



MONDAN
MANAGEMENT PTY LTD

Our Ref: J190315

16 April 2020

Liverpool City Council
Locked Bag 7064
LIVERPOOL BC NSW 1871

Attention: Customer Service

Dear Sir/Madam,

Subject: Complying Development Certificate No. J190315
Al-Faisal College – 83-87 Gurner Avenue, Austral

Reference is made to the application for a Complying Development Certificate in respect of the above property. In that regard we confirm that a Complying Development Certificate No. J190315 was issued on 16 April 2020 pursuant to Councils approvals policy.

Please note that works will not commence on site until Mondan Management have issued the Notice to Commence to Council.

Please find enclosed a CD containing all documentation assessed in the determination of the application.

Also please find enclosed a cheque for \$36.00 being the registration fee for the above.

Should you require any further information please contact the undersigned.

Yours faithfully,

Charbel Gabriel
for **Mondan Management Pty Ltd**

Cc: Al-Faisal College
 149 Auburn Road
 AUBURN NSW 2144



MONDAN
MANAGEMENT PTY LTD

Our Ref: J190315

16 April 2020

Al-Faisal College
149 Auburn Road
AUBURN NSW 2144

Attention: Shafiq Khan

Dear Shafiq,

Subject: Complying Development Certificate No. J190315
Al-Faisal College – 83-87 Gurner Avenue, Austral

Reference is made to the application for a Complying Development Certificate in respect of the above property. In that regard we confirm that a Complying Development Certificate No. J190315 was issued on 16 April 2020 pursuant to Councils approvals policy.

Please note that works will not commence on site until Mondan Management have issued the Notice to Commence to Council.

Please find enclosed a CD containing all documentation assessed in the determination of the application.

Should you require any further information please contact the undersigned.

Yours faithfully,

Charbel Gabriel
for **Mondan Management Pty Ltd**

Our Ref: J190315

16 April 2020

Al-Faisal College
149 Auburn Road
AUBURN NSW 2144

Attention: Shafiq Khan

Dear Shafiq,

Subject: Complying Development Certificate No. J190315
Al-Faisal College – 83-87 Gurner Avenue, Austral

We refer to our engagement in respect of the above and enclose the Complying Development Certificate for such works.

NOTE:

Please be advised that the issuing of this Complying Development Certificate does not authorise works to commence. Developer contributions under the Councils Section 94 or 94A policy are required to be made before works are authorised to commence.

In this regard the applicant is to attend Council after the CDC had been receipted by Council in order to allow the payment to be referenced against the specific development (allow 2 days minimum), upon the payment being made please forward a copy of the receipt to this office.

Once we have a copy of the receipt we will then forward to Council the Notice of Appointment of PCA and intention to commence works. Works cannot commence until 2 days after this notice has been provided to Council.

Mandatory inspection of works

The Environmental Planning and Assessment Act 1979 require that the inspections detailed below, known as Critical Stage Inspections, be carried out by the Principal Certifying Authority (PCA) or another Accredited Certifier with the prior consent of the PCA.

The provision of certificates in lieu of mandatory inspections (ie Engineer's or waterproofing certificates) is not acceptable at any time.

It is necessary for the following inspections to be carried out in relation to the proposed works.

Class 1 & 10 buildings

- After excavation for, and prior to the placement of, any footings, and
- Prior to pouring any in-situ reinforced concrete building element, and
- Prior to covering of the framework for any floor, wall, roof or other building element, and
- Prior to covering waterproofing in any wet areas, and
- Prior to covering stormwater drainage connections, and
- In the case of a swimming pool, as soon as practicable after the barrier (if one is required under the Swimming Pools Act 1992) has been erected,
- After the building work has been completed and prior to any occupation certificate being issued in relation to the buildings.

Class 2, 3 & 4 buildings or parts of building

- After the commencement of the excavation for, and before the placement of the first footing.
- Prior to covering of waterproofing in any wet areas, for a minimum of 10% of rooms with wet areas within a building, and
- Prior to covering any stormwater drainage connections, and
- In the case of a swimming pool, as soon as practicable after the barrier (if one is required under the Swimming Pools Act 1992) has been erected,
- After the building work has been completed and prior to any occupation certificate being issued in relation to the building.

