



'Greenhouse' GBCA Office Tenancy

Level 15, 179 Elizabeth Street, Sydney

Green Star - Office Interiors v1.1  
Round 2 Submission

In this Round 2 submission, all comments left by the Certified Assessors in the Round 1 have been addressed within the credits with the exception of Man-7, which the project team is no longer claiming.

Credits claimed and included in this Round 2 submission:

Man-4, Man-6, IEQ-2, IEQ-7, IEQ-11, Ene-1, Mat-2, Eco-4, and 5 innovation claims across Inn-2 and Inn-3.

#### Project Description:

The Green Building Council of Australia's (GBCA) Head Office is a tangible expression of the character and culture of GBCA as an organisation. From the introduction of a raised floor that provides a displacement air system to the light shelves used to manage radiant heat loads, the space embodies the principles of the GBCA: to "develop a sustainable property industry for Australia and drive the adoption of green building practices through market-based solutions". This project offers a range of sustainable initiatives that are not generally included in single floor fitouts. These initiatives offer both environmental benefits and direct user benefits, making this workplace a showcase of environmental design and contemporary workplace practice.

The entire space has focused on the provision of a healthy and productive working environment for staff.

The GBCA head office supports a group of environmental champions and their expectations of what needed to be achieved to maintain their reputation and to support their culture and desire to work in a space that was healthy and vibrant. These factors have allowed the design team to experiment with initiatives that other clients might not be prepared to trial. For example, water saving initiatives included a grey water system – something which is not typically incorporated in a single floor tenancy and which was difficult to implement.

Workshops were conducted to establish staff aspirations and functional requirements for the project. Beyond the environmental aspects, the interior has been designed to:

- Create a dynamic and professional work environment for the staff, members, and visitors'
- Provide opportunities for training to take place within the tenancy'
- Provide flexibility for future expansion and changing team environments'
- Provide a library for members and visitors to educate and enable member products to be showcased in use'
- Take advantage of amazing views over Hyde Park looking towards Sydney Harbour.

When designing the space, Indoor Environmental Quality was of key concern to the occupants. Ample planting of greenery is used to enhance the IEQ as well as general wellbeing of staff. Furniture and fitments like carpet have been selected for their sustainability and because of the take back policies that the suppliers have in place - they resell, recondition or supply the product free of charge for use by others or reuse the raw materials. As a result, vintage furniture from second-hand stores and mid century design classics merge with new green items providing an eclectic non corporate look that is a good fit with the GBCA culture. A feature has been made of spent florescent light tubes.

Wherever appropriate materials have been reused and revealed honestly. An example of this is the exposed concrete floor and the underside of the overhead soffit.

Only minimal joinery is built in. In the case of benches and the reception counter, the front is made from fixed modules however all of the storage that works with it is mobile and able to be relocated, reused or sold later on for future use. Systems furniture used was developed to utilise only essential materials. Consequently, it is modular, free standing and engineered to be as light as possible, with minimal screening provided through a single layer of material. Powdercoating has been used extensively where a substrate required a finish providing the most minimal finish available.

Staff within GBCA worked closely with the design team and consultants, overseeing Greenstar evidence collection. All consultants and teams had at least one Greenstar Professional who contributed their sustainable knowledge to their area of expertise. The fitout is registered to achieve a Green Star Office Interiors rating, with sustainable features including:

- CO<sub>2</sub> sensors throughout the space mean supplying air into occupied areas only. Consequently, no supplementary air-conditioning is used.
- Equipment kept to a minimum. Use of small laptops linked to a standard size flat screen reduces energy and heat loads.
- Extensive light zoning has been used throughout the space.
- Full advantage was made of the natural light that was available whilst avoiding glare and heat issues. For the majority of working days, a bare minimum of artificial light is needed for staff to work and circulate efficiently. The use of automated blinds and light and motion sensors has ensured lighting efficiency and glare control are maximised.
- A worm farm was created on the balcony allowing staff to reduce their lunch and catering waste.
- Bike parking has been included and bikes provided for staff to get around the city.

As a not for profit organisation, the budget to fitout this space was always going to be tight. Add into that the timeframe that the project team were given and the environmental aspirations of the client and the task looked almost impossible. The GBCA workplace has strived to optimise the environmental outcomes while working with a very limited budget of \$780,000 and a timeframe of four months from briefing to the occupants moving in - with the Christmas shutdown in the middle of construction. The entire project was delivered on time and on budget and was achieved only by some support from GBCA member organisations including the consultants, construction team and contractors. Ingenuity was the true enabler of this project though as the combined team scouted for second hand access floors, furniture and materials to stretch the budget as far as possible.

ESD principals have been utilised throughout the entire fitout ensuring the space can be used as a teaching tool for visiting project teams. Materials used throughout the space have been sourced for their environmental properties. All materials, paints and sealants were selected for their lack of VOCs and formaldehyde. As many items as possible were relocated from the former GBCA office including chairs and workstations which work well alongside new additions. Other furniture was sourced from op shops. The raised floor for displacement air was also second hand.

Materials have also been used in a manner that will allow for future reuse. The carpet tiles have not been glued to the floor. Instead, they are fixed to each other through the use of single sided tape. They are not adhered to the slab allowing tiles to be removed without damage to the backing or the slab. Additionally, all design work was undertaken working with standard sheet sizes and modular design techniques. Thereby minimising layering of materials and making sure that mobile joinery and storage units were designed consistently to allow them to move around the space and meet changing user needs. Partitions have been minimised to avoid future waste if removed. When used, they are modular and demountable to allow for relocation, storage or resale. Curtained areas provide definition to meeting spaces, minimising materials used and avoiding the need for special HVAC work in these areas.

The interior has also been carefully designed in a way to effectively minimise energy consumption. An example of this are the light shelves installed inside the building along the eastern façade. The shelves bounce indirect light onto the soffit lining. This inturn provides indirect natural light deeper into the floor plate and reduces the need for artificial light. The heat load generated by the direct morning light is stopped by blinds at the lower level of the glazed bay windows and then captured in the void above the light shelves and drawn out of the space using mechanical extraction.



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| ISSUE | DATE     | FOR          |
|-------|----------|--------------|
| A     | 28.10.07 | CONSTRUCTION |
| B     | 28.11.07 | CONSTRUCTION |

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**L15, 179 ELIZABETH STREET**  
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**CLIENT PROJECT No.**

**PROJECT**

**GREEN BUILDING COUNCIL**  
**OF AUSTRALIA**  
**BVN PROJECT NUMBER**

**M0709010**  
**TRUE NORTH** **PROJECT NORTH**

**GRAPHIC SCALE**  
0 2000 5000  
**SCALE**

1:100 at A2 **DO NOT SCALE**  
**STATUS**

**CONSTRUCTION**  
**DRAWING**

**JOINERY PLAN**  
**DRAWING NUMBER** **ISSUE**  
**CD-D-02** **B**

CASTLEREAGH STREET

ELIZABETH STREET

**AS BUILT**

01 PLAN - JOINERY PLAN

1:100

CASTLEREAGH STREET



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| ISSUE | DATE     | FOR                   |
|-------|----------|-----------------------|
| 01    | 03.10.07 | INFORMATION           |
| 02    | 09.10.07 | INFORMATION           |
| 03    | 11.10.07 | INFORMATION           |
| 04    | 17.10.07 | APPROVAL              |
| 05    | 22.10.07 | APPROVAL              |
| 06    | 22.10.07 | CURTAIN RAILS DELETED |
| A     | 09.11.07 | FOR CONSTRUCTION      |

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BVN PROJECT NUMBER

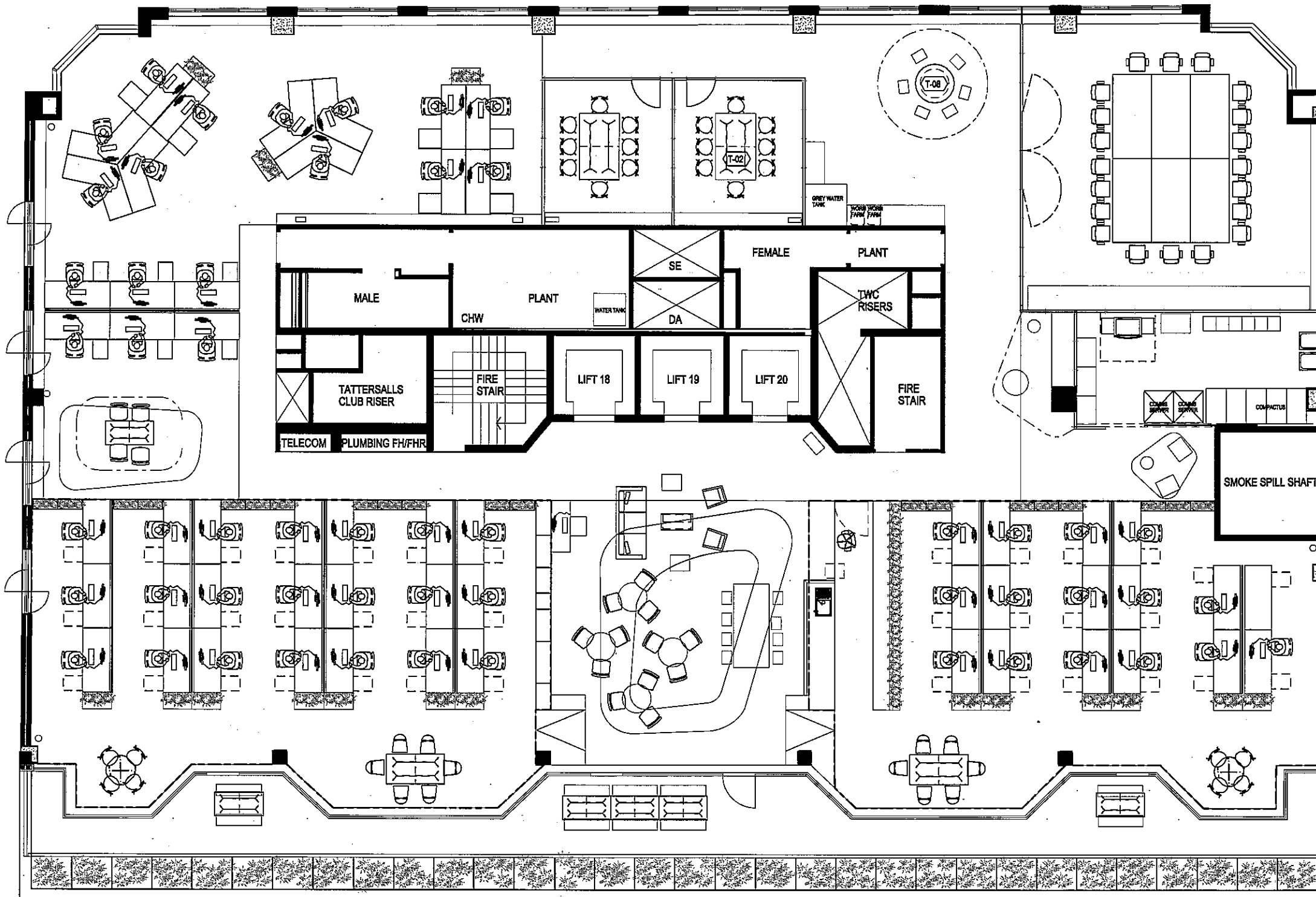
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TRUE NORTH PROJECT NORTH

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STATUS

FOR CONSTRUCTION  
DRAWING

**GENERAL ARRANGEMENT  
FLOOR PLAN**  
DRAWING NUMBER ISSUE  
**A-D-01 A**



ELIZABETH STREET

**AS BUILT**  
*[Signature]*

01 FLOOR PLAN  
1:100

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| ISSUE | DATE     | FOR                             |
|-------|----------|---------------------------------|
| 01    | 11.10.07 | PRICING                         |
| 02    | 17.10.07 | APPROVAL                        |
| 03    | 17.10.07 | APPROVAL                        |
| 04    | 05.11.07 | ADDED P4, UPDATED FINISH TO DRI |
| A     | 09.11.07 | FOR CONSTRUCTION                |
| B     | 11.12.07 | DOOR HARDWARE ADDED             |

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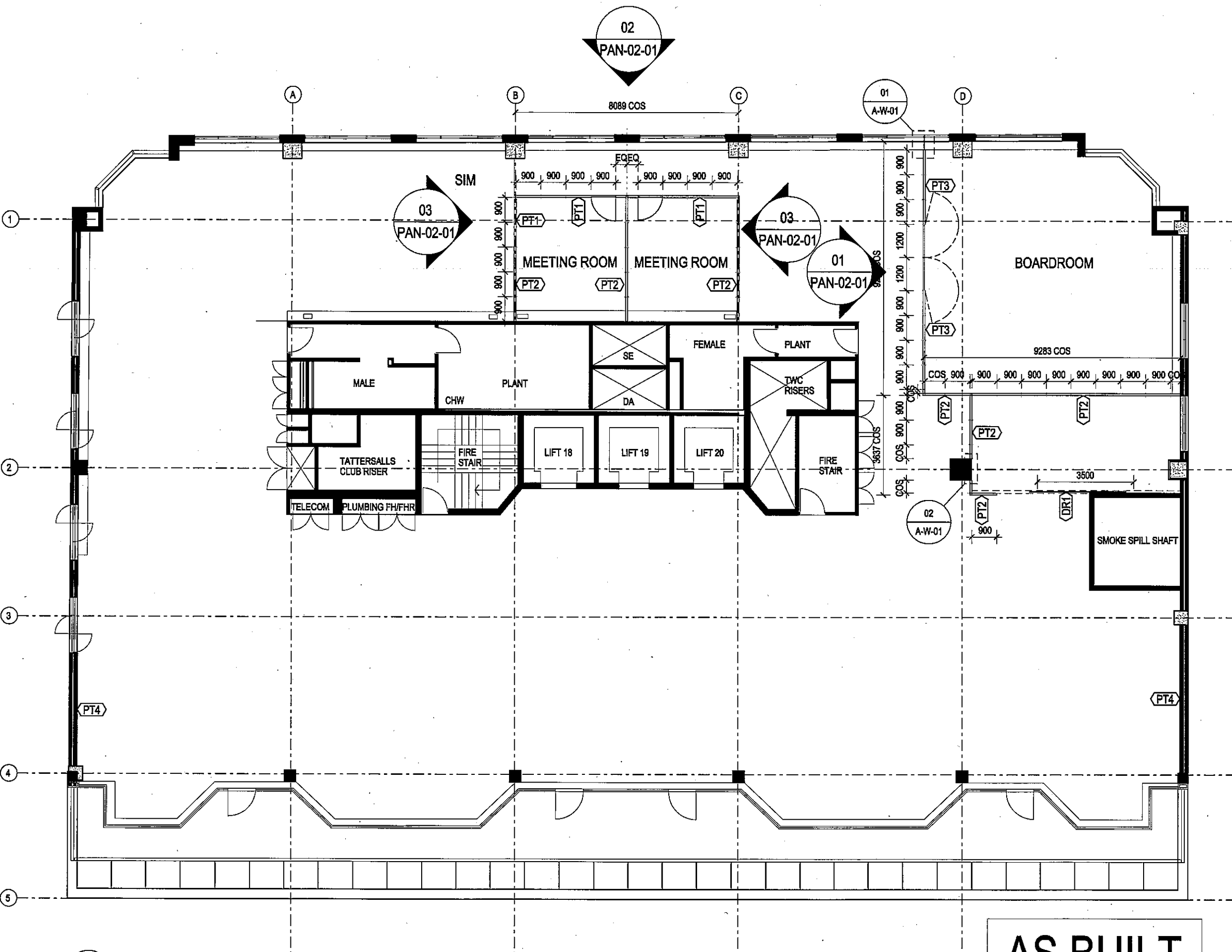
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STATUS

**FOR CONSTRUCTION**  
DRAWING

**PARTITION PLAN**

| DRAWING NUMBER | ISSUE |
|----------------|-------|
| A-M-01         | B     |



01 PARTITION PLAN  
1:100

**AS BUILT**





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| ISSUE | DATE     | FOR                                       |
|-------|----------|---|
| A     | 09.11.07 | FOR CONSTRUCTION                          |
| B     | 26.11.07 | FOR CONSTRUCTION - MDF<br>CEILING CHANGED |

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PROJECT  
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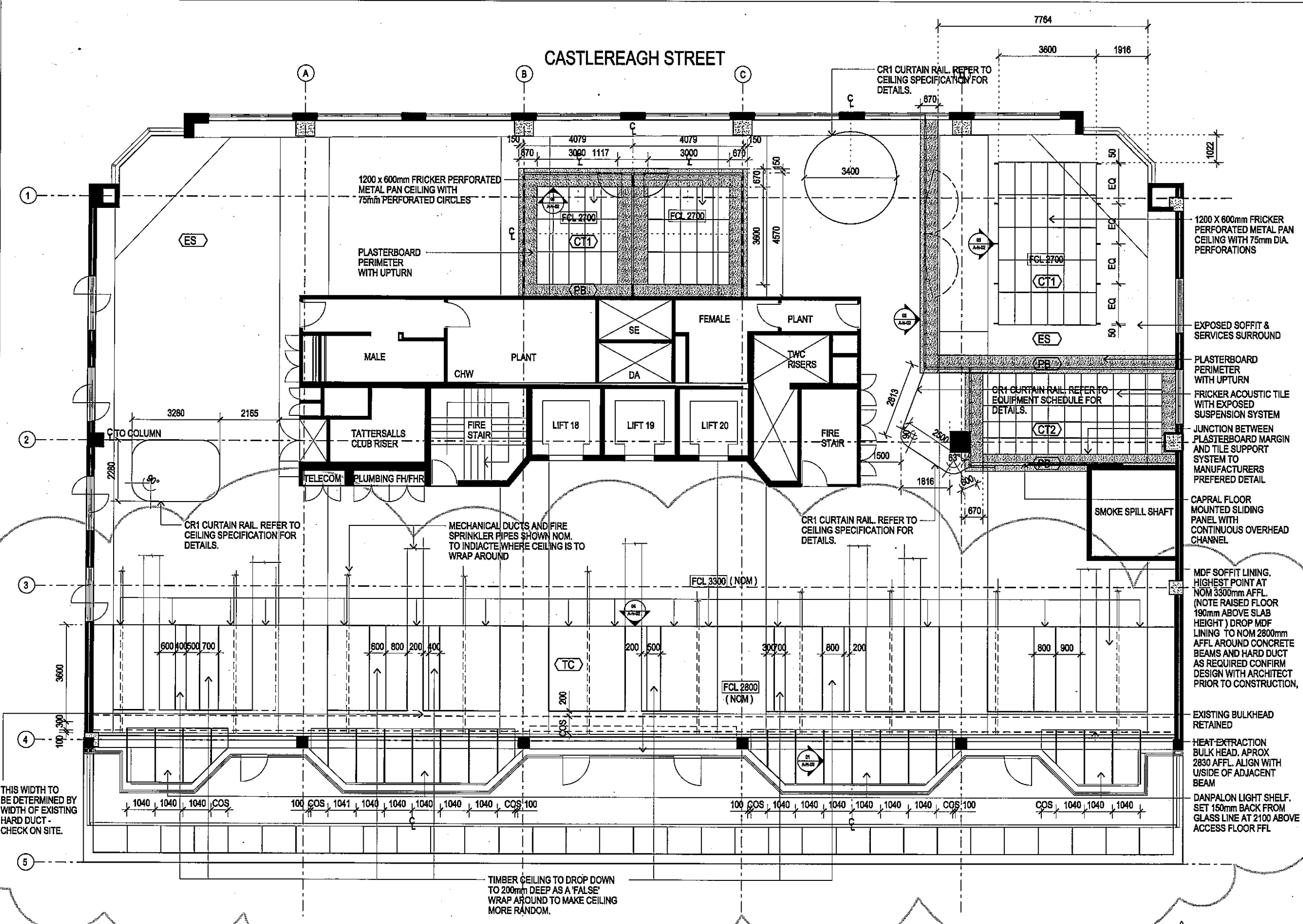
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TRUE NORTH PROJECT NORTH

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STATUS

FOR CONSTRUCTION  
DRAWING

RCP  
DRAWING NUMBER ISSUE  
A-N-01 B



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BE DETERMINED BY  
WIDTH OF EXISTING  
HARD DUCT -  
CHECK ON SITE.

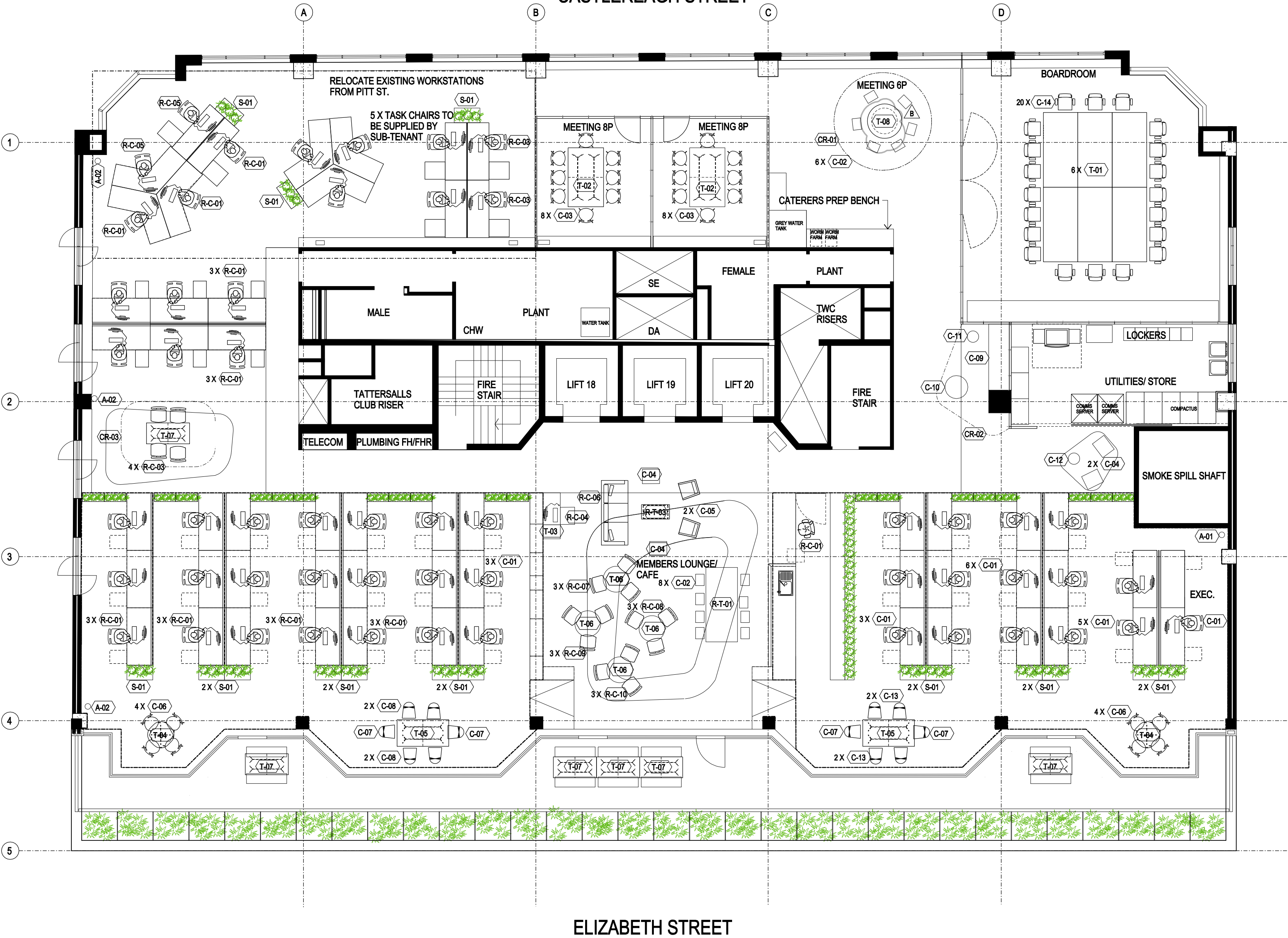
TIMBER CEILING TO DROP DOWN  
TO 200mm DEEP AS A 'FALSE'  
WRAP AROUND TO MAKE CEILING  
MORE RANDOM.