Class 5-9 buildings or parts of buildings

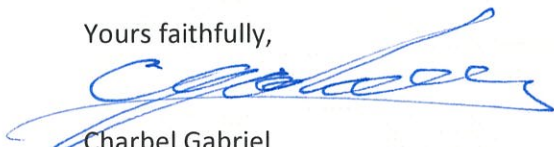
- After the commencement of the excavation for, and before the placement of the first footing.
- Prior to covering any stormwater drainage connections, and
- In the case of a swimming pool, as soon as practicable after the barrier (if one is required under the Swimming Pools Act 1992) has been erected,
- After the building work has been completed and prior to any occupation certificate being issued in relation to the building.

Builder to Arrange Critical Stage Inspections

The Principal Contractor for the building site is responsible for ensuring that the Principal Certifying Authority is given notice of at least **at least 48 hours** if a Critical Stage Inspection is required.

Should you require any further information please contact the undersigned.

Yours faithfully,



Charbel Gabriel
for **Mondan Management Pty Ltd**

COMPLYING DEVELOPMENT CERTIFICATE

CERTIFICATE NO. J190315

FOR

AL-FAISAL COLLEGE

PREMISES

83-87 GURNER AVENUE, AUSTRAL

DATE: 16 APRIL 2020

JOB NUMBER: J190315

MONDAN
MANAGEMENT PTY LTD**COMPLYING DEVELOPMENT CERTIFICATE**

Issued under the

Environmental Planning and Assessment Act 1979 – Division 3, Sections 84 – 87

Environmental Planning and Assessment Regulation 2000 – Part 7, Division 2

Property to which this certificate relates

Address 83-87 Gurner Avenue, AUSTRAL NSW 2179
Lot No 9 **DP** 1207216
Land Use Zone R2 – Low Density Residential

Applicant

Name Al-Faisal College
Address 149 Auburn Road, AUBURN NSW 2144

Description of Development

This Complying Development Certificate relates to construction of one level multipurpose hall and associated car parking to an existing school approved pursuant to State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017.

Building Classification 7a & 9b**Determination**

The determination of this Complying Development Certificate has been made on the basis of the documentation contained in the annexures to this certificate.

The determination of this Complying Development Certificate has been made under the provisions of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 and is subject to conditions listed in Annexure 2.

I Mariusz Para certify that the proposed development is a complying development (and if carried out as specified in the certificate) will comply with all development standards applicable to the development and with such other requirements prescribed by the Environmental Planning and Assessment Regulation 2000 concerning the issue of this certificate

Certificate Number J190315
Date of Endorsement 16 April 2020
The Date that this Certificate Lapses 16 April 2025

Signature
Accredited Certifier
Accredited Body
Registration No

Mariusz Para
Building Professionals Board
BPB1896

Fire Safety Measures That Form Part Of This Certificate

Issued in accordance with Clause 168 (1) (c) of the Environmental Planning and Assessment Regulation 2000

Fire Safety Measures

Fire Safety Measure	Status*			Minimum Standard of Performance
	N	E	M	
Automatic fire Suppression system (Carpark)	☒	☐	☐	Multi-Purpose Hall: BCA 2019 Clause E1.5, Specification E1.5 & AS 2118.1-2017.
Automatic fire detection and alarm system	☒	☒	☐	BCA Spec E2.2a Part 4 and AS 1670-2004 Multi-Purpose Hall: BCA 2019 Clause E2.2a, Specification E2.2a & AS 1670.1-2018.
Automatic shutdown air handling	☒	☐	☐	Multi-Purpose Hall: BCA 2019 Clause E2.3 NSW Table E2.2b.
Emergency lighting	☒	☒	☐	BCA Clause E4.2, E4.4 and AS 2293.1 Multi-Purpose Hall: BCA 2019 Clause E4.2 & E4.4 & AS 2293.1-2018.
Exit and directional signage	☒	☒	☐	BCA Clause E4.5, E4.6, E4.8 and AS 2293.1 Multi-Purpose Hall: BCA 2019 Clause E4.5, E4.6, E4.8 & AS 2293.1-2018.
Fire alarm monitoring system	☒	☐	☐	Multi-Purpose Hall: BCA 2019 Specification E2.2a & AS 1670.3-2018.
Fire blankets	☐	☒	☐	AS 2444, AS 3504 (1995)
Fire doorsets	☒	☒	☐	AS 1905.1-2005 Multi-Purpose Hall: BCA 2019 Clause C2.13, Specification C3.4 & AS 1905.1-2015.
Fire hydrant systems	☒	☒	☐	AS 2419.1 (2005) BCA Clause E1.3 Multi-Purpose Hall: BCA 2019 Clause E1.3 & 2419.1-2005.
Fire hose reel systems	☒	☒	☐	AS 2441 (2005) BCA Clause E1.4 Multi-Purpose Hall: BCA 2019 Clause E1.4 & 2441-2005.

Continued Fire Safety Measures

Fire seals (protecting openings and service penetrations in fire resisting components of the building)	☒	☐	☐	<u>Multi-Purpose Hall:</u> BCA 2019 Clause C3.15, Specification C3.15 & Manufacturer's specifications
Fire hazard properties – wall, floor, ceiling linings	☐	☒	☐	BCA 2010 Spec C1.10
Mechanical Air handling system	☒	☐	☐	<u>Multi-Purpose Hall:</u> BCA 2019 Clause E2.2, Table E2.2a, AS 1668.1-2015 & AS 1668.2-2012 (clause 5.5 car park exhaust operation)
Occupant warning system	☒	☒	☐	AS 1670.1, AS 1670.4 <u>Multi-Purpose Hall:</u> BCA 2019 Clause E2.2, Specification E2.2a (Clause 7) & AS 1670.1-2018.
Portable fire extinguishers	☒	☒	☐	BCA Clause E1.6 and AS 2444 <u>Multi-Purpose Hall:</u> BCA 2019 Clause E1.6 & AS 2444-2001.
Warning and operational signs	☒	☐	☐	<u>Multi-Purpose Hall:</u> BCA 2019 Clause D2.23, D3.6, E3.3 & Clause 183 of the Environmental Planning and Assessment Regulation 2000

SCHEDULE 1

Documentation assessed in the determination of Complying Development Certificate Application J190315.

Item	Documentation	Prepared by	Date
1.	Complying Development Application	Al-Faisal College	08 October 2019
2.	SEPP Conditions	-	-
3.	Structural Design Certificate	Complete Construction Engineering Pty Ltd	14 April 2020
4.	Sanitary Plumbing & Drainage Certificate	Complete Construction Engineering Pty Ltd	09 April 2020
5.	Mechanical Services Design Certificate	RMJ Engineering Pty Ltd	16 April 2020
6.	Fire Services Design Certificate	Main Frame Electrical	09 April 2020
7.	Record of Opinion – Fire Detection & Alarm System	Mondan Management Pty Ltd	16 April 2020
8.	Hydraulic Services Design Certificate	Complete Construction Engineering Pty Ltd	16 April 2020
9.	Record of Opinion – Fire Hose Reel, Automatic Fire Suppression System & Fire Hydrant	Mondan Management Pty Ltd	16 April 2020
10.	Civil & Stormwater Design Certificate	Complete Construction Engineering Pty Ltd	09 April 2020
11.	Traffic Impact Statement	Traffix	09 April 2020
12.	Section J Report	Max Brightwell	July 2019
13.	Site Survey Plan	-	-
14.	Registered Quantity Surveyors Cost Report	QPC & C Pty Limited	08 April 2020
15.	Building Plan Assessment	Sydney Water	09 April 2020
16.	Electrical Specification	JoEliane Electrical Engineer Consultant Pty Ltd	03 April 2020
17.	Acoustic Verification and Compliance Statement	Architecture Design Studio NSW Pty Ltd	16 April 2020
18.	Planning Report	R.J. Graham & Associates Pty Ltd	23 August 2019
19.	Pre-Issue Inspection Report	Vic Lilli & Partners	09 October 2019
20.	Receipt of Payment – Long Service Levy	Long Service Corporation	15 April 2020

Plans and Specification that form part of Complying Development Certificate:

Architectural documentation & specification as prepared by Architecture Design Studio (NSW) Pty Ltd