AS BUILT

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13/06/2008

CASTLEREAGH STREET



ELIZABETH STREET

AS BUILT

01 LOOSE FURNITURE FLOOR PLAN  
1:100



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| ISSUE | DATE     | FOR              |
|-------|----------|------------------|
| 01    | 05.11.07 | PRICING          |
| A     | 09.11.07 | FOR CONSTRUCTION |
| B     | 13.11.07 | CODE CHANGED     |

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CLIENT PROJECT No.

PROJECT

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OF AUSTRALIA  
BVN PROJECT NUMBER

M0709010  
TRUE NORTH PROJECT NORTH

GRAPHIC SCALE  
0 2000 5000

SCALE  
1:100 at A2 DO NOT SCALE  
STATUS

CONSTRUCTION  
DRAWING

LOOSE FURNITURE  
FLOOR PLAN

| DRAWING NUMBER | ISSUE |
|----------------|-------|
| CD-S-01        | B     |



# FINISHES LEGEND

- CP01: REFER FINISHES SCHEDULE FOR DETAILS
- CP02: REFER FINISHES SCHEDULE FOR DETAILS.  
NOTE: CP02 IS FULL TILES WORKING WITHIN CARPET GRID.
- CP03: REFER FINISHES SCHEDULE FOR DETAILS
- CON: REFER FINISHES SCHEDULE FOR DETAILS
- TASMAN ACCESS FLOOR 190mm HIGH. REFER TO ACCESS FLOOR PLAN & SPECIFICATION

# FINISHES NOTES:

JUNCTION OF CONCRETE & CARPET TILE WHERE EXPOSED TO BE FINISHED WITH BLACK DIMINISHING STRIP.

REFER TO SPECIFICATION FOR FINISHES DESCRIPTION AND SPECIFICATION.

REFER TO SPECIFICATION FOR INSTALLATION PROCEDURE TO ALL FINISHES.



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| ISSUE | DATE     | FOR                      |
|-------|----------|--------------------------|
| 01    | 11.10.07 | INFORMATION              |
| 02    | 05.11.07 | EXTENT OF CARPET CHANGED |
| A     | 08.11.07 | FOR CONSTRUCTION         |

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TRUE NORTH

PROJECT NORTH

## GRAPHIC SCALE



SCALE

1:100 at A2

DO NOT SCALE

STATUS

FOR CONSTRUCTION

DRAWING

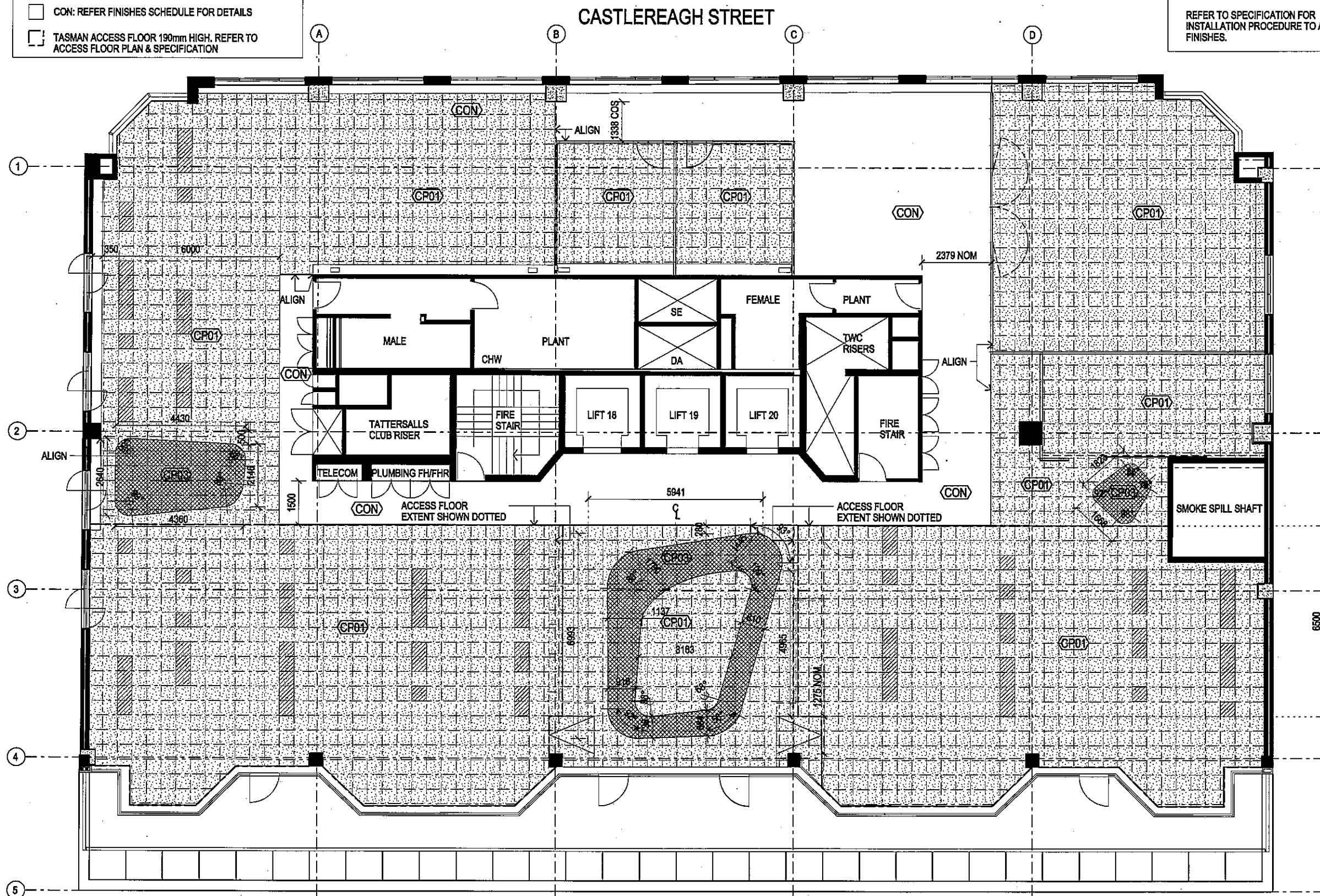
## FLOOR FINISHES PLAN

DRAWING NUMBER

ISSUE

A-U-01

A



AS BUILT

01 FLOOR FINISHES PLAN  
1:100

ELIZABETH STREET

P:\07\m0709010\gbca\Arch\plot\CD-U-01\_Floor\_Finishes.dgn

13/08/2008

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|-------|----------|-------------------|
| 01    | 17.10.07 | CONSTRUCTION      |
| 02    | 17.10.07 | APPROVAL          |
| 03    | 22.10.07 | APPROVAL          |
| 04    | 05.11.07 | RAMP SIZE CHANGED |
| A     | 09.11.07 | FOR CONSTRUCTION  |

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CLIENT PROJECT No.

PROJECT

GREEN BUILDING COUNCIL  
OF AUSTRALIA

BVN PROJECT NUMBER

M0709010

TRUE NORTH PROJECT NORTH

GRAPHIC SCALE  
0 2000 5000  
SCALE

1:100 at A2 DO NOT SCALE

STATUS

FOR CONSTRUCTION  
DRAWING

ACCESS FLOOR PLAN

|                |       |
|----------------|-------|
| DRAWING NUMBER | ISSUE |
| A-V-02         | A     |

CASTLEREAGH STREET

ELIZABETH STREET

**AS BUILT**

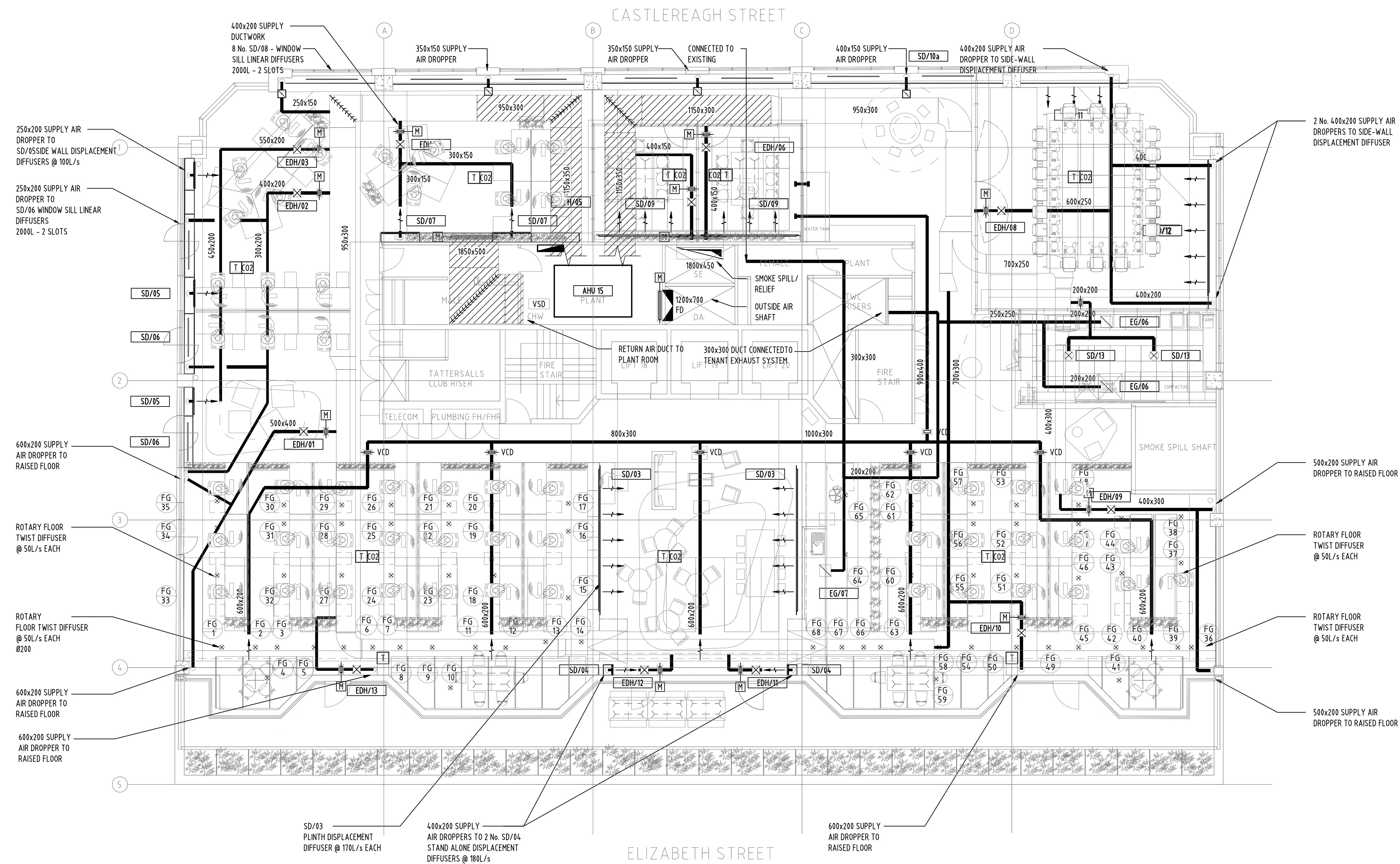
01 FLOOR FINISHES PLAN

1:100

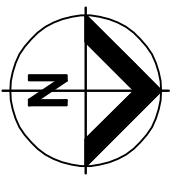
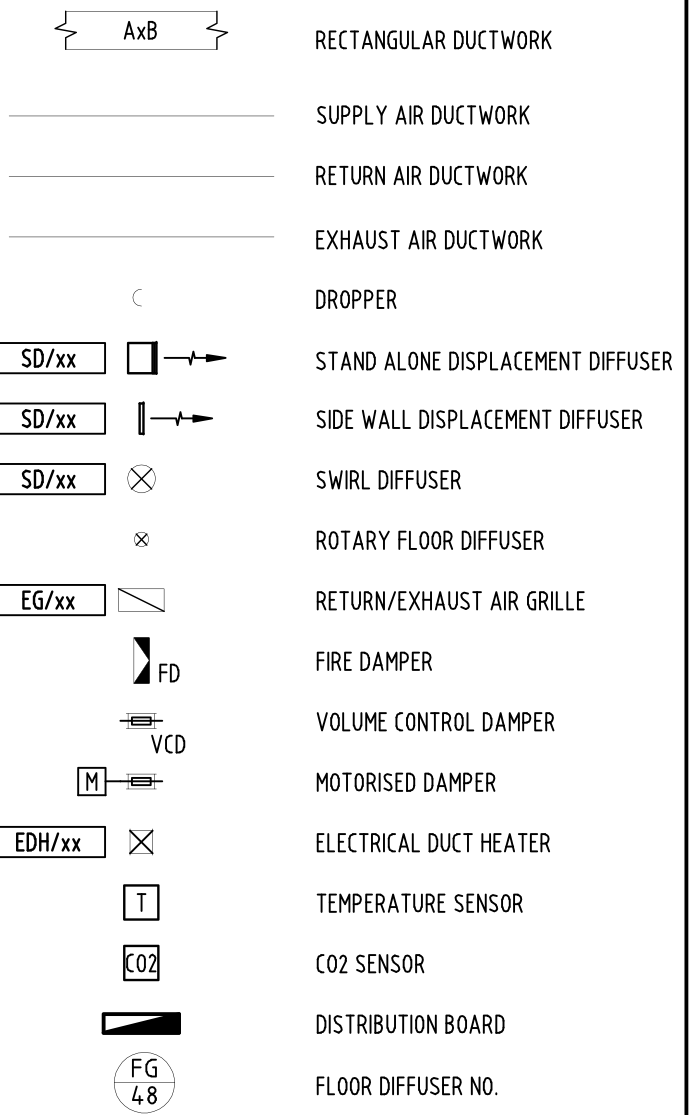
P:\22\0709010\plan\AccessFloor.dwg

13/09/2008





LEGEND



| Rev | Description | By     | Date       |
|-----|-------------|--------|------------|
| A   | AS BUILT    | ENRWEL | 11.03.2009 |
|     |             |        |            |
|     |             |        |            |
|     |             |        |            |
|     |             |        |            |

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BRISBANE  
MOUNT ISA  
MELBOURNE  
HEAD OFFICE

|             |
|-------------|
| CLIENT      |
| <b>GBCA</b> |

|  |
|--|
| Project  |
| <b>LEVEL 15<br/>179 ELIZABETH STREET<br/>SYDNEY NSW 2000</b> |

|                                |
|--------------------------------|
| Drawing Title                  |
| <b>DUCTWORK LAYOUT<br/>L15</b> |

|                           |                |       |           |
|---------------------------|----------------|-------|-----------|
| CAD File                  |                | Drawn | -         |
| Coordinated               |                | Scale | 1:100 @A1 |
| Project Architect         |                | Date  | 11-03-09  |
| Project Director          |                |       |           |
| PTW Project No.           | Drawing Number | Rev   |           |
| -                         | ST 236-M01 A   | A     |           |
| JLW Project No.<br>ST 236 |                |       |           |

**AS BUILT**



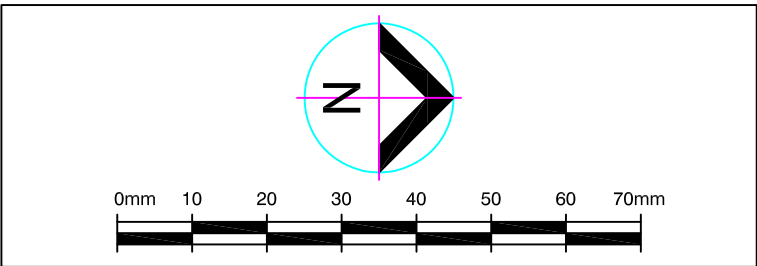
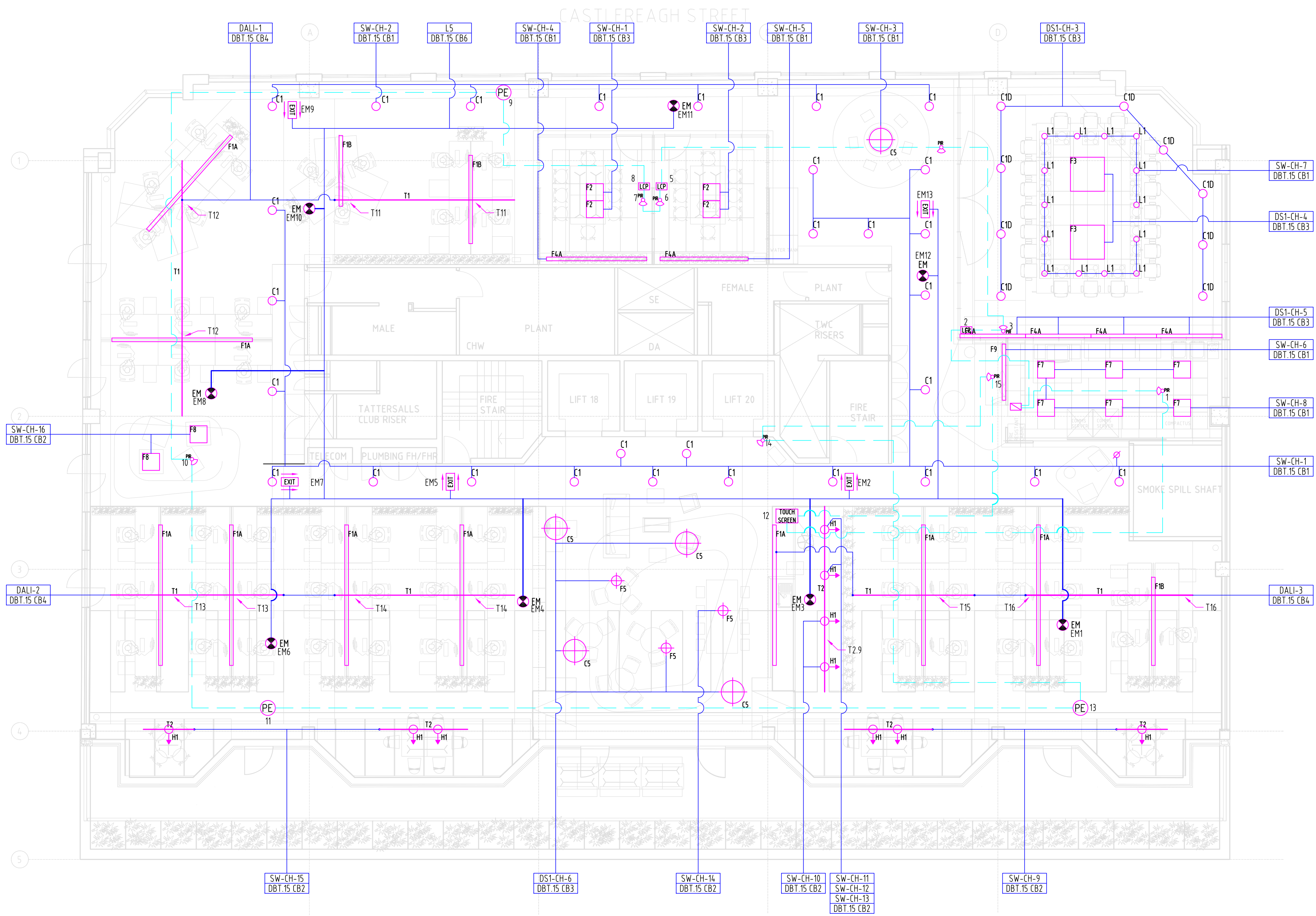
| DATE     | REV | AMENDMENT          | BY  | CHKD |
|----------|-----|--------------------|-----|------|
| 19.10.07 | A   | TENDER             | MPB | ASD  |
| 12.11.07 | B   | CONSTRUCTION ISSUE | MPB | ASD  |
| 27.02.08 | C   | AS INSTALLED ISSUE | TC  |      |
|          |     |                    |     |      |
|          |     |                    |     |      |


NOTES

1. ——— DYNALITE CONTROL 'LOOP' CCT

| COMPONENT | SERIAL NO. |
|-----------|------------|
| 1         | 430746     |
| 2         | 426490     |
| 3         | 424664     |
| 4         | 430678     |
| 5         | 426489     |
| 6         | 424663     |
| 7         | 428157     |
| 8         | 426488     |
| 9         | 428148     |
| 10        | 430745     |
| 11        | 430745     |
| 12        |            |
| 13        | 428147     |
| 14        | 430679     |
| 15        | 424665     |

| CIRCUIT    | ... | ...   | CHANNEL  | ...    |
|------------|-----|-------|----------|--------|
| DBT.15 CB1 | L1  | 8.8A  | SW-CH-1  | 4.76A  |
|            |     |       | SW-CH-2  | 15A    |
|            |     |       | SW-CH-3  | 0.3A   |
|            |     |       | SW-CH-4  | 0.35A  |
|            |     |       | SW-CH-5  | 0.35A  |
|            |     |       | SW-CH-6  | 0.3A   |
|            |     |       | SW-CH-7  | 0.175A |
|            |     |       | SW-CH-8  | 1.05A  |
| DBT.15 CB2 | L2  | 2.08A | SW-CH-9  | 0.43A  |
|            |     |       | SW-CH-10 | 0.3A   |
|            |     |       | SW-CH-11 | 0.10A  |
|            |     |       | SW-CH-12 | 0.10A  |
|            |     |       | SW-CH-13 | 0.10A  |
|            |     |       | SW-CH-14 | 0.16A  |
|            |     |       | SW-CH-15 | 0.43A  |
|            |     |       | SW-CH-16 | 0.46A  |
| DBT.15 CB3 | L3  | 9.8A  | DS1-CH-1 | 1A     |
|            |     |       | DS1-CH-2 | 1A     |
|            |     |       | DS1-CH-3 | 3A     |
|            |     |       | DS1-CH-4 | 2A     |
|            |     |       | DS1-CH-5 | 1A     |
| DBT.15 CB4 | L4  | 12A   | DS1-CH-6 | 1.6A   |
|            |     |       | DALI-1   | 4A     |
|            |     |       | DALI-2   | 4A     |
| DBT.15 CB6 | L5  |       | DALI-3   | 4A     |






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PROJECT

**LEVEL 15**  
**179 ELIZABETH STREET**  
**SYDNEY NSW 2000**

CLIENT

GBCA

|            |   |          |     |
|------------|---|----------|-----|
| DATE       | 04.10.07  | DRAWN    | EWM |
| SCALE      | 1:100   | CHECKED  |     |
| SHEET SIZE | A1  | APPROVED |     |
| CAD FILE   |  |          |     |

TITLE

**ELECTRICAL SERVICES**  
**LIGHTING LAYOUT**

PROJECT NO.