Drawing No.	Revision	Title	Date
0401	6	Site Plan	07.04.20
0990	7	General Arrangement Basement Plan	07.04.20
1000	7	General Arrangement Ground Floor Plan	07.04.20
1001	7	General Arrangement Upper Floor Plan	07.04.20
1002	7	General Arrangement Roof Plan	07.04.20
1501	7	GA Elevation North Elevation & South Elevation	07.04.20
1502	7	GA Elevation East Elevation & West Elevation	07.04.20
1601	7	GA Section	07.04.20

Structural documentation & specification as prepared by Complete Construction Engineering Pty Ltd

Drawing No.	Revision	Title	Date
S-0	8	General Construction Notes	31.03.20
S-1	8	RC Piers & Shoring Piles Plan	31.03.20
S-2	8	Footing Plan	31.03.20
S-3	8	RC Columns Plan	31.03.20
S-4	8	RC Slab Plan – UGCP Level	31.03.20
S-5	8	RC Beams Plan – Ground Floor	31.03.20
S-6	8	RC Slab Plan – Ground Floor Bottom Steel	31.03.20
S-7	8	RC Slab Plan – Ground Floor Top Steel	31.03.20
S-8	8	Sections and Details S-1	31.03.20
S-9	8	Sections and Details S-2	31.03.20
S-10	8	RC Slab – Mechanical Services, Sections and Details	31.03.20
S-11	8	Structural Columns Plan – Ground Floor	31.03.20
S-12	8	Structural Steel Plan – MPH – Lower Roof	31.03.20
S-13	8	Structural Steel Plan – MPH – Upper Roof	31.03.20
S-15	8	Sections, Connections and Details	31.03.20
S-16	8	Perspective Vies 1 & 2 – Structure	31.03.20
S-17	8	Perspective Vies 3 & 4 – Structure	31.03.20

Electrical documentation & specification as prepared by JoEliane Electrical Engineer Consultant Pty Ltd

Drawing No.	Revision	Title	Date
ES-01	1	Legend, General Notes and Drawing Index	10.12.19
ES-02	2	Single Line Diagram	03.04.20
ES-03	2	Car Park Basement Lighting and Power Layout	03.04.20
ES-04	3	Ground Floor Lighting Layout	03.04.20
ES-05	3	Ground Floor	03.04.20

Stormwater documentation & specification as prepared by Complete Construction Engineering Pty Ltd

Drawing No.	Revision	Title	Date
H-11	8	Stormwater Plan – Part 1	31.03.20
H-12	8	Stormwater Plan – Part 2	31.03.20

Wet Fire documentation & specification as prepared by Complete Construction Engineering Pty Ltd

Drawing No.	Revision	Title	Date
F-1	8	Wet Fire Protection System – Fire Sprinklers, Fire Hose Reels Plan	31.03.20
F-2	8	Wet Fire Protection System Ground Floor-MPH	31.03.20

Fire Services documentation & specification as prepared by Main Frame Electrical

Drawing No.	Revision	Title	Date
FS201	A	Fire Services Layout Basement	01.04.20
FS202	A	Fire Services Layout Ground Floor	01.04.20

Erosion & Sediment Control documentation & specification as prepared by Complete Construction Engineering Pty Ltd

Drawing No.	Revision	Title	Date
C-1	8	Erosion & Sediment Control Plan	31.03.20

Hydraulic documentation & specification as prepared by Complete Construction Engineering Pty Ltd

Drawing No.	Revision	Title	Date
H-1	8	Hydraulic Plan	31.03.20

Statutory Documentation



Application for a Complying Development Certificate

Information for the Applicant

- This form may be used to apply for a complying development certificate (a "CDC") to carry out development classed as "complying development". To complete this form, please place a cross in the relevant boxes, fill out the white sections as appropriate and attach copies of all documents indicated in the form as being required to be provided. To minimise delay in receiving a decision about the application, please ensure that all relevant information and documents are provided.
- Once completed, this application form should be submitted to a "certifying authority" for determination. Certifying authorities are either a private accredited certifier (which may be either an individual or a company) or the Local Council. A list of private accredited certifiers can be obtained from the Building Professionals Board at <http://www.bpb.nsw.gov.au/page/for-consumers/find-a-certifier/>
- It is recommended that applicants should obtain a planning certificate issued under S10.7 (previously known as s.149) Environmental Planning and Assessment Act 1979 from the Local Council and provide it to the certifying authority with this application. This may expedite the determination of the application.
- A single application for a CDC may be made for development comprising the concurrent construction of new single storey or two storey dwelling houses if each is to be erected on existing adjoining lots.
- If the certifying authority issues a CDC, the Applicant (or a subsequent owner of the land on which the development is proposed to be carried out) has permission to carry out the development without the need to obtain further development consent.