SYD 0703900

DRAWING NO.

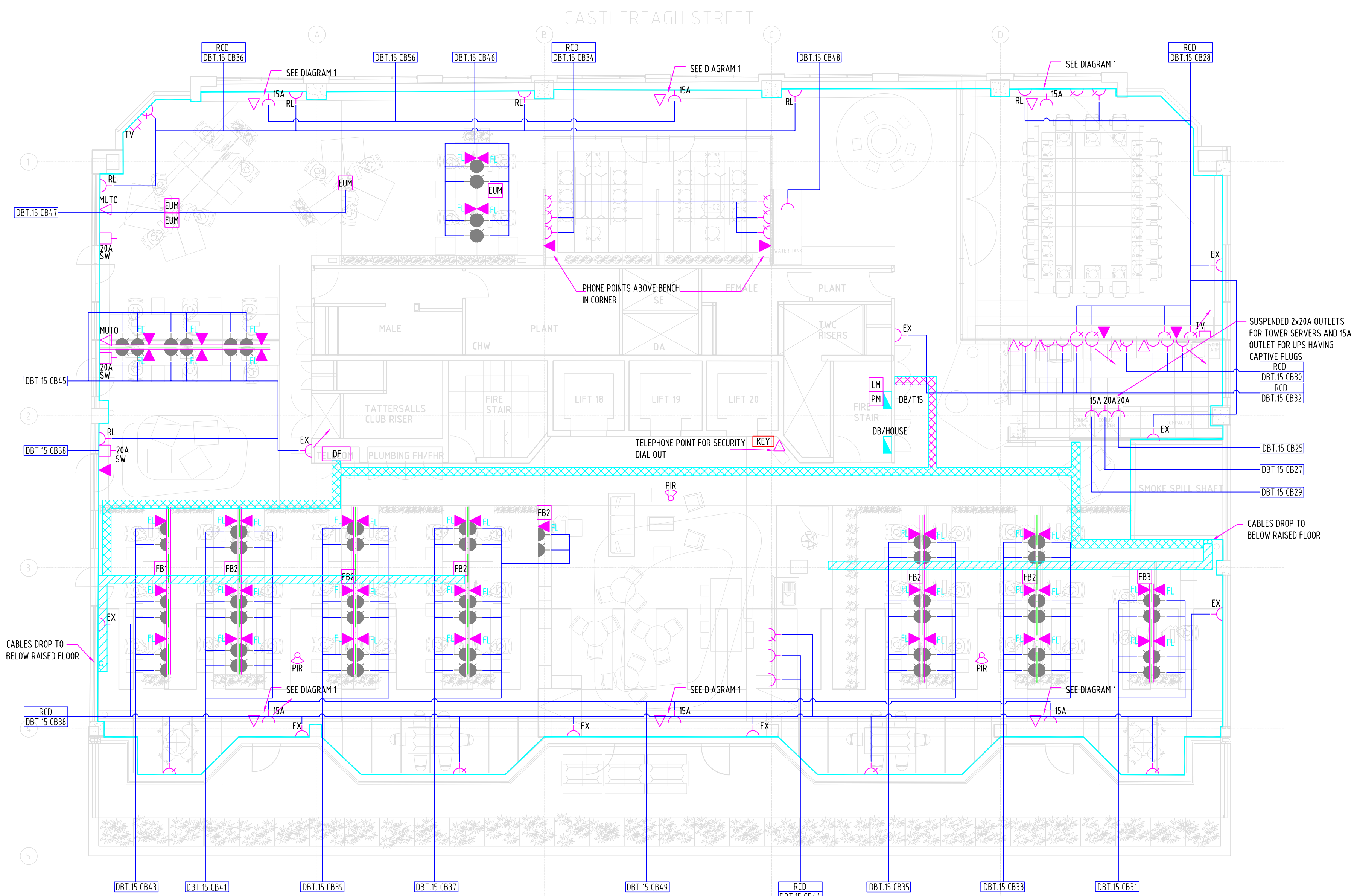
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REVISION

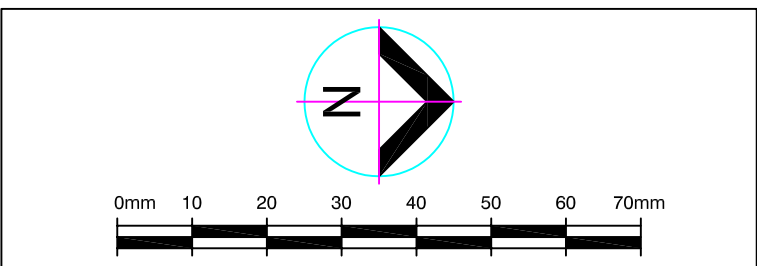
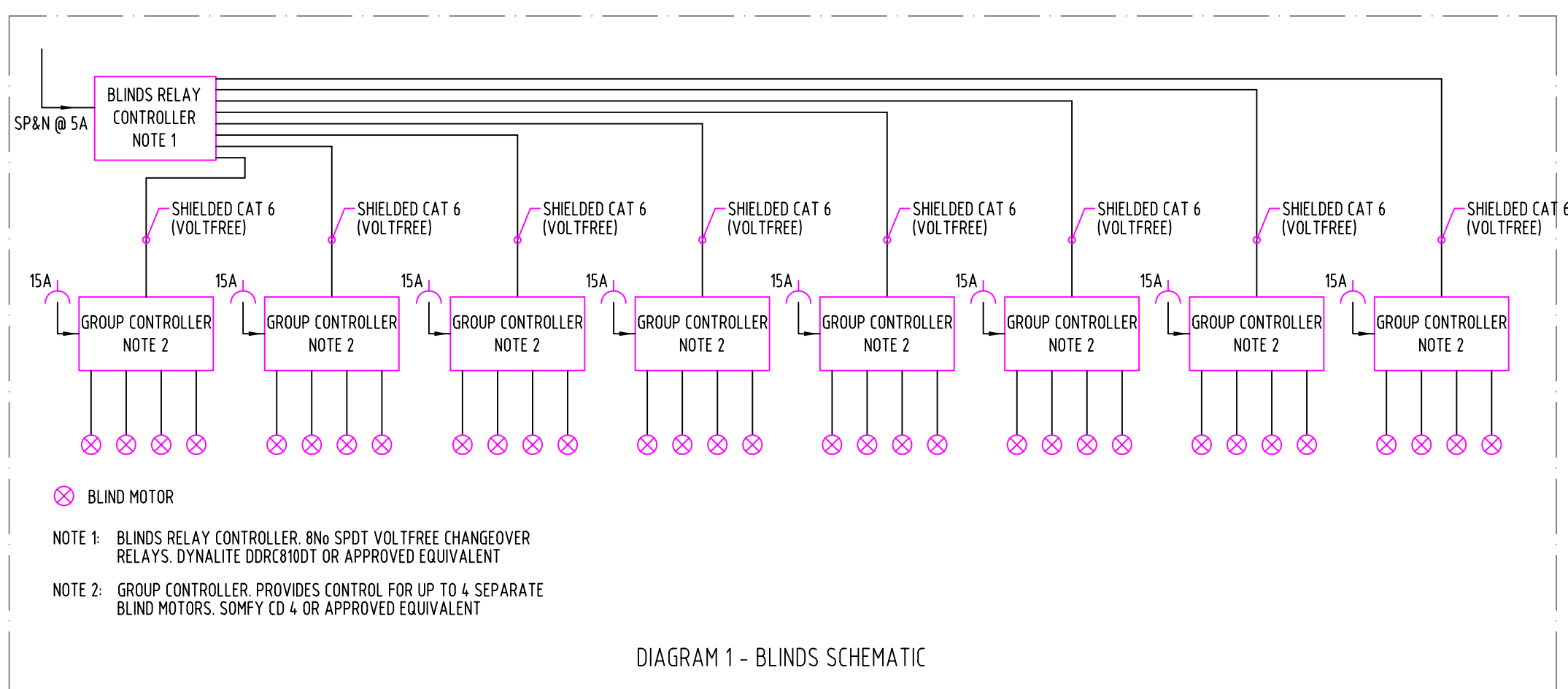
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| DATE     | REV | AMENDMENT                  | BY  | CHKD |
|----------|-----|----------------------------|-----|------|
| 19.10.07 | A   | TENDER                     | MPB | ASD  |
| 12.11.07 | B   | CONSTRUCTION ISSUE         | MPB | ASD  |
| 21.11.07 | C   | REVISED CONSTRUCTION ISSUE | MPB | ASD  |
| 28.11.07 | D   | REVISED CONSTRUCTION ISSUE | MPB | ASD  |
| 27.02.08 | E   | AS INSTALLED               | TC  |      |
|          |     |                            |     |      |



- FB1 FLOOR BOX CONTAINS - 1 X 20A  
3 X DOUBLE RJ45
- FB2 FLOOR BOX CONTAINS - 1 X 20A  
6 X DOUBLE RJ45
- FB3 FLOOR BOX CONTAINS - 1 X 20A  
4 X DOUBLE RJ45
- EUM UMBILICAL - OUTLETS  
MOUNTED AT HL WITH  
DROPPERS TO FLOOR  
LEVEL  
1 X 20A  
6 X DOUBLE RJ45
- 10A DGPO  
EX - EXISTING TO BE RETAINED  
RL - EXISTING TO BE RELOCATED TO FRONT OF PLENUM WHERE NEEDED
- SOFT WIRED 10A DGPO
- STARTER SOCKET
- SINGLE RJ45  
FL - DENOTES FLY LEAD
- DOUBLE RJ45  
FL - DENOTES FLY LEAD
- MUTO MULTI USER COMMUNICATIONS OUTLET  
12No RJ45 OUTLETS
- CABLE TRAY AT HIGH LEVEL 300mm  
POWER AND 300mm COMMS
- CABLE TRAY BELOW RAISED FLOOR  
300mm POWER AND 300mm COMMS
- CABLE DROPPERS
- 2 X 50mm BASKET STACKED 1 FOR  
SOFT WIRE POWER AND 1 FOR COMMS  
FLY LEADS
- PIR PIR INTRUDER DETECTOR
- KEY INTRUDER ALARM KEY PAD
- LM 100amp Three Phase meter for Lighting Circuits  
Located in DB/T15
- PM 100amp Three Phase meter for power circuits  
Located in DB/T15






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Consulting Engineers

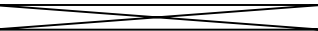
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PROJECT

**LEVEL 15**  
**179 ELIZABETH STREET**  
**SYDNEY NSW 2000**

CLIENT  
GBCA

|            |   |          |     |
|------------|---|----------|-----|
| DATE       | 15.10.07  | DRAWN    | MPB |
| SCALE      | 1:100   | CHECKED  | ASD |
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TITLE  
**ELECTRICAL SERVICES**  
**POWER LAYOUT**

PROJECT NO.  
**SYD 0703900 E002**

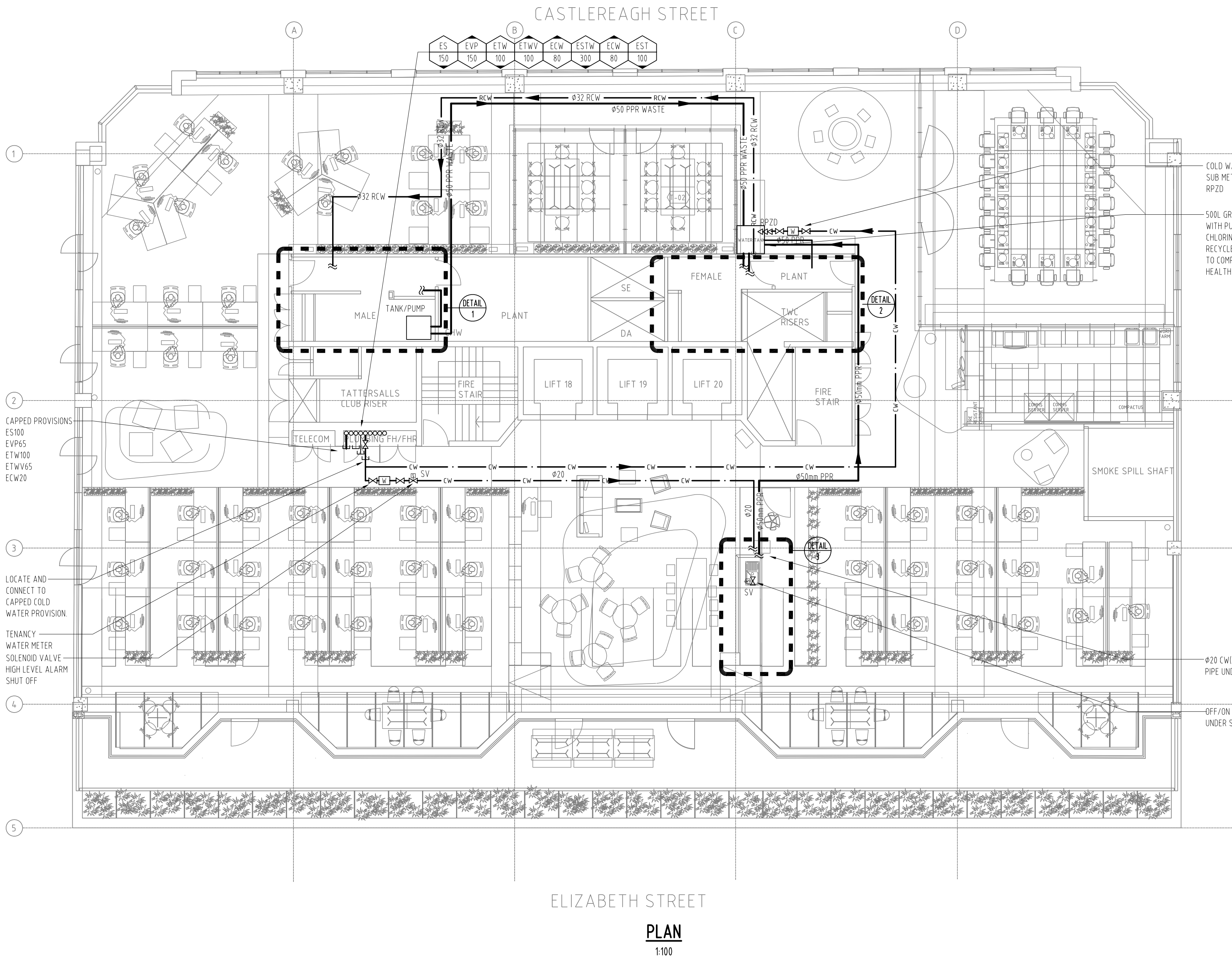
DRAWING NO.  
**E002**

REVISION  
**E**

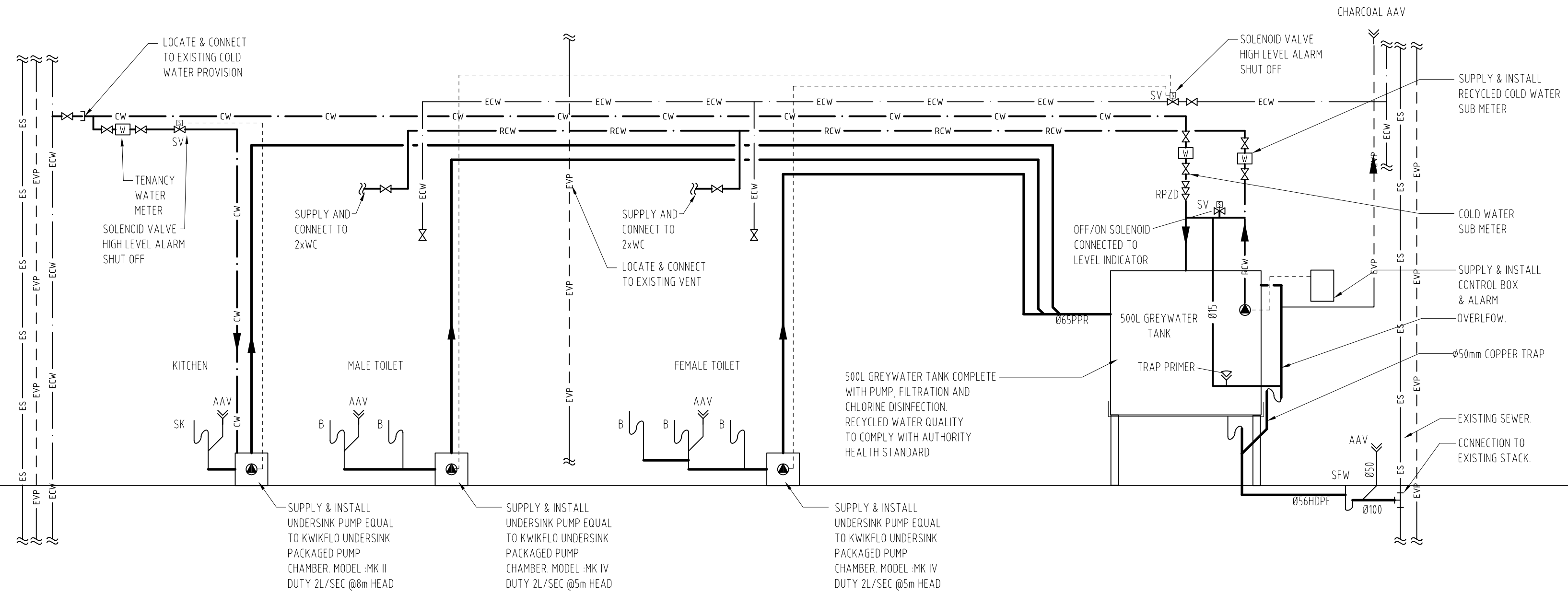
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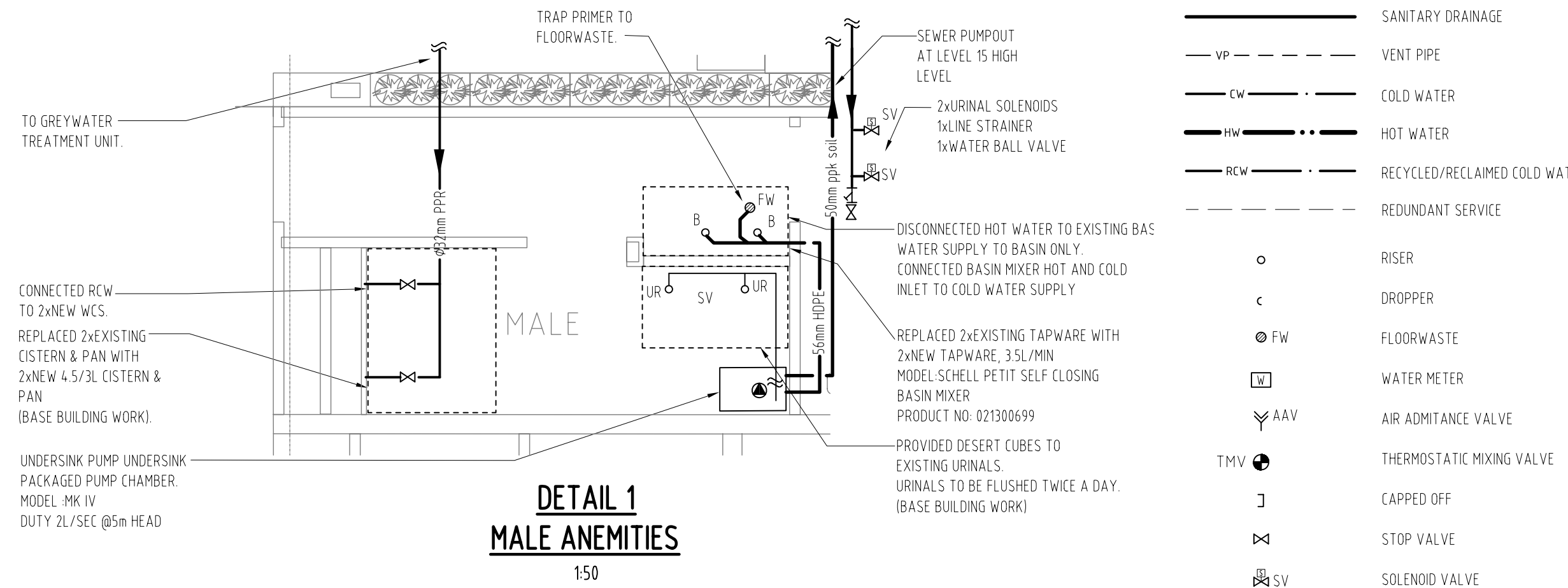
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| 13.06.08 | AB  | ISSUED FOR AS BUILTS | JT | VM   |
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|          |     |                      |    |      |
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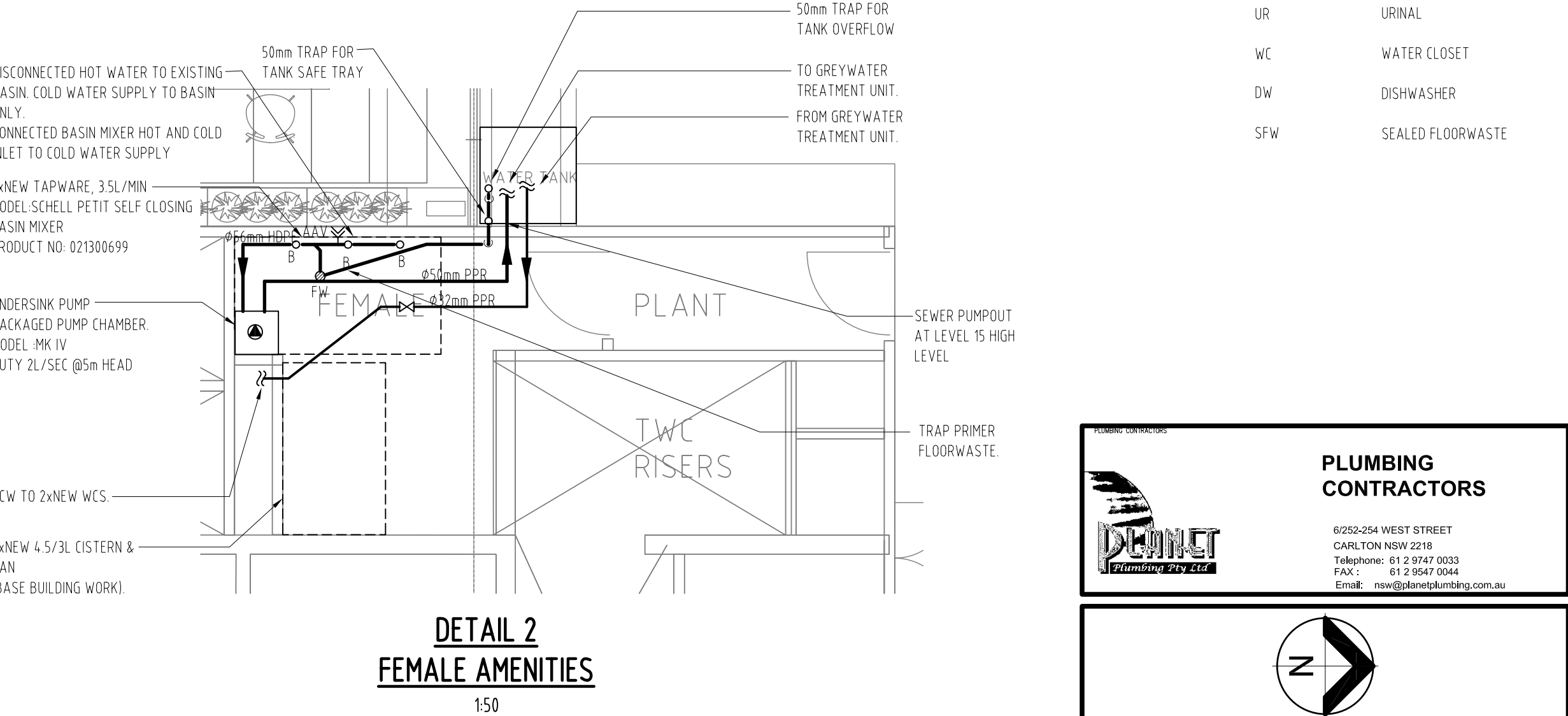
PLAN  
1:100