However, depending upon factors such as the type of development, the location of the development and whether there will be external work or activities involved (eg. road opening, use of footpath areas) there may still be a need to obtain other approvals in order for the work involved to be performed. A list of the possible additional approvals that may be required can be obtained from the Department of Planning at www.planning.nsw.gov.au. In order to avoid potential delays in commencing any work, Applicants should ascertain whether other approvals will be needed, and if so, the stage at which they will be required.

SECTION A: Details of the Applicant

Mr ☒ Ms ☐ Mrs ☐ Dr ☐ Other:

First name

SHAFIQ

Family name

KHAN

Company (if applicable)

AL-FAISAL COLLEGE

ABN (if applicable)

32082621092

Unit/Street no.

149

Street name

AUBURN ROAD

Suburb or town

AUBURN

State

NSW

Postcode

2144

Daytime telephone

(02) 8877 2000

Fax

—

Mobile

0409998000

Email

shafiq@afc.nsw.edu.au

SECTION B: Location and title details of the land where the development is to be carried out

Flat/street no.

83-87

Street name

GUERNER AVENUE

Suburb or town

AUSTRAL

Postcode

2179

Lot no.

9

Section

DP /SP no.

1207216

Volume/folio

SECTION C. Describe the development proposed to be carried out

Provide a brief description of the development. For example, if a dwelling is proposed, include information such as the type of building (house, townhouse, villa etc), the number of floors, the number of bedrooms, the major building material (brick, brick veneer, timber clad etc).

Construction of one level multipurpose hall and associated car parking to a existing school.

SECTION D. Estimated cost of the development

\$ 7,828,139.00

The contract price, or if there is no contract a genuine and accurate estimate, for all labour and material costs associated with all demolition and construction required for the development, including the cost of construction of any building and the preparation of a building for the purpose for which it is to be used (such as the costs of installing plant, fittings, fixtures and equipment). GST is also to be included.

SECTION E. Environmental planning instrument

Provide the name of the "environmental planning instrument" (*see - definition below) under which the development is complying development.

If the development is specified as complying development by a "development control plan" (*see - definition below) referred to in an environmental planning instrument, also provide the name of that development control plan.

Note: The criteria for complying development may vary between environmental planning instruments. You must nominate which instrument this Application is to be assessed under.

☐ State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

OR

☒ Other environmental planning instrument (EPI)

Name of EPI

State environmental planning policy (Educational establishment and child care facilities).

Name of Development Control Plan (if applicable)

*Environmental planning instruments (EPI) are State Environmental Planning Policies and Local Environmental Plans. Complying development is commonly, but not always, authorised under either the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008, or a Local Environmental Plan of the Council for the area where the development is to be carried out.

Development Control Plan. An EPI may refer to another instrument called a "Development Control Plan" (DCP) which contains more detailed provisions which support the EPI. A DCP may specify certain development as being complying development under the EPI.

SECTION F. Asbestos

If any bonded asbestos material or friable asbestos material will be disturbed, repaired or removed in carrying out the development, what is the estimated area of the material?

N/A square metres

SECTION G. Attachments relating to the proposed development

Applicants must provide the documents listed below that are relevant to the type of development that is proposed. Please confirm that documents relating to the requirements below have been attached by placing a cross in the appropriate box(s). Applicants should confirm with the certifying authority how many copies of documents are required to be provided prior to lodging this application.

1. Attachments for fire link conversions

Does the Application relate ONLY to a fire link conversion? ☐ Yes ☒ No

If 'Yes' provide a document that describes the design and construction, and mode of operation, of the new fire alarm communication link.