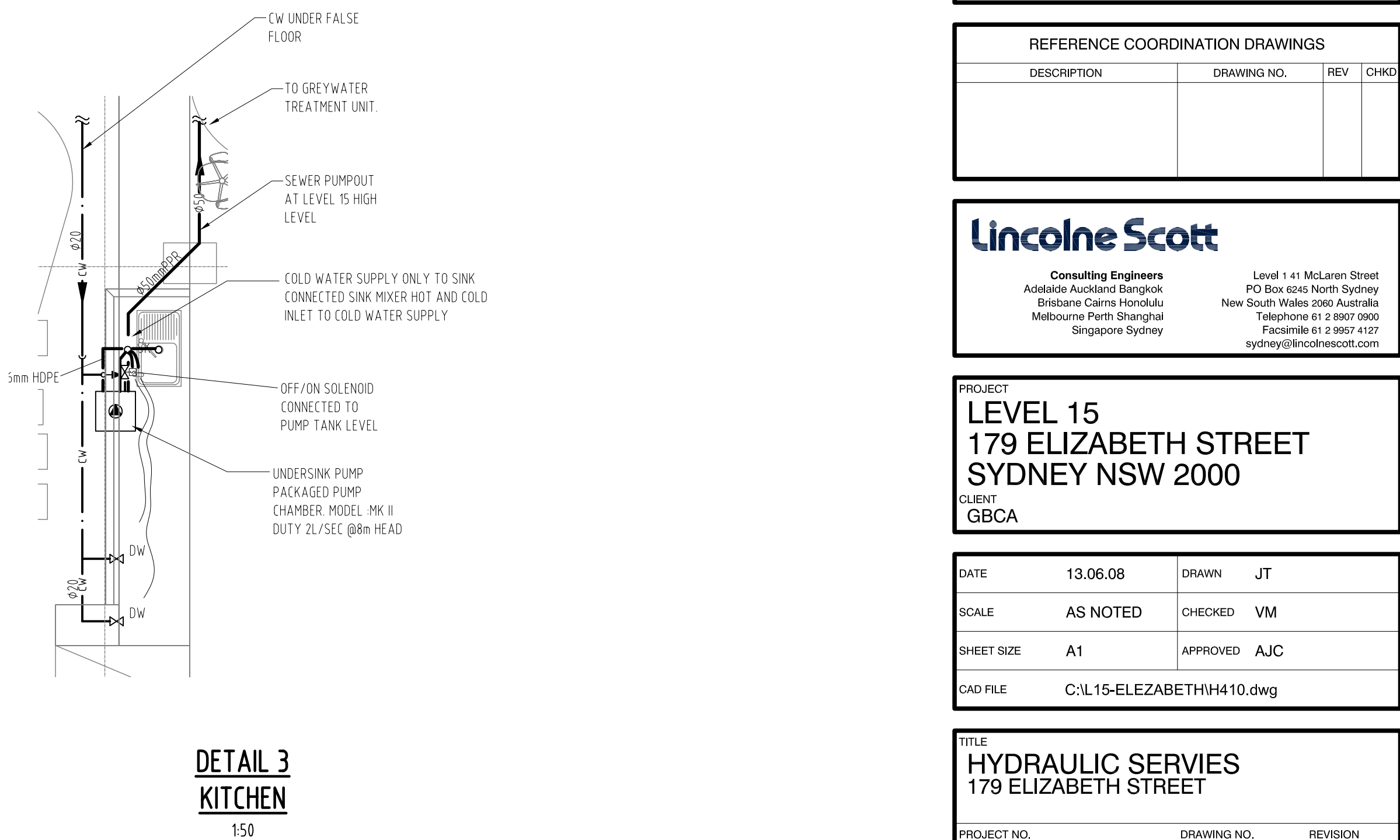
SCHEMATIC  
N.T.S



DETAIL 1  
MALE AMENITIES  
1:50



DETAIL 2  
FEMALE AMENITIES  
1:50



DETAIL 3  
KITCHEN  
1:50

LEGEND

- SANITARY DRAINAGE
- VENT PIPE
- COLD WATER
- HOT WATER
- RECYCLED/RECLAIMED COLD WATER
- REDUNDANT SERVICE
- RISER
- DROPPER
- FLOORWASTE
- WATER METER
- AIR ADMITTANCE VALVE
- THERMOSTATIC MIXING VALVE
- CAPPED OFF
- STOP VALVE
- SOLENOID VALVE
- BASIN
- SINK
- URINAL
- WATER CLOSET
- DISHWASHER
- SEALED FLOORWASTE

**PLUMBING CONTRACTORS**

6/252-254 WEST STREET  
CARLTON NSW 2218  
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Fax: 61 2 9567 0044  
Email: [nsw@plumbingdryclean.com.au](mailto:nsw@plumbingdryclean.com.au)

0mm 10 20 30 40 50 60 70mm

| REFERENCE COORDINATION DRAWINGS |             |     |      |
|---------------------------------|-------------|-----|------|
| DESCRIPTION                     | DRAWING NO. | REV | CHKD |
|                                 |             |     |      |
|                                 |             |     |      |

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PROJECT  
**LEVEL 15  
179 ELIZABETH STREET  
SYDNEY NSW 2000**

CLIENT  
GBCA

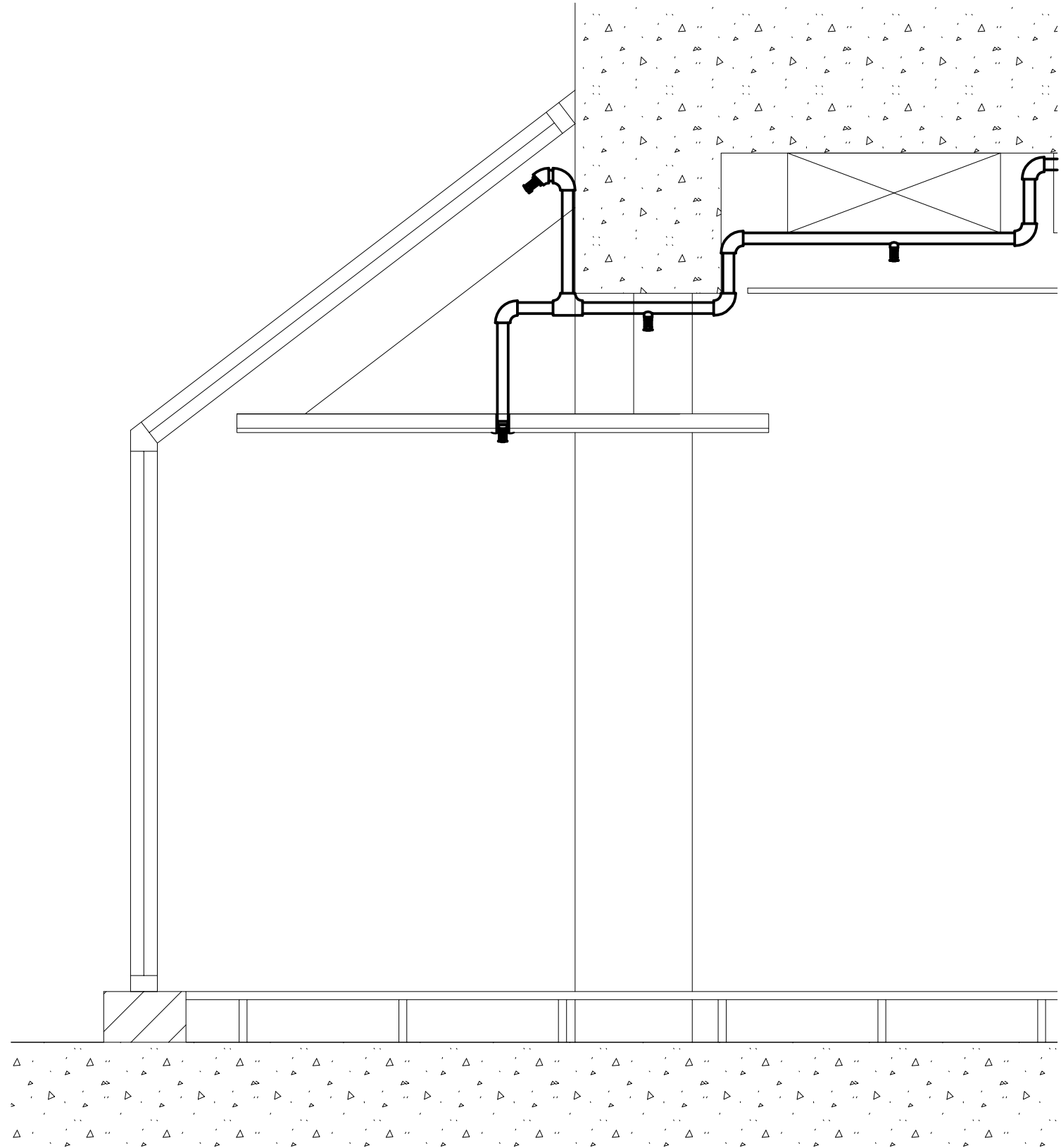
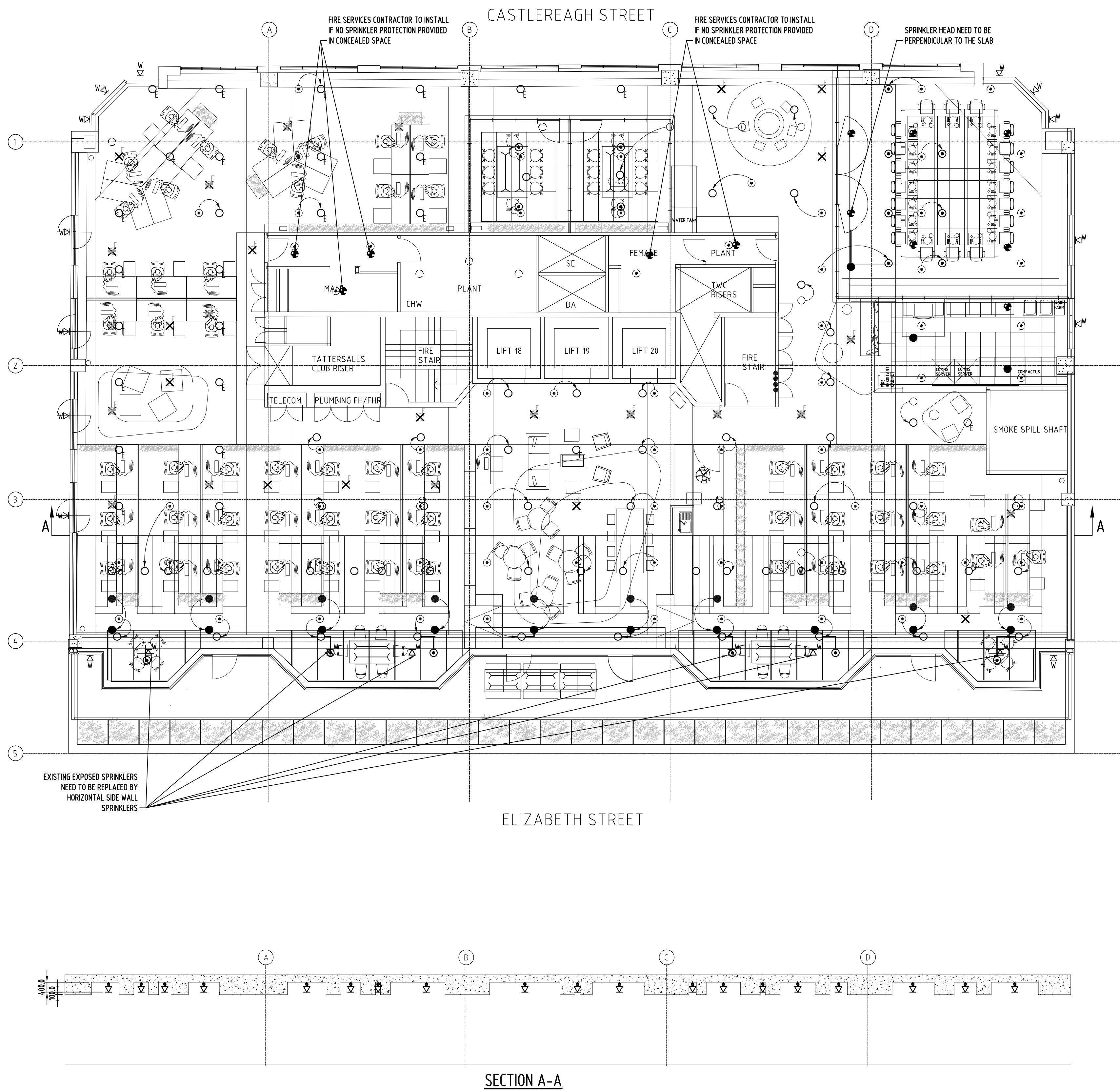
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TITLE  
**HYDRAULIC SERVICES  
179 ELIZABETH STREET**

PROJECT NO. SYD 0703900  
DRAWING NO. H410  
REVISION AB

AS BUILTS

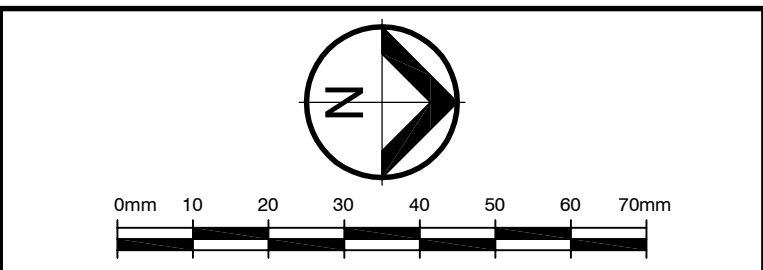




LIGHT SHELF SECTION  
SCALE 1:20

| DATE     | REV | AMENDMENT                  | BY | CHKD |
|----------|-----|----------------------------|----|------|
| 09.11.07 | A   | CONSTRUCTION ISSUE         | GM | WZA  |
| 20.11.07 | B   | REVISED CONSTRUCTION ISSUE | GM | WZA  |
| 04.11.07 | C   | REVISED CONSTRUCTION ISSUE | GM | WAZA |
|          |     |                            |    |      |
|          |     |                            |    |      |

| LEGEND |   |
|--------|---|
|        | NEW BELOW CEILING SPRINKLER   |
|        | EXISTING BELOW CEILING SPRINKLER TO REMAIN  |
|        | EXISTING BELOW CEILING SPRINKLER TO BE RELOCATED                                    |
|        | EXISTING BELOW CEILING SPRINKLER TO BE REMOVED                                      |
|        | NEW EXPOSED SPRINKLER   |
|        | EXISTING BELOW CEILING SPRINKLER CONVERTED TO EXPOSED SPRINKLER                     |
|        | EXISTING BELOW CEILING SPRINKLER TO BE RELOCATED AND CONVERTED TO EXPOSED SPRINKLER |
|        | EXISTING EXPOSED SPRINKLER TO REMAIN  |
|        | NEW CONCEALED SPACE SPRINKLER   |
|        | EXISTING CONCEALED SPACE SPRINKLER TO REMAIN  |
|        | EXISTING CONCEALED SPACE SPRINKLER TO BE RELOCATED                                  |
|        | EXISTING CONCEALED SPACE SPRINKLER TO BE REMOVED                                    |
|        | NEW SIDE WALL SPRINKLER   |
|        | EXISTING SIDE WALL SPRINKLER  |
|        | PENDANT SPRINKLER ELEVATION   |



| REFERENCE COORDINATION DRAWINGS |             |     |      |
|---------------------------------|-------------|-----|------|
| DESCRIPTION                     | DRAWING NO. | REV | CHKD |
|                                 |             |     |      |
|                                 |             |     |      |

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PROJECT  
**LEVEL 15**  
**179 ELIZABETH STREET**  
**SYDNEY NSW 2000**

CLIENT  
GBCA

|            |                          |          |     |
|------------|--------------------------|----------|-----|
| DATE       | 04.10.07                 | DRAWN    | GM  |
| SCALE      | 1:100                    | CHECKED  | WZA |
| SHEET SIZE | A1                       | APPROVED | AAS |
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TITLE  
**FIRE SERVICES**  
**179 ELIZABETH STREET**  
**WET FIRE SYSTEM LAYOUT**

PROJECT NO.  
SYD 0703900

DRAWING NO.  
F510

REVISION  
C

SCOPE OF WORKS


- The scope of the fire services works shall be for the complete works associated with the refurbishment and upgrade works and shall include and not be limited to the following:
- The provision of the required upgrade for the sprinklers system shall be carried out in accordance with AS2118.1-1995. In addition, during sprinklers upgrade works, fire services contractor shall provide temporary fire protection services to protect OH1 areas to BCA and Fire Authority requirements.
  - Where the existing sprinkler installation requires isolation during the works, fire service contractor shall seek the approval from the building management. Fire Service contractor shall provide adequate fire protection to BCA and fire authority during the disengagement of the sprinkler system.
  - New sprinkler heads to be pendant spray type standard response rated at 68 C° (match existing).
  - Sprinklers' pipework supports associated with the new pipework shall be carried out in accordance with AS2118.9.
  - Connect all relocated and new sprinkler heads to the existing sprinkler system and make good.
  - New sprinklers pipework shall be tested before connection to existing in accordance with AS2118.9. Test certificates to be issued by fire service contractor demonstrating test results to the superintendent.
  - All Works to be carried out in a professional manner and finished to Architectural requirements.
  - Coordinate fire services with other building services trades.
  - All cabling shall be new and run in PVC conduits where ever exposed.
  - Carbon Dioxide Portable Fire Extinguishers must be provided as listed in Table E1.6 of the BCA and must be selected, located and distributed in accordance with sections 1, 2.3, and 4 of AS2444.
  - Install new EMS cone speakers in accordance with AS2220.1&2-1999 and connect to the existing EMS system, taking into account upgrading the amplifiers if required to accommodate the new installed speakers and adjust the dB level.
  - Modify Zion AS2 FIP located at Fire Control Room in ground floor level as required.
  - Modify and upgrade Zion EMS ( amplifiers ) panel located at Fire Control Room in ground floor level as required.
  - Provide labels to associated equipment within this scope of works.
  - Certification of the installed work for compliance with BCA, AS1668.1-1999, AS2220.1&2-1999 (Adm 2), and AS 2118.1-1995 provided in format fire safety certificate (form 15).


CONSTRUCTION





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| 09.11.07 | A   | CONSTRUCTION ISSUE         | GM | WZA  |
| 20.11.07 | B   | REVISED CONSTRUCTION ISSUE | GM | WZA  |
| 04.11.07 | C   | REVISED CONSTRUCTION ISSUE | GM | WAZA |
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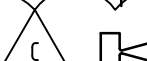
LEGEND


- 


FIRE EXTINGUISHER NEW  
C - CARBON DIOXIDE
- 

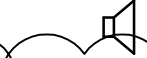
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C - CARBON DIOXIDE  
D - DRY CHEMICAL  
S - WATER
- 


WARDEN INTERCOM EXISTING
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FLASHING STROBE LIGHT NEW
- 


HORN SPEAKER NEW
- 


HORN SPEAKER EXISTING
- 

CONE SPEAKER NEW
- 

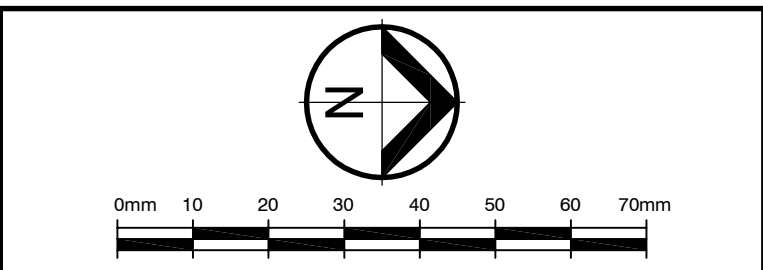
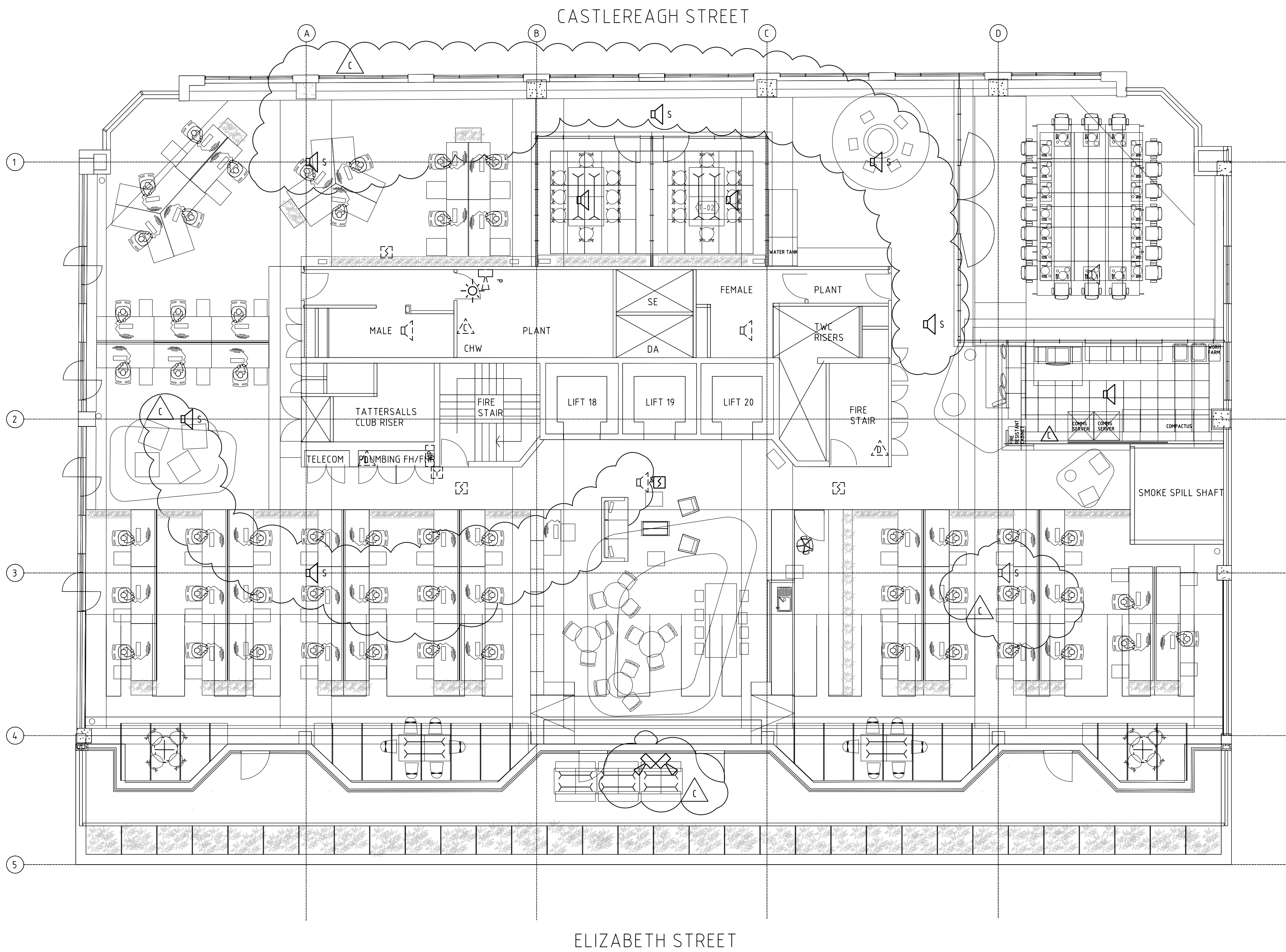
SPEAKER NEW SURFACE MOUNTED
- 

CONE SPEAKER EXISTING  
REPLACE EXISTING CONE SPEAKERS WITH CEILING  
RECESSED SPEAKER IN OPEN AREAS.
- 

SMOKE DETECTOR EXPOSED NEW
- 

SMOKE DETECTOR EXPOSED EXISTING
- 

MANUAL CALL POINT EXISTING



| REFERENCE COORDINATION DRAWINGS |             |     |      |
|---------------------------------|-------------|-----|------|
| DESCRIPTION                     | DRAWING NO. | REV | CHKD |
|                                 |             |     |      |

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PROJECT  
**LEVEL 15**  
**179 ELIZABETH STREET**  
**SYDNEY NSW 2000**

CLIENT  
GBCA

|            |                          |          |     |
|------------|--------------------------|----------|-----|
| DATE       | 04.10.07                 | DRAWN    | GM  |
| SCALE      | 1:100                    | CHECKED  | WZA |
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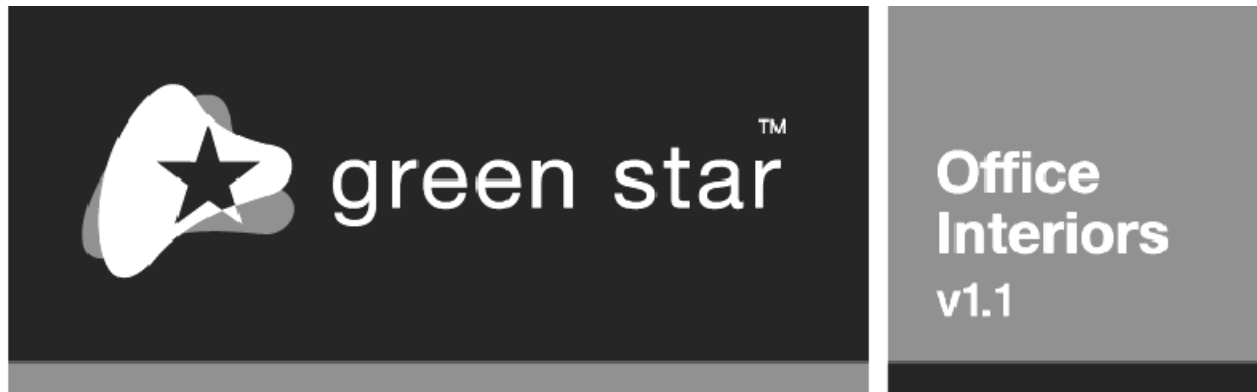
TITLE  
**FIRE SERVICES**  
**179 ELIZABETH STREET**  
**DRY FIRE SYSTEM LAYOUT**

PROJECT NO.  
SYD 0703900

DRAWING NO.  
F520

REVISION  
C

CONSTRUCTION



**The Green Building Council of Australia (GBCA) recommends that you use this rating tool in conjunction with the Green Star - Office Interiors v1.1 Technical Manual. To obtain a copy, please see [www.gbcaus.org](http://www.gbcaus.org).**

Green Star - Office Interiors evaluates the environmental initiatives and/or the potential environmental impact of a Class 5 office tenancy fitout. It was developed primarily to assess an office tenancy fitout once construction is completed, however it should also be used during the fitout design phase to ensure green initiatives are incorporated at the earliest possible stage.

You are invited to use Green Star - Office Interiors to predict a Green Star rating. The GBCA does not endorse any self-assessed rating and you are forbidden from presenting self-assessment results in the public domain. The GBCA offers a formal certification process for ratings of Four Stars and above; this service provides for independent third party review of points claimed to ensure all points can be demonstrated to be achieved by the provision of the necessary documentary evidence. The use of Green Star - Office Interiors without formal certification by the GBCA does not entitle the user or any other party to promote a Green Star rating publicly.

**Use the tabs at the bottom of the pages to navigate.**

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## Introduction to Green Star

### What is Green Star?

### What does Green Star - Office Interiors do?

### Who can use Green Star - Office Interiors?

### What do Green Star ratings mean?

### Acknowledgements



### What is Green Star?

The Green Star environmental rating system for buildings was developed by the Green Building Council of Australia (GBCA). Green Star is Australia's first comprehensive rating system for evaluating the environmental design and performance of Australian buildings based on a number of criteria, including energy and water efficiency, indoor environment quality and resource conservation.

Green Star has built on existing systems and tools in overseas markets, including the British BREEAM (Building Research Establishment Environmental Assessment Method) system and the North American LEED (Leadership in Energy and Environmental Design) system, by establishing individual environmental measurement criteria relevant to the Australian marketplace and environmental context.

The Green Star rating system was created to:

- define green building by establishing a common language and standard of measurement;
- promote integrated, whole-building design;
- identify building life-cycle impacts;
- raise awareness of green building benefits;
- recognise and reward environmental leadership; and
- transform the built environment to reduce the environmental impact of development.

### What does Green Star - Office Interiors do?

Green Star - Office Interiors evaluates the environmental initiatives and/or the potential environmental impact of a Class 5 office tenancy fitout. It was developed primarily to assess an office tenancy fitout once construction is completed, however it should also be used during the fitout design phase to ensure green initiatives are incorporated at the earliest possible stage.

### Who can use Green Star - Office Interiors?

Green Star - Office Interiors should be used by Class 5 office tenancy fitout project stakeholders as a guide for green and sustainable design and resource use. The rating tool can assess a tenancy fitout post-construction, however it can also be used during the fitout design phase to ensure green initiatives are incorporated at the earliest possible stage. The use of Green Star - Office Interiors is encouraged on all such projects to assess and improve their environmental design attributes.

The GBCA recommends that you use this rating tool in conjunction with the Green Star - Office Interiors v1.1 Technical Manual. To obtain a copy, see [www.gbcaus.org](http://www.gbcaus.org).



The use of Green Star – Office Interiors without formal certification by the GBCA does not entitle the user or any other party to promote the Green Star rating achieved. No fee is payable to the GBCA for such use, however formal recognition of the Green Star rating - and the right to promote same - requires undertaking the formal certification process offered by the GBCA.

All Green Star rating tools are reviewed annually; please forward any feedback to [greenstar@gbcaus.org](mailto:greenstar@gbcaus.org) by 30 November each year.

### What do Green Star ratings mean?

Green Star rating tools use six stars to measure performance. Projects that obtain a predicted rating of one, two or three stars are not eligible for formal certification. Projects that obtain a predicted 4 Star rating (or above) or above are eligible to apply for formal certification, whereby a:

- 4 Star Green Star Certified Rating recognises and rewards "Best Practice";
- 5 Star Green Star Certified Rating recognises and rewards "Australian Excellence"; and
- 6 Star Green Star Certified Rating recognises and rewards "World Leadership".

The first step in registering a project for formal certification is to contact the GBCA's Technical Manager via e-mail at [greenstar@gbcaus.org](mailto:greenstar@gbcaus.org).

Again, the use of Green Star - Office Interiors without formal certification by the GBCA does not entitle the user or any other party to promote a Green Star rating publicly.

### Acknowledgements

The GBCA is very grateful to all parties who contributed monies, content, time and effort in the development of the Green Star rating system and its rating tools.

Green Star – Office Interiors was very generously sponsored by the following GBCA members: the Sustainable Energy Authority Victoria, the office furniture designer and manufacturer Wilkhahn Asia Pacific and the US-based philanthropic organisation the Flora Family Foundation.

Green Star – Office Interiors was based on national and international guidelines, including the US LEED Green Building Rating System for Commercial Interiors, the Queensland Government's Sustainable Development Office Fitout Design Guidelines, Melbourne Docklands ESD Guide, and the Sydney Olympic Park Authority's Environmental Guidelines 1993. The support of the UK's Building Research Establishment is also acknowledged.



## How to use this tool

1. Complete the Building Input worksheet as the building's type and location may affect the predicted rating.
2. Complete the remaining worksheets by reviewing each credit in each category and entering the number of points you predict the building will achieve in the 'No. of Points Achieved' column. Calculators are provided for a number of the tool's credits.
3. Enter any points that may be achieved but need to be confirmed in the 'Points to be Confirmed' column.
4. Enter any comments required in the 'Comments' column.
5. The predicted rating is shown in the Summary worksheet. More detail on point scores (both achieved and those to be confirmed) are shown in the Credit Summary and Graphical Summary worksheets at the end of the tool.

### Limitations

The GBCA does not endorse any self-assessed rating achieved by the use of Green Star - Office Interiors. The GBCA offers a formal certification process for ratings of Four Stars and above; this service provides for independent third party review of points claimed to ensure all points can be demonstrated to be achieved by the provision of the necessary documentary evidence. The use of Green Star Office Interiors without formal certification does not entitle the user or any other party to promote the Green Star rating achieved.

The application of Green Star – Office Interiors to all Class 5 office tenancy fitout projects is encouraged to assess and improve their environmental design attributes. No fee is payable to the GBCA for such use, however again formal recognition of the Green Star rating - and the right to promote same - requires undertaking the formal certification process offered by the GBCA.



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Green Star and Green Star - Office Interiors have been developed with the assistance and participation of representatives from many organisations. The views and opinions expressed have been determined upon by the GBCA and its Committees.

Together, Green Star, Green Star - Office Interiors and all accompanying documentation represent the GBCA's approved standard to improve the environmental impact of buildings using established and/or advanced industry principles, practices, materials and standards.

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**The application of Green Star - Office Interiors to all Class 5 office tenancy fitouts projects is encouraged to assess and improve their environmental design attributes. No fee is payable to the GBCA for such use, however again formal recognition of the Green Star rating - and the right to promote same - requires undertaking the formal certification process offered by the GBCA.**

**You are only authorised to proceed to use Green Star and Green Star – Office Interiors on this basis.**

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## Green Star - Office Interiors

### Building Input WorkSheet

|                              |                        |
|------------------------------|------------------------|
| New or Refurbished Building: | Refurbished Building ▼ |
|------------------------------|------------------------|

|                      |                                |
|----------------------|--------------------------------|
| Name of Building:    | Level 15, 179 Elizabeth Street |
| Address of Building: | 179 Elizabeth Street           |
|                      | Sydney                         |
| Postcode:            | 2000                           |
| State:               | NSW ▼                          |

|                 |            |
|-----------------|------------|
| Applicant:      | GBCA       |
| Contact Person: | Joe Karten |

|                                     |            |
|-------------------------------------|------------|
| Green Star Accredited Professional: | Joe Karten |
|-------------------------------------|------------|

|                             |                |
|-----------------------------|----------------|
| Project Manager:            | Davis Langdon  |
| Architect:                  | BVN            |
| Structural/Civil Engineer:  | Lincolne Scott |
| Building Services Engineer: | Lincolne Scott |
| Quantity Surveyor:          | Davis langdon  |
| Acoustic Consultant:        |                |
| Landscaping Consultant:     |                |
| Building Surveyor:          |                |
| Main Contractor:            | Schiavello     |
| Local Planning Authority:   |                |

|   |     |
|---|-----|
| Net Lettable Area (NLA) in m <sup>2</sup> : | 804 |
| No. of Levels:                              | 1   |

**Please note, eligibilty criteria apply to projects that wish to undergo certification under this rating tool. Please refer to [www.gbcaus.org](http://www.gbcaus.org) for further detials.**

|   |  |
|---|--|
| Building Description:<br>(Orientation, Form, Structure, Façade, etc.) |  |
|---|--|

|  |  |
|--|--|
| Building Services:<br>(Heating, Cooling, Ventilation, Lighting, Lifts, Domestic Hot Water) |  |
|--|--|

|                        |           |
|------------------------|-----------|
| Date:                  | 14-Nov-07 |
| Current Project Phase: |           |

|  |
|--|
| <b>NB Use of Green Star - Office Interiors may predict a rating that differs from that achieved via formal Green Star certification. Detailed guidance on credit compliance criteria is contained in the Green Star - Office Interiors Manual.</b> |
|--|

## Green Star - Office Interiors

Credit Summary for: Level 15, 179 Elizabeth Street

### Management

| Ref No. | Title                                 | Aim of Credit  | Credit Criteria Summary  | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments |  |
|---------|---------------------------------------|--|--|-------------------------|------------------------|------------------------|----------|--|
| Man-1   | Green Star Accredited Professional    | To encourage and recognise the adoption of sustainable development principles from the earliest project stages throughout design and construction.           | Two points are awarded where it is demonstrated that at least one principal participant of the tenancy fitout design team is a Green Star Accredited Professional and is engaged to provide sustainability advice throughout the design and delivery period.   | 2                       | 2                      |                        |          |  |
| Man-2   | Tenancy Fitout Commissioning          | To encourage and recognise improved building services performance and energy efficiency through adequate commissioning.                                      | One point is awarded where it is demonstrated that comprehensive pre-commissioning, commissioning and quality monitoring were performed by the appropriate contractors and trades on-site (developed in accordance with relevant ASHRAE Guidelines and CIBSE Commissioning Codes) and were communicated to the tenant.<br>This credit is limited to items installed as part of the tenancy fitout and does not include base building services unless altered by the tenant. If no alterations to base building services are undertaken or no supplementary systems are installed this credit is 'Not Applicable' - type "na" in the 'No. of Points Achieved' column. | 1                       | 0                      |                        |          |  |
|         |                                       |  | An additional point is awarded where it is demonstrated that the tenancy fitout project team transferred commissioning information to the base building owner, including:<br>• Tenancy fitout buildings services design intent;<br>• Tenancy fitout as-installed information including commissioning data which impacts on any base building services; and<br>• Supplementary building services details and the commissioning report.  | 1                       | 0                      |                        |          |  |
| Man-3   | Commissioning - Tenancy Fitout Tuning | To encourage and recognise improved energy efficiency and comfort within the tenancy in all seasons due to adequate commissioning.                           | One point is awarded for tenancy fitouts greater than 1000m2 where it is demonstrated that a tenant is committed to 12 months' commissioning and tuning and reporting the commissioning outcomes to the building owner. Tuning is required at least quarterly and final recommissioning is required after 12 months.<br>If the fitout is less than 1000m2 or if only minor or no alterations to base building services are undertaken, or no supplementary building services are installed, then this credit is 'Not Applicable' - type "na" in the 'No. of Points Achieved' column.   | 0                       | na                     |                        |          |  |
| Man-4   | Tenant Guide                          | To encourage and recognise the provision of guidance to enable tenants to achieve the environmental performance envisaged by the tenancy fitout design team. | Three points are awarded where it is demonstrated that there is a Tenant Guide.  | 3                       | 3                      |                        |          |  |

|                |  |  |  |    |    |   |  |
|----------------|--|--|--|----|----|---|--|
| Man-5          | Environmental Management               | To encourage and recognise the adoption of an Environmental Management Plan in line with established government and industry guidelines during tenancy fitout works. | Up to four points are awarded as follows: <ul style="list-style-type: none"><li>• 2 points are awarded where it is demonstrated that the contractor implemented a comprehensive Environmental Management Plan for the works in accordance with Section 4 and Appendix C of the NSW Environmental Management System Guidelines (1998);</li><li>• 2 points are awarded where it is demonstrated that the contractor had ISO 14001:2004 Environmental Management System certification for the tenancy fitout.</li></ul> | 4  | 4  |   |  |
| Man-6          | Waste Management During Tenancy Fitout | To encourage and recognise initiatives that avoid construction and deconstruction waste going to landfill.   | Up to three points are awarded where it is demonstrated that the contractor has implemented a Waste Management Plan and achieved the following targets: <ul style="list-style-type: none"><li>• 1 point where 40% of waste by weight was re-used or recycled;</li><li>• 2 points where 60% of waste by weight was re-used or recycled;</li><li>• 3 points where 80% of waste by weight was re-used or recycled.</li></ul>  | 3  | 2  |   |  |
| Total Points = |  |  |  | 14 | 11 | 0 |  |



## Green Star - Office Interiors

Credit Summary Level 15, 179 Elizabeth Street

### Indoor Environment Quality

| Ref No. | Title                                 | Aim of Credit  | Credit Criteria Summary   | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments |  |
|---------|---------------------------------------|--|---|-------------------------|------------------------|------------------------|----------|--|
| IEQ-1   | Ventilation Rates                     | To encourage and recognise the provision of increased outside air rates in order to promote a healthy indoor environment.  | Up to three points are awarded where it is demonstrated that outside air is provided at rates that exceed the requirements of AS 1668.2-1991 OR if natural ventilation is provided.<br><b>Mechanically Ventilated Tenancy:</b><br><ul style="list-style-type: none"> <li>• 1 point for a 50% increase on AS 1668.2-1991;</li> <li>• 2 points for a 100% increase on AS 1668.2-1991;</li> <li>• 3 points for a 150% increase on AS 1668.2-1991.</li> </ul> <b>Naturally Ventilated Tenancy:</b><br><ul style="list-style-type: none"> <li>• 3 points where 90% of the NLA is naturally ventilated in accordance with AS 1668.2-2002.</li> </ul> <b>Mixed Mode Tenancy:</b><br>Both modes of operation must satisfy the relevant mechanical and natural ventilation criteria. The number of points awarded is limited to the maximum number of points available under the 'Mechanically Ventilated Tenancy' criteria.           | 3                       | 1                      |                        |          |  |
|         |                                       |  | If the ventilation points are achieved due to alterations to the base building as part of the tenancy fitout works, then an additional point is awarded. This additional point is only awarded if the base building would not have achieved the ventilation criteria above without the tenancy fitout works. If this improvement was not achieved the additional point is considered 'Not Applicable' - type "na" in the 'No. of Points Achieved' column.   | 1                       | 0                      |                        |          |  |
| IEQ-2   | Carbon Dioxide Monitoring and Control | To encourage and recognise the provision of improved indoor air quality by ensuring that the fresh air supply can be measured against the level of pollutants in the tenancy fitout space. | One point is awarded where it is demonstrated that ONE of the following conditions is met in the tenancy fitout:<br><ul style="list-style-type: none"> <li>• A carbon dioxide (CO<sub>2</sub>) monitoring system with a minimum of one CO<sub>2</sub> sensor per return duct in the tenancy fitout that facilitates continuous monitoring and adjustment of outside air ventilation rates for all enclosed spaces less than 100m<sup>2</sup> in area; OR</li> <li>• The HVAC systems used by the tenancy provide 100% outside air with no re-circulated component; OR</li> <li>• The floor area occupied by the tenancy fitout is entirely naturally ventilated.</li> </ul> The Credit Criteria may be satisfied through existing base building features and provisions OR through additional work undertaken as part of the tenancy fitout for the supplementary air systems being delivered to the tenancy's meeting rooms. | 1                       | 1                      |                        |          |  |
| IEQ-3   | Daylight                              | To encourage and recognise tenancy fitouts that provide good levels of natural light at the work setting and are located in buildings designed to optimise the provision of natural light. | Up to three points are awarded where it is demonstrated that a percentage of work settings are located on an area of the floor plate that has a Daylight Factor of >2.5% as measured at the finished floor level, as follows:<br><ul style="list-style-type: none"> <li>• 1 point = 30% of work settings;</li> <li>• 2 points = 60% of work settings;</li> <li>• 3 points = 90% of work settings.</li> </ul>  | 3                       | 0                      |                        |          |  |

|       |                            |  |  |   |   |  |  |
|-------|----------------------------|--|--|---|---|--|--|
| IEQ-4 | Daylight Glare Control     | To encourage and recognise tenancy fitouts that are designed to reduce the discomfort of glare from natural light.                               | Up to two points are awarded where it is demonstrated that glare is reduced, as follows:<br>• 1 point is awarded where automated blinds/screens with a Visual Light Transmittance (VLT) of less than 10% and a manual override function are installed by either the tenant or the base building owner to reduce glare associated with natural lighting and eliminate all direct sun penetration;<br>• 1 point is awarded where all workstation monitors provided as part of the tenancy fitout are flat-screen and are mounted on an adjustable arm that enables the monitor to be pivoted and adjusted horizontally and vertically. | 2 | 1 |  |  |
| IEQ-5 | High Frequency Ballasts    | To encourage and recognise the increase in workplace amenity by avoiding low frequency flicker that may be associated with fluorescent lighting. | One point is awarded where it is demonstrated that high frequency ballasts are installed in fluorescent luminaries over a minimum of 95% of the tenancy fitout's NLA.  | 1 | 1 |  |  |
| IEQ-6 | Electric Lighting Levels   | To encourage and recognise tenancy fitout office lighting that provides maximum opportunity for visual comfort.                                  | One point is awarded where it is demonstrated that the tenancy lighting achieves a maintained illuminance level of no more than 400 Lux for 95% of the NLA as measured at the working plane.<br>An additional point is awarded if a Two Component Lighting System (base lighting plus supplementary task lighting) is installed and the general lighting level has an average maintained illuminance of no more than 220 Lux for 80% of the NLA.   | 2 | 2 |  |  |
| IEQ-7 | External Views             | To encourage and recognise tenancy fitouts that allow long distance views and visual connection to the outdoors.                                 | Up to two points are awarded where it is demonstrated that a percentage of work settings have a direct line of sight through vision glazing, either externally or to an adequately sized and naturally lit internal atrium, as follows:<br>• 1 point = 60% of work settings;<br>• 2 points = 90% of work settings.<br>The distance to the nearest vision glazing is to be no more than eight metres.   | 2 | 2 |  |  |
| IEQ-8 | Individual Comfort Control | To encourage and recognise the provision of individual occupant thermal comfort controls.  | Up to two points are awarded where it is demonstrated that workstations enable individual control of the air supply rates, air temperature or radiant temperature to each workstation, as follows:<br>• 1 point where 60% of workstations enable individual control;<br>• 2 points where 90% of workstations enable individual control.  | 2 | 1 |  |  |
|       |                            |  | An additional point is awarded where the tenancy fitout works alter the existing base building's HVAC system to achieve at least one point above. Where the Credit Criteria is not achieved as a result of the tenancy fitout works this credit is 'Not Applicable' - type "na" in the 'No. of Points Achieved' column.  | 1 | 1 |  |  |
| IEQ-9 | Asbestos                   | To encourage and recognise actions taken to reduce health risks to occupants from the presence of hazardous materials.                           | One point is awarded where it is demonstrated that an asbestos survey has been carried out on the existing tenancy and all identified asbestos has been appropriately removed and disposed of as defined by the relevant environmental and Occupational Health and Safety (OH&S) legislation. This credit is 'Not Applicable' for new tenancy fitouts - type "na" in the 'No. of Points Achieved' column.  | 1 | 1 |  |  |



|                       |                            |   |   |           |           |          |  |
|-----------------------|----------------------------|---|---|-----------|-----------|----------|--|
| IEQ-10                | Internal Noise Levels      | To encourage and recognise tenancy fitouts that control internal noise levels to ensure occupant comfort.   | One point is awarded where it is demonstrated that ambient internal noise levels are 40-45 dBLAeq in general offices and 35-40 dBLAeq in private offices, with the tenancy ready for occupancy but unoccupied as per AS/NZS 2107:2000; AND Where a reverberation time (RT60) of 0.4-0.6 seconds for general offices and a RT60 of 0.6 - 0.8 seconds for private offices is achieved.  | 1         | 0         |          |  |
| IEQ-11                | Volatile Organic Compounds | To encourage and recognise tenancy fitouts that reduce the detrimental impact on occupant health from products that emit pollutants.                              | Up to eight points are awarded where it is demonstrated that benchmarks for low Volatile Organic Compound (VOC) content are met, as follows:<br><ul style="list-style-type: none"> <li>• 2 points where 95% of all painted surfaces are low-VOC paints (AELA 23-2005) or no paint is used;</li> <li>• 2 points where all carpets are low-VOC (US Carpet and Rug Institute Green Label) or no carpet is installed;</li> <li>• 2 points where all adhesives and sealants are low-VOC (South Coast Air Quality Management District (California, U.S.) Rule 1168) or no adhesives/sealants are used;</li> <li>• 2 points where all tenancy fitout items (workstations, walls/partitions, chairs, tables and storage units) are low-VOC (US EPA's Environmental Technology Verification test method). Refer to the Technical Manual for emissions standards).</li> </ul> | 8         | 6         |          |  |
| IEQ-12                | Formaldehyde Minimisation  | To encourage and recognise tenancy fitouts that reduce the use of high formaldehyde emission composite wood products.   | Up to two points are awarded where it is demonstrated that all composite wood products meet the following benchmarks:<br><ul style="list-style-type: none"> <li>• 1 point where low formaldehyde emission (E1 limit under EN 13986:2004 OR no greater than 0.05ppm after 28 days under EN 717-1:2004) composite wood products are used;</li> <li>• 2 points where low formaldehyde emission (F4Star under JIS A 5905:2003) OR no composite wood products are used.</li> </ul>   | 2         | 1         |          |  |
| IEQ-13                | Air Supply Ductwork        | To encourage and recognise tenancy fitouts that reduce the detrimental impact on occupant health from residual materials within the existing air supply ductwork. | One point is awarded where it is demonstrated that all accessible supply air ductwork has been cleaned to remove dust, dirt and mould prior to occupancy. If the ductwork is new or the fitout does not include ductwork this credit is 'Not Applicable' - type "na" in the 'No. of Points Achieved' column.  | 1         | 1         |          |  |
| IEQ-14                | Tenant Exhaust             | To encourage and recognise tenancy fitouts that reduce the detrimental impact on occupant health from equipment related sources of internal air pollutants.       | One point is awarded where it is demonstrated that all print/photocopy rooms are enclosed and have a dedicated and separate exhaust facility. The exhaust from the room(s) must not be connected to the return air duct and must comply with the requirements in AS 1668.2-2002.  | 1         | 1         |          |  |
| IEQ-15                | Indoor Plants              | To encourage and recognise the installation of indoor plants that improve indoor environment quality.   | Up to two points are awarded, as follows:<br>1 point is awarded where it is demonstrated that indoor plants are incorporated in the tenancy fitout and comply with the following requirements:<br><ul style="list-style-type: none"> <li>• The plant species are selected on the basis of their suitability to indoor environments;</li> <li>• A 'Horticultural Maintenance Plan' is in place (minimum two years) to ensure that the health of the plants is maintained; and</li> <li>• There is a minimum density of one large plant (300mm pot) or two small plants (200mm pot) per two work settings, distributed over the NLA.</li> </ul> 2 points are awarded where the above is demonstrated, but the plant density is increased to a minimum of one large plant or two small plants per work setting.  | 2         | 2         |          |  |
| <b>Total Points =</b> |                            |   |   | <b>34</b> | <b>22</b> | <b>0</b> |  |

## Green Star - Office Interiors

Credit Summary for: Level 15, 179 Elizabeth Street

### Energy

| Ref No.        | Title                   | Aim of Credit  | Credit Criteria Summary   | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments |  |
|----------------|-------------------------|--|---|-------------------------|------------------------|------------------------|----------|--|
| Ene-1          | Energy Efficiency       | To reduce tenancy operational energy and greenhouse gas emissions.   | It is a Conditional Requirement for obtaining a Green Star - Office Interiors Certified Rating that the tenancy fitout achieves a minimum predicted rating of Four Stars using the Australian Building Greenhouse Rating (ABGR) scheme's 'Validation Protocol for Tenancy Energy Estimation Version 2005-02'. This credit does not require the signing of an ABGR 'Commitment Agreement'. Any renewable energy generated by the tenant on-site can be included in the ABGR calculation. | Conditional Requirement | Yes                    |                        |          |  |
| Ene-2          | Energy Improvements     | To encourage and recognise tenancy fitouts that reduce operational energy consumption and greenhouse gas emissions over and above the Ene-1 Conditional Requirement. | Up to twelve points are awarded where there is an improvement in energy efficiency and greenhouse gas emissions above the conditional Four Star ABGR (refer to Ene-1). Points are awarded as follows:<br>• 3 points = 4.5 Star ABGR<br>• 6 points = 5 Star ABGR<br>• 9 points = 5 Star ABGR + 20% CO <sub>2</sub> reduction on 5 Star<br>• 12 points = 5 Star ABGR + 40% CO <sub>2</sub> reduction on 5 Star  | 12                      | 6                      |                        |          |  |
| Ene-3          | Electrical Sub-metering | To encourage and recognise the provision of energy sub-metering to facilitate tenant energy monitoring.  | One point is awarded where it is demonstrated that separate sub-metering is provided for tenancy lighting and small power consumption. Where the tenancy is greater than one floor this must be provided separately for each floor.   | 1                       | 1                      |                        |          |  |
|                |                         |  | An additional point is awarded where sub-metering is provided for substantive energy use greater than 25kVA within the tenancy, such as supplementary air conditioning for computer server rooms, meeting rooms or loads associated with server rooms. If there are no substantive energy uses above 25kVA then the additional point is considered to be 'Not Applicable' - type "na" in the 'No. of Points Achieved' column.   | 0                       | na                     |                        |          |  |
| Ene-4          | Office Lighting Zoning  | To encourage and recognise lighting initiatives that offer greater flexibility for light switching, making it easier to light occupied areas only.                   | One point is awarded where it is demonstrated that:<br>• All individual or enclosed spaces have separate switches;<br>• The size of individually switched lighting zones does not exceed 100sqm for 95% of tenancy; and<br>• Switches are clearly labelled, conveniently located and easily accessed by tenants.  | 1                       | 1                      |                        |          |  |
|                |                         |  | An additional point is awarded where the above is achieved and where an individually addressable lighting system is provided for 95% of the NLA.  | 1                       | 0                      | 0                      |          |  |
| Total Points = |                         |  |   | 15                      | 8                      | 0                      |          |  |

## Green Star - Office Interiors

Credit Summary Level 15, 179 Elizabeth Street

### Transport

| Ref No.               | Title              | Aim of Credit   | Credit Criteria Summary  | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments |  |
|-----------------------|--------------------|---|--|-------------------------|------------------------|------------------------|----------|--|
| Tra-1                 | Public Transport   | To encourage and recognise tenancies with proximity and good access to public transport networks that have frequent servicing.                                | Up to five points are awarded based on the proximity of the tenancy to public transport, the number of routes served, and the average frequency of service during the weekday two-hour morning peak commuting period and the two-hour afternoon peak commuting period.<br>The points are determined using the Public Transport Calculator.   | 5                       | 5                      |                        |          |  |
| Tra-2                 | Car Parking        | To encourage and recognise tenancies that promote the utilisation of alternative modes of transport by limiting available parking spaces.                     | Two points are awarded where the parking spaces allocated to the tenant are less than the maximum current local planning allowances (as at Development Approval), as follows:<br>• 1 point = at least 25% less than the maximum local planning allowances, or within 10% of the minimum local planning allowances if only a minimum is stipulated;<br>• 2 points = at least 50% less than the maximum local planning allowances, or no more than the minimum local planning allowances if only a minimum is stipulated.<br>Where car parking is not permitted in the local planning scheme this credit is 'Not Applicable' - type 'na' in the 'No. of Points Achieved' column.   | 2                       | 2                      |                        |          |  |
| Tra-3                 | Cyclist Facilities | To encourage and recognise tenancies that promote the use of bicycles by occupants by ensuring adequate cyclist facilities are provided in the base building. | Up to two points are awarded where it is demonstrated that the building includes cyclist facilities, as shown below.<br>1 point is awarded where there is adequate provision of cyclist facilities, as follows:<br>• secure bicycle storage for 5% of tenancy occupants (based on one person per 15m2 of the NLA); PLUS<br>• accessible showers (1 per 10 bicycle spaces provided or part thereof); PLUS<br>• changing facilities (with secure lockers – one for each bicycle space).<br>2 points are awarded where there is good provision of cyclist facilities, as follows:<br>• secure bicycle storage for 10% of all building occupants (based on one person per 15m2 of the NLA); PLUS<br>• accessible showers (1 per 10 bicycle spaces provided or part thereof); PLUS<br>• changing facilities (with secure lockers – one for each bicycle space). | 2                       | 0                      |                        |          |  |
|                       |                    |   | An additional point is awarded where the cyclist facilities were installed specifically for the tenancy fitout and were not pre-existing in the base building. Where the Credit Criteria are achieved due to pre-existing base building facilities this additional point is considered 'Not Applicable' - type 'na' in the 'No. of Points Achieved' column.  | 1                       | 0                      |                        |          |  |
| <b>Total Points =</b> |                    |   |  | <b>10</b>               | <b>7</b>               | <b>0</b>               |          |  |

## Green Star - Office Interiors

Credit Summary for:

Level 15, 179 Elizabeth Street

### Public Transport Calculator

| No. of Bus, Tram or Ferry Services                          |  |        |
|---|--|--------|
| Walking Distance from Building Entrance to Public Transport | Frequency of Service During Peak Periods |        |
|   | 15 min                                   | 30 min |
| 0-250m  |  |        |
| 250-500m  | 18                                       |        |
| 500-750m  |  |        |
| 750m-1km  |  |        |

| No. of Train Services                                       |  |        |
|---|--|--------|
| Walking Distance from Building Entrance to Public Transport | Frequency of Service During Peak Periods |        |
|   | 15 min                                   | 30 min |
| 0-250m  |  |        |
| 250-500m  |  |        |
| 500-750m  |  |        |
| 750m-1km  |  |        |

|                        |          |
|------------------------|----------|
| <b>Points Achieved</b> | <b>5</b> |
|------------------------|----------|

#### How to use the Calculator

1. Determine the number and type of public transport options within 1km of the building and the walking distance to each.
2. Determine the frequency of each service between 7.30am and 9.30am and between 4.30pm and 6.30pm from Monday to Friday (excluding public holidays) from current timetables.
3. Enter the number of services in each category in the tables above, based on type, distance and frequency.

#### Notes

1. If the site is within 15 minutes travel time (via a public transport connecting service with a frequency of no more than 30 minutes) of a public transport interchange then the services available from the interchange can be included in the Calculator with the following modifications:
  - the number of interchange services for each type and frequency to be entered in the tables above should be halved; and
  - the distance to the interchange services is equal to the distance from the site to the connecting service plus 250m.
2. If a public transport service terminates within 1km of the site then that service only counts as half of one service (i.e. enter 0.5 instead of 1 for that service).

Green Star - Office Interiors

Credit SummaryLevel 15, 179 Elizabeth Street

Water

| Ref No. | Title                    | Aim of Credit   | Credit Criteria Summary  | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments |  |
|---------|--------------------------|---|--|-------------------------|------------------------|------------------------|----------|--|
| Wat-1   | Potable Water Efficiency | To encourage and recognise the use of water efficient fittings and appliances that result in reduced potable water consumption. | Up to twelve points are awarded where it is demonstrated that the predicted potable water consumption for sanitary use by the tenant has been reduced. This is determined using the Potable Water Calculator, with points being awarded based on the type and rating of fixtures/fittings.   | 12                      | 12                     |                        |          |  |
|         |                          |   | One point is awarded where all dishwashers are 5A rated. If no dishwashers are installed as part of the tenancy fitout then this credit is 'Not Applicable' - type "na" in the 'No. of Points Achieved' column.  | 1                       | 0                      |                        |          |  |
|         |                          |   | An additional point is awarded for fitouts where base building water fixtures associated with the tenancy required replacement to gain more than six points using the Potable Water Calculator. If six points or less were achieved using the Potable Water Calculator, or no alteration to the base building water fittings and/or fixtures were made, then this point is considered 'Not Applicable' (type "na" in the 'No. of Points Achieved' column). | 1                       | 1                      |                        |          |  |
|         |                          |   | Total Points =   | 14                      | 13                     | 0                      |          |  |

# Green Star - Office Interiors v1.1

Tenancy Fitout:

Level 15, 179 Elizabeth Street

## Potable Water Calculator

|                     |    |
|---------------------|----|
| Number of Occupants | 60 |
|---------------------|----|

|                    |            |
|--------------------|------------|
| Hours of Operation | Standard ▼ |
|--------------------|------------|

### WATER CONSUMPTION DUE TO FITTINGS:

|                                   | Water Efficiency | Percentage of Each Type |
|-----------------------------------|------------------|-------------------------|
| <b>Toilets</b>                    |                  |                         |
|                                   | L/flush          |                         |
| Caroma Leda Invisi Suite 4.5/3    | 3.4              | 100%                    |
| <enter description here>          |                  |                         |
| <enter description here>          |                  |                         |
| <enter description here>          |                  |                         |
| <b>Urinal Flush Controls</b>      |                  |                         |
|                                   | L/flush          |                         |
| Caroma Cube3 0.8 Electronic Flush | 0.8              | 100%                    |
| <enter description here>          |                  |                         |
| <enter description here>          |                  |                         |
| <enter description here>          |                  |                         |
| Urinal flush on auto timer *      |                  |                         |
| <b>Taps</b>                       |                  |                         |
|                                   | L/min            |                         |
| Schell Petit Self-closing mixer   | 4.5              | 100%                    |
| <enter description here>          |                  |                         |
| <enter description here>          |                  |                         |
| <enter description here>          |                  |                         |

% of occupants served

Shower Demand: No showers installed ▼

|                          |  |       |    |
|--------------------------|--|-------|----|
| <b>Showerheads</b>       |  | L/min |    |
| Pre-existing             |  | 0     | 0% |
| <enter description here> |  |       |    |
| <enter description here> |  |       |    |
| <enter description here> |  |       |    |

|  |      |
|--|------|
| Total Water Consumption From Fittings (L/day/person) | 6.91 |
|--|------|

|                 |    |
|-----------------|----|
| Points Achieved | 12 |
|-----------------|----|

## Green Star - Office Interiors

Credit Summary Level 15, 179 Elizabeth Street

### Materials

| Ref No. | Title                | Aim of Credit   | Credit Criteria Summary  | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments |  |
|---------|----------------------|---|--|-------------------------|------------------------|------------------------|----------|--|
| Mat-1   | Workstations         | To encourage and recognise the selection of workstations that have a reduced environmental impact relative to available alternatives.         | Up to seven points are awarded where it is demonstrated that the workstations used in the tenancy fitout have a reduced environmental impact as determined by the Mat-1 Workstations Calculator. Maximum points can only be obtained if information about <u>all</u> the workstations in the tenancy fitout is provided.                         | 7                       | 6                      |                        |          |  |
| Mat-2   | Flooring             | To encourage and recognise the selection of flooring that has a reduced environmental impact relative to available alternatives.              | Up to five points are awarded where it is demonstrated that the flooring used in the tenancy fitout has a reduced environmental impact as determined by the Mat-2 Flooring Calculator. Maximum points can only be obtained if information about <u>all</u> the flooring in the tenancy fitout is provided.                                       | 5                       | 5                      |                        |          |  |
| Mat-3   | Walls and Partitions | To encourage and recognise the selection of walls and partitions that have a reduced environmental impact relative to available alternatives. | Up to two points are awarded where it is demonstrated that the area of built zones meets the following requirements: <ul style="list-style-type: none"> <li>• 1 point where built zones represent &lt; 15% of the NLA;</li> <li>• 2 points where built zones represent &lt; 5% of the NLA.</li> </ul>  | 2                       | 0                      |                        |          |  |
|         |                      |   | Up to three points are awarded where it is demonstrated that the walls and partitions used in the tenancy fitout have a reduced environmental impact as determined by the Mat-3 Walls and Partitions Calculator. Maximum points can only be obtained if information about <u>all</u> the walls and partitions in the tenancy fitout is provided. | 3                       | 3                      |                        |          |  |
| Mat-4   | Chairs               | To encourage and recognise the selection of chairs that have a reduced environmental impact relative to available alternatives.               | Up to three points are awarded where it is demonstrated that the chairs used in the tenancy fitout have a reduced environmental impact as determined by the Mat-4 Chairs Calculator. Maximum points can only be obtained if information about <u>all</u> the chairs in the tenancy fitout is provided.   | 3                       | 3                      |                        |          |  |

|        |  |  |  |   |   |  |  |
|--------|--|--|--|---|---|--|--|
| Mat-5  | Tables                                 | To encourage and recognise the selection of tables that have a reduced environmental impact relative to available alternatives.                                  | One point is awarded where it is demonstrated that the tables used in the tenancy fitout have a reduced environmental impact as determined by the Mat-5 Tables Calculator. Maximum points can only be obtained if information about <u>all</u> the tables in the tenancy fitout is provided.   | 1 | 1 |  |  |
| Mat-6  | Storage                                | To encourage and recognise the selection of storage units that have a reduced environmental impact relative to available alternatives.                           | One point is awarded where it is demonstrated that the storage units used in the tenancy fitout have a reduced environmental impact as determined by the Mat-6 Storage Calculator. Maximum points can only be obtained if information about <u>all</u> the storage units in the tenancy fitout is provided.  | 1 | 1 |  |  |
| Mat-7  | Joinery                                | To encourage and recognise the use of joinery that has a reduced environmental impact relative to available alternatives.  | One point is awarded where it is demonstrated that the joinery used in the tenancy fitout has a reduced environmental impact as determined by the Mat-7 Joinery Calculator. Maximum points can only be obtained if information about <u>all</u> the joinery in the tenancy fitout is provided.   | 1 | 1 |  |  |
| Mat-8  | Ceilings                               | To encourage and recognise the reduction of waste during tenancy fitout works.   | One point is awarded where it is demonstrated that:<br><ul style="list-style-type: none"> <li>The base building ceiling tiles are left intact with the exception of areas requiring removal due to the installation of tenant services; OR</li> <li>Work undertaken to ceiling tiles does not adversely impact on the base building ceiling grid, with tiles being retained for re-installation during 'make good' at the end of the tenancy; OR</li> <li>Where the tenancy fitout is in a building where there are no ceiling tiles.</li> </ul> | 1 | 0 |  |  |
| Mat-9  | Waste Management for Tenancy Operation | To encourage and recognise the inclusion of storage space that facilitates the recycling of resources used within the tenancy to reduce waste going to landfill. | Two points are awarded where it is demonstrated that waste management and recycling systems for typical office waste are included in the tenancy fitout, as follows:<br><ul style="list-style-type: none"> <li>1m<sup>2</sup> of designated recycling storage space per six work settings with monthly collections; or</li> <li>1m<sup>2</sup> of designated recycling storage space per 24 work settings with weekly collections.</li> </ul>  | 2 | 2 |  |  |
| Mat-10 | PVC Minimisation                       | To encourage and recognise the reduction of Poly Vinyl Chloride (PVC) products in Australian buildings.  | Up to two points are awarded where it is demonstrated that the total PVC content cost for major services elements (conduits & cables etc) is reduced by replacement with alternative materials, as follows:<br><ul style="list-style-type: none"> <li>1 point = 30% reduction by cost;</li> <li>2 points = 60% reduction by cost.</li> </ul> PVC that exists in the base building that is not being replaced should be excluded from the cost calculations.  | 2 | 0 |  |  |
| Mat-11 | Timber                                 | To encourage and recognise the specification of re-used timber products or timber from certified environmentally responsible forest management practices.        | Two points are awarded where it is demonstrated that all timber and composite timber products used in the tenancy fitout are sourced from either or a combination of the following:<br><ul style="list-style-type: none"> <li>Post-consumer re-used timber; or</li> <li>Forest Stewardship Council (FSC) Certified Timber.</li> </ul> If the material cost of timber represents less than 0.1% of the tenancy fitout's total contract value then this credit is 'Not Applicable' (type "na" in the 'No. of Points Achieved' column).             | 2 | 0 |  |  |



|                |    |    |   |  |
|----------------|----|----|---|--|
| Total Points = | 30 | 22 | 0 |  |
|----------------|----|----|---|--|

# Green Star - Office Interiors v1.1

Tenancy Fitout:

## Materials Calculators Output Sheet

### Points Allocation Summary

|                              | Workstations | Floor Coverings | Walls and Partitions | Chairs | Tables | Storage Units | Joinery | Total |
|------------------------------|--------------|-----------------|----------------------|--------|--------|---------------|---------|-------|
| Maximum No. Points Available | 7            | 5               | 3                    | 3      | 1      | 1             | 1       | 21    |
| Available Points*            | 7            | 5               | 3                    | 3      | 1      | 1             | 1       | 21    |
| Points Awarded**             | 6            | 5               | 3                    | 3      | 1      | 1             | 1       | 20    |

\*(based on fraction of items specified in the data input sheet compared to total specified within the fitout).

### Workstations

| Amount                      |    |
|-----------------------------|----|
| Total within Fitout         | 55 |
| Total from Data Input Sheet | 55 |
| Reused                      | 12 |
| Fixed                       | 0  |
| Loose                       | 43 |
| Environmentally Innovative  | 0  |

### Floor Coverings

| Amount                      |                    |
|-----------------------------|--------------------|
| Total within Fitout         | 804 m <sup>2</sup> |
| Total from Data Input Sheet | 804 m <sup>2</sup> |
| Reused                      | 0 m <sup>2</sup>   |
| Exposed Concrete            | 140 m <sup>2</sup> |
| Carpet                      | 0 m <sup>2</sup>   |
| Timber                      | 0 m <sup>2</sup>   |
| Resilient                   | 0 m <sup>2</sup>   |
| Ceramic/Stone               | 0 m <sup>2</sup>   |
| Other                       | 0 m <sup>2</sup>   |
| Environmentally Innovative  | 664 m <sup>2</sup> |

### Walls and Partitions

| Amount                      |      |
|-----------------------------|------|
| Total within Fitout         | 45 m |
| Total from Data Input Sheet | 45 m |
| Reused                      | 0 m  |
| New                         | 45 m |
| Environmentally Innovative  | 0    |

### Chairs

| Amount                      |     |
|-----------------------------|-----|
| Total within Fitout         | 148 |
| Total from Data Input Sheet | 148 |
| Reused                      | 44  |
| Task                        | 0   |
| Meeting Room                | 0   |
| Breakout Space              | 0   |
| Other                       | 0   |
| Environmentally Innovative  | 104 |

### Tables

| Amount                      |    |
|-----------------------------|----|
| Total within Fitout         | 21 |
| Total from Data Input Sheet | 21 |
| Composite Wood              | 18 |
| Environmentally Innovative  | 0  |
| Glass                       | 0  |
| Metal                       | 0  |
| Plastic                     | 0  |
| Reused                      | 3  |
| Timber                      | 0  |

### Storage Units

| Amount                      |    |
|-----------------------------|----|
| Total within Fitout         | 17 |
| Total from Data Input Sheet | 17 |
| Reused                      | 0  |
| Compactus                   | 0  |
| Composite Wood              | 0  |
| Timber                      | 0  |
| Metal                       | 0  |
| Other                       | 0  |
| Environmentally Innovative  | 17 |

### Joinery

| Amount                      |        |
|-----------------------------|--------|
| Total within Fitout         | 35.4 m |
| Total from Data Input Sheet | 35 m   |
| New                         | 35 m   |
| Reused                      | 0 m    |
| Environmentally Innovative  | 0 m    |

### Notes:

\* Points Available = number of items specified in the data input sheet x total items specified within the fitout

\*\* Points Awarded = Sum of the Weighted Score x Points Available.

\*\* Weighted Score = product score x (no of items/total items specified in the data input sheet).

# Green Star - Office Interiors v1.1

Tenancy Fitout:

## Mat-1 Workstations Calculator

Total Number of Workstations within the Fitout:

55 units

Points Awarded for this Credit

6

|    |                     |                              |                                  |                                | Resource Utilisation  |            | Management |                          |                    |        |           |                        |                     | Reusability |                          | Product Score (%) |
|----|---------------------|------------------------------|----------------------------------|--------------------------------|-----------------------|------------|------------|--------------------------|--------------------|--------|-----------|------------------------|---------------------|-------------|--------------------------|-------------------|
|    | Type of Workstation | Name of Workstation Supplier | Brief Description of Workstation | Number of Workstations (Units) | Eco Preferred Content | Durability | EMS?       | EMS ISO 14001 Certified? | EMS Includes?      |        |           |                        | Product Stewardship | Modular     | Designed for Disassembly |                   |
|    |                     |                              |                                  |                                |                       |            |            |                          | Waste Minimisation | Energy | Emissions | Materials Minimisation |                     |             |                          |                   |
| 1  | Loose               | Schiavello                   | Marina Workstation               | 43                             | <5%                   | ≥10yrs     | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | Yes         | ≥90%                     | 83                |
| 2  | Reused              | GBCA                         | Re-use of client's existing wksn | 12                             |                       |            |            |                          |                    |        |           |                        |                     |             |                          | 100               |
| 3  |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 4  |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 5  |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 6  |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 7  |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 8  |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 9  |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 10 |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 11 |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 12 |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 13 |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 14 |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 15 |                     |                              |                                  |                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |

Notes:

Workstations are assessed across three environmental impact categories, as follows:

- 'Resource Utilisation' which assesses the workstation's:
  - Eco Preferred Content (EC); and
  - Durability (DU).
- 'Management' which assesses:
  - the workstation manufacturer's Environmental Management System (EMS); and
  - Product Stewardship (PS).
- 'Reusability' which assesses whether the workstation is:
  - Modular (MO); and/or
  - Designed for Disassembly (DD).

Each of the environmental impact categories are weighted equally:

Total Score = EC + DU + EMS + PS + MO + DD.

Total Score therefore = 10 + 10 + 10 + 10 + 10 + 10

The number of points determined by the Mat-1 Workstations Calculator is based on the Total Score out of 60 for each workstation which is weighted according to the number of that workstation type as a fraction of total number of workstations.

The number of points is automatically calculated and appears in the Materials Calculators Output Sheet.

# Green Star - Office Interiors v1.1

Tenancy Fitout:

## Mat-2 Flooring Calculator

Total Floor Area within the Fitout:

804 m<sup>2</sup>

Points Awarded for this Credit

5

|    |                            |                           |                                |                                    | Resource Utilisation  |            | Management |                          |                    |        |           |                        |                     | Reusability |                          | Product Score (%) |
|----|----------------------------|---------------------------|--------------------------------|------------------------------------|-----------------------|------------|------------|--------------------------|--------------------|--------|-----------|------------------------|---------------------|-------------|--------------------------|-------------------|
|    | Type of Flooring           | Name of Flooring Supplier | Brief Description of Flooring  | Area of Flooring (m <sup>2</sup> ) | Eco Preferred Content | Durability | EMS?       | EMS ISO 14001 Certified? | EMS Includes?      |        |           |                        | Product Stewardship | Modular     | Designed for Disassembly |                   |
|    |                            |                           |                                |                                    |                       |            |            |                          | Waste Minimisation | Energy | Emissions | Materials Minimisation |                     |             |                          |                   |
| 1  | Environmentally Innovative | InterfaceFLOOR            | Carpet Tile                    | 664                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          | 100               |
| 2  | Exposed Concrete           | Agar Cleaning             | Sealed Existing Concrete Floor | 140                                |                       |            |            |                          |                    |        |           |                        |                     |             |                          | 100               |
| 3  |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 4  |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 5  |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 6  |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 7  |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 8  |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 9  |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 10 |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 11 |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 12 |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 13 |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 14 |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |
| 15 |                            |                           |                                |                                    |                       |            |            |                          |                    |        |           |                        |                     |             |                          |                   |

Notes:

Flooring is assessed across three environmental impact categories, as follows:

- 'Resource Utilisation' which assesses the flooring's:
  - Eco Preferred Content (EC); and
  - Durability (DU).
- 'Management' which assesses:
  - the flooring manufacturer's Environmental Management System (EMS); and
  - Product Stewardship (PS).
- 'Reusability' which assesses whether the flooring is:
  - Modular (MO); and/or
  - Designed for Disassembly (DD).

Each of the environmental impact categories are weighted equally:

Total Score = EC + DU + EMS + PS + MO + DD.

Maximum Score = 10 + 10 + 10 + 10 + 10 + 10

The number of points determined by the Mat-2 Flooring Calculator is based on a total score out of 60 for each flooring type and then weighted according to the area of that flooring type as a fraction of total floor space.

The final score is provided in the Materials Calculators Output Sheet.

# Green Star - Office Interiors v1.1

Tenancy Fitout:

## Mat-3 Walls and Partitions Calculator

Total Length of Walls and Partitions within the Fitout

43.6

m

Points Awarded for this Credit

3

|    |                              |                                    |   |                                 | Resource Utilisation  |            | Management |                          |                    |        |           |                        |                     | Reusability |                          |    | Product Score (%) |
|----|------------------------------|------------------------------------|---|---------------------------------|-----------------------|------------|------------|--------------------------|--------------------|--------|-----------|------------------------|---------------------|-------------|--------------------------|----|-------------------|
|    | Type of Walls and Partitions | Name of Walls/ Partitions Supplier | Brief Description of Walls and Partitions | Length of Wall or Partition (m) | Eco Preferred Content | Durability | EMS?       | EMS ISO 14001 Certified? | EMS Includes?      |        |           |                        | Product Stewardship | Modular     | Designed for Disassembly |    |                   |
|    |                              |                                    |   |                                 |                       |            |            |                          | Waste Minimisation | Energy | Emissions | Materials Minimisation |                     |             |                          |    |                   |
| 1  | New                          | Schiavello                         | PT1 - MK10 System                         | 13.4                            | <5%                   | ≥10yrs     | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | Yes         | ≥90%                     | 83 |                   |
| 2  | New                          | Schiavello                         | PT2 - MK10 System                         | 21                              | <5%                   | ≥10yrs     | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | Yes         | ≥90%                     | 83 |                   |
| 3  | New                          | Schiavello                         | PT3 - MK10 System                         | 9.2                             | <5%                   | ≥10yrs     | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | Yes         | ≥90%                     | 83 |                   |
| 4  |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 5  |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 6  |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 7  |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 8  |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 9  |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 10 |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 11 |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 12 |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 13 |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 14 |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |
| 15 |                              |                                    |   |                                 |                       |            |            |                          |                    |        |           |                        |                     |             |                          |    |                   |

**Notes:**  
Walls and partitions are assessed across three environmental impact categories, as follows:  
• 'Resource Utilisation' which assesses the walls/partitions:  
• Eco Preferred Content (EC); and  
• Durability (DU).  
• 'Management' which assesses:  
• the walls/partitions manufacturer's Environmental Management System (EMS); and  
• Product Stewardship (PS).  
• 'Reusability' which assesses whether the walls/partitions are:  
• Modular (MO); and/or  
• Designed for Disassembly (DD).  
Each of the environmental impact categories are weighted equally:  
Total Score = EC + DU + EMS + PS + MO + DD.  
Maximum Score = 10 + 10 + 10 + 10 + 10 + 10  
The number of points determined by the Mat-3 Walls and Partitions Calculator is based on a total score out of 60 for each wall/partition ty and then weighted according to the length of wall/partition as a fraction of total walls/partitions.  
The final score is provided in the Materials Calculators Output Sheet.

Green Star - Office Interiors v1.1

Tenancy Fitout:

Mat-4 Chairs Calculator

Total Number of Chairs within the Fitout: 148 units Points Awarded for this Credit 3

|    |                            |                        |                            |                  | Resource Utilisation  |            | Management |                          |                    |        |           |                        |                     | Reusability              | Product Score (%) |
|----|----------------------------|------------------------|----------------------------|------------------|-----------------------|------------|------------|--------------------------|--------------------|--------|-----------|------------------------|---------------------|--------------------------|-------------------|
|    | Type of Chair              | Name of Chair Supplier | Brief Description of Chair | Number of Chairs | Eco Preferred Content | Durability | EMS?       | EMS ISO 14001 Certified? | EMS Includes?      |        |           |                        | Product Stewardship | Designed for Disassembly |                   |
|    |                            |                        |                            |                  |                       |            |            |                          | Waste Minimisation | Energy | Emissions | Materials Minimisation |                     |                          |                   |
| 1  | Reused                     | GBCA                   | R-C - 01 Task Chair        | 22               |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 2  | Environmentally Innovative | Wilkhahn               | C-01 FS Line Chair         | 24               |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 3  | Environmentally Innovative | Interstudio            | C-02 Zaishu Stool          | 14               |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 4  | Environmentally Innovative | ESO/Style craft        | C-03 Spark Chair           | 16               |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 5  | Environmentally Innovative | ESO/Style craft        | C-04 Plop Ottoman          | 4                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 6  | Environmentally Innovative | ESO/Style craft        | C-05 True Armchair         | 2                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 7  | Environmentally Innovative | ESO/Style craft        | C-06 Grow Chair            | 8                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 8  | Environmentally Innovative | ESO/Style craft        | C-07 Spark Chair           | 4                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 9  | Environmentally Innovative | ESO/Style craft        | C-08 Spark Chair           | 4                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 10 | Environmentally Innovative | ESO/Style craft        | C-09 Plop Ottoman          | 1                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 11 | Environmentally Innovative | ESO/Style craft        | C-10 Plop Ottoman          | 1                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 12 | Environmentally Innovative | ESO/Style craft        | C-11 Plop Ottoman          | 1                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 13 | Environmentally Innovative | ESO/Style craft        | C-12 Plop Ottoman          | 1                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
|    | Environmentally Innovative | ESO/Style craft        | C-13 Spark Chair           | 4                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 14 | Environmentally Innovative | Herman Miller          | C-14 Mirra Chair           | 20               |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 15 | Reused                     | GBCA                   | R-C - 03 Meeting Chair     | 7                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 16 | Reused                     | GBCA                   | R-C - 05 Task Chair        | 2                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
|    | Reused                     | Mitchell Rd            | R-C - 06 Lounge            | 1                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 17 | Reused                     | Vampt                  | R-C - 07 Cafe Chair        | 3                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 18 | Reused                     | Vampt                  | R-C - 08 Cafe Chair        | 3                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 19 | Reused                     | Vampt                  | R-C - 09 Cafe Chair        | 3                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |
| 20 | Reused                     | Mitchell Rd            | R-C - 10 Cafe Chair        | 3                |                       |            |            |                          |                    |        |           |                        |                     |                          | 100               |

Notes:  
Chairs are assessed across three environmental impact categories, as follows:  
• 'Resource Utilisation' which assesses the chairs':  
• Eco Preferred Content (EC); and  
• Durability (DU).  
• 'Management' which assesses:  
• the chair manufacturer's Environmental Management System (EMS); and  
• Product Stewardship (PS).  
• 'Reusability' which assesses whether the chairs are:  
• Designed for Disassembly (DD).  
Each of the environmental impact categories are weighted equally:  
Total Score = EC + DU + EMS + PS + DD.  
Maximum Score = 10 + 10 + 10 + 10 + 10  
The number of points determined by the Mat-4 Chairs Calculator are based on a total score out of 50 for each chair type and then weighted according to the number of that chair type as a fraction of total chairs.  
The final score is provided in the Materials Calculators Output Sheet.

# Green Star - Office Interiors v1.1

Tenancy Fitout:

## Mat-5 Tables Calculator

Total Number of Tables within the Fitout:

21 units

Points Awarded for this Credit

1

|    | Type of Table  | Name of Table Supplier | Brief Description of Table                   | Number of Tables | Resource Utilisation  |                  | Management |                          |                    |        |           |                        | Reusability         |                          | Product Score (%) |
|----|----------------|------------------------|--|------------------|-----------------------|------------------|------------|--------------------------|--------------------|--------|-----------|------------------------|---------------------|--------------------------|-------------------|
|    |                |                        |  |                  | Eco Preferred Content | Durability       | EMS        | EMS ISO 14001 Certified? | EMS Includes       |        |           |                        | Product Stewardship | Designed for Disassembly |                   |
|    |                |                        |  |                  |                       |                  |            |                          | Waste Minimisation | Energy | Emissions | Materials Minimisation |                     |                          |                   |
| 1  | Composite Wood | Schiavello             | T - 01 Marina Boardroom w/ castors 2600x1200 | 6                | ≥25%                  | ≥7yrs and <10yrs | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | ≥90%                     | 92                |
| 2  | Composite Wood | Schiavello             | T - 02 Marina meeting 2000x1200              | 2                | ≥25%                  | ≥7yrs and <10yrs | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | ≥90%                     | 92                |
| 3  | Composite Wood | Schiavello             | T - 03 Marina Computer Table 1600x600        | 1                | ≥25%                  | ≥7yrs and <10yrs | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | ≥90%                     | 92                |
| 4  | Composite Wood | Schiavello             | T - 04 Marina Meeting 900 dia.               | 2                | ≥25%                  | ≥7yrs and <10yrs | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | ≥90%                     | 92                |
| 5  | Composite Wood | Schiavello             | T - 05 Marina Meeting 1800x900               | 2                | ≥25%                  | ≥7yrs and <10yrs | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | ≥90%                     | 92                |
| 6  | Composite Wood | Schiavello             | T - 06 QED Cafe 900 dia.                     | 4                | ≥25%                  | ≥7yrs and <10yrs | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | ≥90%                     | 92                |
| 7  | Reused         | GBCA                   | T - 07 Reused                                | 1                |                       |                  |            |                          |                    |        |           |                        |                     |                          | 100               |
| 8  | Composite Wood | Schiavello             | T - 08 Marina Meeting 1200 dia.              | 1                | ≥25%                  | ≥7yrs and <10yrs | Yes        | Yes                      | Yes                | Yes    | Yes       | Yes                    | Yes                 | ≥90%                     | 92                |
| 9  | Reused         | GBCA                   | R - T - 01 Reused Café                       | 1                |                       |                  |            |                          |                    |        |           |                        |                     |                          | 100               |
| 10 | Reused         | Vampt                  | R - T - 03 Reused Coffee                     | 1                |                       |                  |            |                          |                    |        |           |                        |                     |                          | 100               |
| 11 |                |                        |  |                  |                       |                  |            |                          |                    |        |           |                        |                     |                          |                   |
| 12 |                |                        |  |                  |                       |                  |            |                          |                    |        |           |                        |                     |                          |                   |
| 13 |                |                        |  |                  |                       |                  |            |                          |                    |        |           |                        |                     |                          |                   |
| 14 |                |                        |  |                  |                       |                  |            |                          |                    |        |           |                        |                     |                          |                   |
| 15 |                |                        |  |                  |                       |                  |            |                          |                    |        |           |                        |                     |                          |                   |

**Notes:**

Tables are assessed across three environmental impact categories, as follows:

- 'Resource Utilisation' which assesses the tables':
  - Eco Preferred Content (EC); and
  - Durability (DU).
- 'Management' which assesses:
  - the table manufacturer's Environmental Management System (EMS); and
  - Product Stewardship (PS).
- 'Reusability' which assesses whether the tables are:
  - Designed for Disassembly (DD).

Each of the environmental impact categories are weighted equally:

Total Score = EC + DU + EMS + PS + DD.

Maximum Score = 10 + 10 + 10 + 10 + 10

The number of points determined by the Mat-5 Tables Calculator are based on a total score out of 50 for each table type and then weighted according to the number of that table type as a fraction of total tables.

The final score is provided in the Materials Calculators Output Sheet.

Green Star - Office Interiors v1.1

Tenancy Fitout:

Mat-6 Storage Calculator

Total Number of Storage Units within the Fitout: 17 Points Awarded for this Credit 1

|    |                            |                               |                                   |                         | Resource Utilisation  |            | Management |                          |                    |        | Reusability |                        | Product Score (%) |                     |                          |
|----|----------------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------|------------|------------|--------------------------|--------------------|--------|-------------|------------------------|-------------------|---------------------|--------------------------|
|    | Type of Storage Unit       | Name of Storage Unit Supplier | Brief Description of Storage Unit | Number of Storage Units | Eco Preferred Content | Durability | EMS?       | EMS ISO 14001 Certified? | EMS Includes?      |        |             |                        |                   | Product Stewardship | Designed for Disassembly |
|    |                            |                               |                                   |                         |                       |            |            |                          | Waste Minimisation | Energy | Emissions   | Materials Minimisation |                   |                     |                          |
| 1  | Environmentally Innovative | CSM                           | S-01 Tambour Storage Unit         | 16                      |                       |            |            |                          |                    |        |             |                        |                   |                     | 100                      |
| 2  | Environmentally Innovative | CSM                           | Compactus unit                    | 1                       |                       |            |            |                          |                    |        |             |                        |                   |                     | 100                      |
| 3  |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 4  |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 5  |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 6  |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 7  |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 8  |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 9  |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 10 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 11 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 12 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 13 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 14 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 15 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 16 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 17 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 18 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 19 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |
| 20 |                            |                               |                                   |                         |                       |            |            |                          |                    |        |             |                        |                   |                     |                          |

Notes:

Storage units are assessed across three environmental impact categories, as follows:

- 'Resource Utilisation' which assesses the storage unit's:
  - Eco Preferred Content (EC); and
  - Durability (DU).
- 'Management' which assesses:
  - the storage unit manufacturer's Environmental Management System (EMS); and
  - Product Stewardship (PS).
- 'Reusability' which assesses whether the storage unit is:
  - Designed for Disassembly (DD).

Each of the environmental impact categories are weighted equally:

Total Score = EC + DU + EMS + PS + DD.

Maximum Score = 10 + 10 + 10 + 10 + 10

The number of points determined by the Mat-6 Storage Calculator are based on a total score out of 50 for each storage unit type and then weighted according to the number of that storage unit type as a fraction of total tables.

The final score is provided in the Materials Calculators Output Sheet.



# Green Star - Office Interiors v1.1

145 Elizabeth Street  
Tel: 02 951 9611

## Mat-7 Joinery Calculator

Total Joinery within the Fitout 

35.4

 m Points Awarded 

1

|    |                 |                          |                                   |  | Resource Utilisation  | Reusability |                          | Product Score (%) |
|----|-----------------|--------------------------|-----------------------------------|--|-----------------------|-------------|--------------------------|-------------------|
|    | Type of Joinery | Name of Joinery Supplier | Brief Description of Joinery Type | Amount of Joinery Type (m <sup>2</sup> ) | Eco Preferred Content | Modularity  | Designed for Disassembly |                   |
| 1  | New             | Easy Rest                | J01 - Mobile unit                 | 4.3                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 2  | New             | Easy Rest                | J02 - Mobile Unit                 | 1.1                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 3  | New             | Easy Rest                | J03 - Mobile Unit                 | 1.6                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 4  | New             | Easy Rest                | J04 - Mobile caterer's unit       | 0.8                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 5  | New             | Easy Rest                | J05 - Reception/ café front       | 6  | <5%                   | Yes         | ≥90%                     | 67                |
| 6  | New             | Easy Rest                | J06 - Reception/ café back bench  | 5.4                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 7  | New             | Easy Rest                | J07 - Shelving unit               | 3.5                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 8  | New             | Easy Rest                | J08 - Boardroom Bench unit        | 6.5                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 9  | New             | Easy Rest                | J09 - Caterer's bemch             | 3.9                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 10 | New             | Easy Rest                | J10 - Meeting Room Unit           | 1.6                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 11 | New             | Easy Rest                | J11 - Services switch panel       | 0.2                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 12 | New             | Easy Rest                | J12 - Mobile unit                 | 0.5                                      | <5%                   | Yes         | ≥90%                     | 67                |
| 13 |                 |                          |                                   |  |                       |             |                          |                   |
| 14 |                 |                          |                                   |  |                       |             |                          |                   |
| 15 |                 |                          |                                   |  |                       |             |                          |                   |

**Notes:**  
Joinery is assessed across two environmental impact categories, as follows:  
• 'Resource Utilisation' which assesses the joinery's:  
    • Eco Preferred Content (EC); and  
• 'Reusability' which assesses whether the joinery is:  
    • Modular (MO); and/or  
    • Designed for Disassembly (DD).  
Each of the environmental impact categories are weighted equally:  
Total Score = EC + MO + DD.  
Maximum Score = 10 + 10 + 10  
The number of points determined by the Mat-7 Joinery Calculator is calculated based on a total score out of 30 for joinery and then weighted according to the amount of that type as a fraction of total joinery.

## Green Star - Office Interiors

Credit Summary Level 15, 179 Elizabeth Street

### Land Use & Ecology

| Ref No. | Title   | Aim of Credit   | Credit Criteria Summary   | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments |  |
|---------|---|---|---|-------------------------|------------------------|------------------------|----------|--|
| Eco-1   | Green Star - Office As Built Certified Building | To encourage and recognise the selection of buildings for tenancy that have a 4 Star Green Star – Office As Built Certified Rating or higher.   | Up to six points are awarded where the base building has a Green Star - Office As Built Certified Rating, as follows:<br>• 2 points for a 4 Star Green Star Certified Rating;<br>• 4 points for a 5 Star Green Star Certified Rating;<br>• 6 points for a 6 Star Green Star Certified Rating.   | 6                       | 0                      |                        |          |  |
| Eco-2   | Building Layout Efficiency                      | To encourage and recognise the selection of buildings for tenancy that have an efficient and flexible layout.   | Two points are awarded where it is demonstrated that Building Layout Efficiency is at least 85%.  | 2                       | 0                      |                        |          |  |
| Eco-3   | Building Environmental Management               | To encourage and recognise the selection of buildings for tenancy that incorporate environmental impact management.   | Up to three points are awarded where the building manager is contractually required to implement the following:<br>• Energy monitoring (quarterly minimum) and consumption reduction targets;<br>• Waste reduction/recycling monitoring (quarterly minimum) and landfill disposal reduction targets;<br>• Water monitoring (quarterly minimum) and consumption reduction targets;<br>• Regular maintenance in accordance with the AIRAH Guideline DA19 HVAC&R Maintenance;<br>• The use of low environmental impact cleaning products;<br>• The procurement of low environmental impact consumables (paints, light fittings, ceiling tiles, flooring etc).<br>One point is awarded for each two of the above requirements that are incorporated in the building management performance contract.  | 3                       | 2                      |                        |          |  |
| Eco-4   | Commitment to Building Performance              | To encourage and recognise the inclusion of lease clauses that align the interests of the building owner/manager and tenants and improve the environmental performance of the base building and occupied space. | Up to three points are awarded where the tenancy lease agreement requires the tenant to participate in the following environmental initiatives:<br>• Energy monitoring (minimum quarterly) and energy consumption reduction targets;<br>• Waste reduction/recycling monitoring (minimum quarterly) and landfill disposal reduction targets;<br>• Water monitoring (minimum quarterly) and water consumption reduction targets;<br>• The use of cleaning products that have a low environmental impact; and/or<br>• The procurement of consumables (i.e. paints, light fittings, ceiling tiles, flooring etc) that have a low environmental impact.<br>One point is awarded for two, two points are awarded for four, and three points are awarded for five of the above initiatives that are incorporated in the tenancy lease agreement. | 3                       | 3                      |                        |          |  |

|                       |                                     |   |   |           |          |          |  |
|-----------------------|-------------------------------------|---|---|-----------|----------|----------|--|
| Eco-5                 | Shell and Core or Integrated Fitout | To encourage and recognise the reduction of material waste during tenancy fitouts.                          | <p>Up to three points are awarded where it is demonstrated that a percentage of the tenancy fitout's NLA was fully integrated with the base building works or the base building works were shell and core only, as follows:</p> <ul style="list-style-type: none"> <li>• 1 point where 30% of the NLA meets the criteria;</li> <li>• 2 points where 60% of the NLA meets the criteria;</li> <li>• 3 points where 90% of the NLA meets the criteria.</li> </ul> <p>This credit applies to tenancy fitouts that are within a new base building construction or are part of an existing building refurbishment. All other building scenarios are considered 'Not Applicable' - type "na" in the 'No. of Points Achieved' column.</p> | 0         | na       |          |  |
| Eco-6                 | Building Conservation               | To encourage and recognise tenancy fitouts undertaken in existing buildings in preference to new buildings. | Two points are awarded where at least 75% of the tenancy fitout had previously been tenanted. If the fitout is integrated with the base building refurbishment at least 90% of the existing structure must be retained.   | 2         | 2        |          |  |
| <b>Total Points =</b> |                                     |   |   | <b>16</b> | <b>7</b> | <b>0</b> |  |

Green Star - Office Interiors

Credit SummaryLevel 15, 179 Elizabeth Street

Emissions

| Ref No.        | Title                                 | Aim of Credit   | Credit Criteria Summary   | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments |  |
|----------------|---------------------------------------|---|---|-------------------------|------------------------|------------------------|----------|--|
| Emi-1          | Refrigerant Ozone Depleting Potential | To encourage and recognise the use of refrigerants that do not contribute to ozone depletion.               | Up to two points are awarded where it is demonstrated that HVAC refrigerants in use have an Ozone Depletion Potential (ODP) of zero OR where no refrigerants are used, as follows: <ul style="list-style-type: none"><li>• 1 point = 95% of all refrigerants by volume have an ODP of zero;</li><li>• 2 points = 100% of all refrigerants by volume have an ODP of zero OR no refrigerants used.</li></ul> This credit only applies if refrigeration equipment has been installed by the tenant, otherwise the credit is 'Not Applicable' (type 'na' in the 'No. of Points Achieved' column). | 0                       | na                     |                        |          |  |
| Emi-2          | Insulation Ozone Depleting Potential  | To encourage and recognise the use of thermal insulation that avoids the use of ozone-depleting substances. | One point is awarded where it is demonstrated that the thermal insulation avoids the use of ozone-depleting substances in both its manufacture and composition. If no insulation has been installed by the tenant this credit is 'Not Applicable' (type 'na' in the 'Points Achieved' column).  | 1                       | 1                      |                        |          |  |
| Total Points = |                                       |   |   | 1                       | 1                      | 0                      |          |  |

## Green Star - Office Interiors

Credit Summary for: **The Greenhouse**

### Innovation

| Ref No.               | Title                                | Aim of Credit  | Credit Criteria Summary  | No. of Points Available | No. of Points Achieved | Points to be Confirmed | Comments  |
|-----------------------|--------------------------------------|--|--|-------------------------|------------------------|------------------------|---|
| Inn-1                 | Innovative Strategies & Technologies | To encourage and recognise the spread of innovative initiatives for building applications that improve a development's environmental impact                              | Up to five Innovation points are awarded at the discretion of the Green Building Council of Australia (GBCA) where it is demonstrated that an innovative strategy or technology is eligible for AusIndustry Research and Development tax concessions and has a significant environmental benefit. The application will be assessed by the GBCA against the following criteria:<br>* Does the application comply with AusIndustry Research and Development tax concessions requirements?<br>* What is the environmental benefit of the innovation?<br>More than one innovation can be submitted, however, the maximum points available for any one building assessment under Inn-1, Inn-2 and Inn-3 is five (total).                          | 5                       |                        |                        |   |
| Inn-2                 | Exceeding Green Star Benchmarks      | To encourage and recognise design initiatives that demonstrate additional environmental benefit by exceeding the current benchmarks in Green Star - Office Interiors.    | Up to five Innovation points are awarded at the discretion of the Green Building Council of Australia (GBCA) where it is demonstrated that the building exceeds, by a measurable margin, one or more existing Green Star – Office Interiors credit category criteria. The application will be assessed by the GBCA against the following criteria:<br>* How has the building initiative exceeded the benchmarks in the Green Star – Office Interiors rating tool?<br>* What is the measurable environmental benefit of the innovation?<br>More than one innovation can be submitted, however, the maximum points available for any one building assessment under Inn-1, Inn-2 and Inn-3 is five (total).                                     |                         |                        |                        |   |
| Inn-3                 | Environmental Design Initiatives     | To encourage and recognise design initiatives that have a significant measurable environmental benefit and that are not awarded points by Green Star – Office Interiors. | Up to five Innovation points are awarded at the discretion of the Green Building Council of Australia (GBCA) where it is demonstrated that a design feature provides a significant environmental benefit but is not awarded points under the Green Star – Office Interiors rating tool criteria. The application will be assessed by the GBCA against the following criteria:<br>* What is the measurable environmental benefit of the innovation?<br>* Which significant environmental benefits of the innovation have been addressed by Green Star – Office Interiors credits?<br>More than one innovation can be submitted but the maximum points available for any one building assessment under Inn-1, Inn-2 and Inn-3 is five (total). |                         |                        | 3                      | 1. Air change effectiveness from displacement ventilation.<br>2. TacTiles reduced environmental impact.<br>3. Tenant installed grey water system. |
| <b>Total Points =</b> |                                      |  |  | <b>5</b>                | <b>0</b>               | <b>3</b>               |   |

# Green Star - Office Interiors

Credit Summary for:

The Greenhouse

| Category                          | Title   | Credit No. | Points Available        | Points Achieved | Points to be Confirmed |
|-----------------------------------|---|------------|-------------------------|-----------------|------------------------|
| <b>Management</b>                 |   |            |                         |                 |                        |
|                                   | Green Star Accredited Professional              | Man-1      | 2                       | 2               | 0                      |
|                                   | Tenancy Fitout Commissioning                    | Man-2      | 1                       | 0               | 0                      |
|                                   | Commissioning - Tenancy Fitout Tuning           | Man-3      | 0                       | na              | 0                      |
|                                   | Tenant Guide                                    | Man-4      | 3                       | 3               | 0                      |
|                                   | Environmental Management                        | Man-5      | 4                       | 4               | 0                      |
|                                   | Waste Management During Tenancy Fitout          | Man-6      | 3                       | 2               | 0                      |
|                                   | <b>TOTAL</b>                                    |            | <b>14</b>               | <b>11</b>       | <b>0</b>               |
| <b>Indoor Environment Quality</b> |   |            |                         |                 |                        |
|                                   | Ventilation Rates                               | IEQ-1      | 3                       | 1               | 0                      |
|                                   | Carbon Dioxide Monitoring and Control           | IEQ-2      | 1                       | 1               | 0                      |
|                                   | Daylight  | IEQ-3      | 3                       | 0               | 0                      |
|                                   | Daylight Glare Control                          | IEQ-4      | 2                       | 1               | 0                      |
|                                   | High Frequency Ballasts                         | IEQ-5      | 1                       | 1               | 0                      |
|                                   | Electric Lighting Levels                        | IEQ-6      | 2                       | 2               | 0                      |
|                                   | External Views                                  | IEQ-7      | 2                       | 2               | 0                      |
|                                   | Individual Comfort Control                      | IEQ-8      | 2                       | 1               | 0                      |
|                                   | Asbestos  | IEQ-9      | 1                       | 1               | 0                      |
|                                   | Internal Noise Levels                           | IEQ-10     | 1                       | 0               | 0                      |
|                                   | Volatile Organic Compounds                      | IEQ-11     | 8                       | 6               | 0                      |
|                                   | Formaldehyde Minimisation                       | IEQ-12     | 2                       | 1               | 0                      |
|                                   | Air Supply Ductwork                             | IEQ-13     | 1                       | 1               | 0                      |
|                                   | Tenant Exhaust                                  | IEQ-14     | 1                       | 1               | 0                      |
|                                   | Indoor Plants                                   | IEQ-15     | 2                       | 2               | 0                      |
|                                   | <b>TOTAL</b>                                    |            | <b>34</b>               | <b>22</b>       | <b>0</b>               |
| <b>Energy</b>                     |   |            |                         |                 |                        |
|                                   | Energy Efficiency                               | Ene-1      | Conditional Requirement | Yes             | #VALUE!                |
|                                   | Energy Improvements                             | Ene-2      | 12                      | 6               | 0                      |
|                                   | Electrical Sub-metering                         | Ene-3      | 1                       | 1               | 0                      |
|                                   | Office Lighting Zoning                          | Ene-4      | 0                       | na              | 0                      |
|                                   | <b>TOTAL</b>                                    |            | <b>2</b>                | <b>1</b>        | <b>0</b>               |
| <b>Transport</b>                  |   |            |                         |                 |                        |
|                                   | Public Transport                                | Tra-1      | 5                       | 5               | 0                      |
|                                   | Car Parking                                     | Tra-2      | 2                       | 2               | 0                      |
|                                   | Cyclist Facilities                              | Tra-3      | 2                       | 0               | 0                      |
|                                   | <b>TOTAL</b>                                    |            | <b>1</b>                | <b>0</b>        | <b>0</b>               |
| <b>Water</b>                      |   |            |                         |                 |                        |
|                                   | Potable Water Efficiency                        | Wat-1      | 12                      | 12              | 0                      |
|                                   |   |            | 1                       | 0               | 0                      |
|                                   |   |            | 1                       | 1               | 0                      |
|                                   | <b>TOTAL</b>                                    |            | <b>14</b>               | <b>13</b>       | <b>0</b>               |
| <b>Materials</b>                  |   |            |                         |                 |                        |
|                                   | Workstations                                    | Mat-1      | 7                       | 6               | 0                      |
|                                   | Flooring  | Mat-2      | 5                       | 5               | 0                      |
|                                   | Walls and Partitions                            | Mat-3      | 5                       | 3               | 0                      |
|                                   | Chairs  | Mat-4      | 3                       | 3               | 0                      |
|                                   | Tables  | Mat-5      | 1                       | 1               | 0                      |
|                                   | Storage   | Mat-6      | 1                       | 1               | 0                      |
|                                   | Joinery   | Mat-7      | 1                       | 1               | 0                      |
|                                   | Ceilings  | Mat-8      | 1                       | 0               | 0                      |
|                                   | Waste Management for Tenancy Operation          | Mat-9      | 2                       | 2               | 0                      |
|                                   | PVC Minimisation                                | Mat-10     | 2                       | 0               | 0                      |
|                                   | Timber  | Mat-11     | 2                       | 0               | 0                      |
|                                   | <b>TOTAL</b>                                    |            | <b>30</b>               | <b>22</b>       | <b>0</b>               |
| <b>Land Use &amp; Ecology</b>     |   |            |                         |                 |                        |
|                                   | Green Star - Office As Built Certified Building | Eco-1      | 6                       | 0               | 0                      |
|                                   | Building Layout Efficiency                      | Eco-2      | 2                       | 0               | 0                      |
|                                   | Building Environmental Management               | Eco-3      | 3                       | 2               | 0                      |
|                                   | Commitment to Building Performance              | Eco-4      | 3                       | 3               | 0                      |
|                                   | Shell and Core or Integrated Fitout             | Eco-5      | 0                       | na              | 0                      |
|                                   | Building Conservation                           | Eco-6      | 2                       | 2               | 0                      |
|                                   | <b>TOTAL</b>                                    |            | <b>16</b>               | <b>7</b>        | <b>0</b>               |
| <b>Emissions</b>                  |   |            |                         |                 |                        |
|                                   | Refrigerant Ozone Depleting Potential           | Emi-1      | 0                       | na              | 0                      |
|                                   | Insulation Ozone Depleting Potential            | Emi-2      | 1                       | 1               | 0                      |
|                                   | <b>TOTAL</b>                                    |            | <b>1</b>                | <b>1</b>        | <b>0</b>               |
| <b>Sub-total weighted points:</b> |   |            | <b>65</b>               |                 | <b>0</b>               |
| <b>Innovation</b>                 |   |            |                         |                 |                        |
|                                   | Innovative Strategies & Technologies            | Inn-1      | 5                       | 0               | 0                      |

|                                  |       |   |   |   |
|----------------------------------|-------|---|---|---|
| Exceeding Green Star Benchmarks  | Inn-2 | 0 | 0 | 0 |
| Environmental Design Initiatives | Inn-3 | 0 | 0 | 3 |
|                                  | TOTAL | 5 | 0 | 3 |

**Total weighted points:**

**65**

**3**

Once certified this would equate to a Five Star rating.

The GBCA does not endorse any self-assessed rating achieved by the use of Green Star - Office Interiors. The GBCA offers a formal certification process for ratings of Four Stars and above; this service provides for independent third party review of points claimed to ensure all points can be demonstrated to be achieved by the provision of the necessary documentary evidence. The use of Green Star - Office Interiors without formal certification by the GBCA does not entitle the user or any other party to promote the Green Star rating achieved.

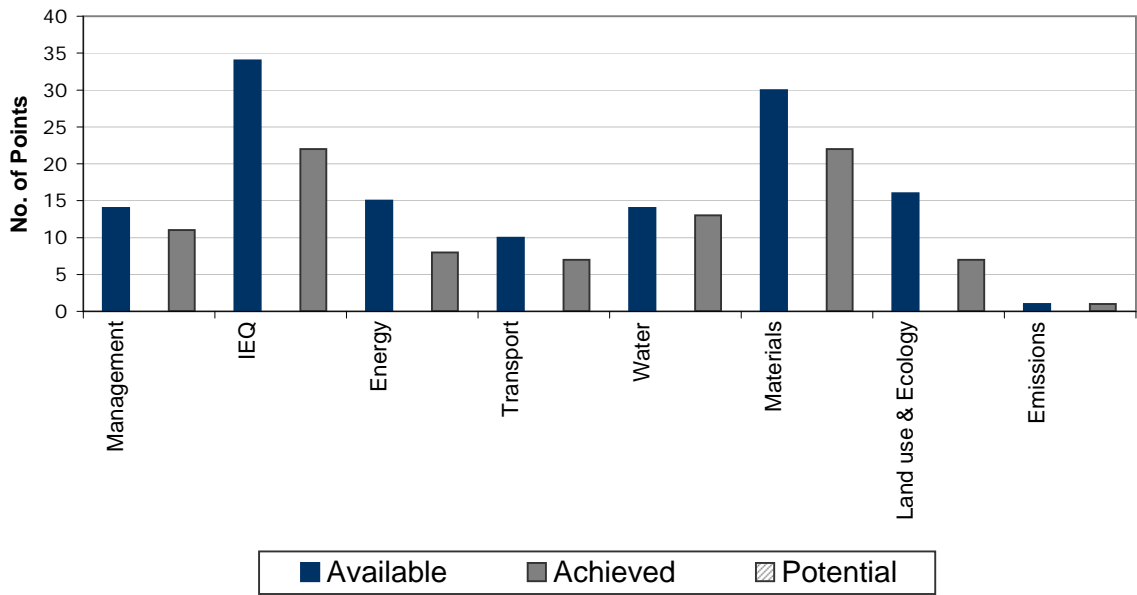
# Green Star - Office Interiors

Summary for Elizabeth Street 170 E

## Green Star Rating



## Points Achieved



## Category Scores