2. Attachments for developments other than fire link conversions

☒ A site plan of the land

Provide a site plan indicating:

- (a) the location, boundary dimensions, site area and north point of the land,
- (b) existing vegetation and trees on the land,
- (c) the location and uses of existing buildings on the land,
- (d) existing levels of the land in relation to buildings and roads,
- (e) the location and uses of buildings on sites adjoining the land.

☒ A sketch of the development

Provide a sketch which indicates:

- (a) the location of any proposed buildings or works (including extensions or additions to existing buildings or works) in relation to the land's boundaries and adjoining development,
- (b) floor plans of any proposed buildings showing layout, partitioning, room sizes and intended uses of each part of the building,
- (c) elevations and sections showing proposed external finishes and heights of any proposed buildings (other than temporary structures),
- (d) elevations and sections showing heights of any proposed temporary structures and the materials of which any such structures are proposed to be made (using the abbreviations set out in SECTION P),
- (e) proposed finished levels of the land in relation to existing and proposed buildings and roads,
- (f) proposed parking arrangements, entry and exit points for vehicles, and provision for movement of vehicles within the site (including dimensions where appropriate),
- (g) proposed landscaping and treatment of the land (indicating plant types and their height and maturity),
- (h) proposed methods of draining the land,
- (i) in respect of BASIX affected development, such other matters as any BASIX certificate(s) requires to be included on the sketch. (See-BASIX NOTES at the end of this Section)
- (j) in respect of BASIX optional development for which a BASIX certificate(s) has been obtained, such other matters as the BASIX certificate(s) requires to be included on the sketch. (See-BASIX NOTES at the end of this Section)

Does the development involve subdivision work? ☐ Yes ☒ No

If 'Yes' provide appropriate subdivision work plans and specifications, which are to include:

- (a) details of the existing and proposed subdivision pattern (including the number of lots and the location of roads),
- (b) details as to which public authorities have been consulted with as to the provision of utility services to the land concerned,
- (c) detailed engineering plans as to the following matters:
 - (i) earthworks,
 - (ii) roadworks,
 - (iii) road pavement,
 - (iv) road furnishings,
 - (v) stormwater drainage,
 - (vi) water supply works,
 - (vii) sewerage works,
 - (viii) landscaping works,
 - (ix) erosion control works,
- (d) copies of any compliance certificates to be relied on.

Does the development involve a change of use of a building (other than a dwelling house or a building or structure that is ancillary to a dwelling house and other than a temporary structure or work that relates only to fire link conversion)? ☐ Yes ☒ No

If 'Yes' provide:

- (a) a list of the Category 1 fire safety provisions that currently apply to the existing building,
- (b) a list of the Category 1 fire safety provisions that are to apply to the building following its change of use.

Does the development involve building work (including work in relation to a dwelling house or a building or structure that is ancillary to a dwelling house)? ☐ Yes ☒ No

If 'Yes' provide:

(1) A detailed description of the development by completing SECTION P.

(2) Appropriate building work plans and specifications, which are to include:

- (a) detailed plans, drawn to a suitable scale and consisting of a block plan and a general plan, that show:
 - (i) a plan of each floor section, and
 - (ii) a plan of each elevation of the building, and
 - (iii) the levels of the lowest floor and of any yard or unbuilt on area belonging to that floor and the levels of the adjacent ground, and
 - (iv) the height, design, construction and provision for fire safety and fire resistance (if any),
- (b) specifications for the development:
 - (i) that describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply, and
 - (ii) that state whether the materials to be used are new or second-hand and (in the case of second-hand materials) give particulars of the materials to be used,
- (c) a statement as to how the performance requirements of the *Building Code of Australia* are to be complied with (if an alternative solution, to meet the performance requirements, is to be used),
- (d) a description of any accredited building product or system sought to be relied on for the purposes of section 4.28 (4) of the Environmental Planning and Assessment Act 1979**,
- (e) copies of any compliance certificate to be relied on,
- (f) if the development involves building work to alter, expand or rebuild an existing building, a scaled plan of the existing building,

- (g) in respect of BASIX affected development, such other matters as the BASIX certificate(s) requires to be included in the plans and specifications. (See-BASIX NOTES at the end of this Section)
- (h) in respect of BASIX optional development for which a BASIX certificate(s) has been obtained, such other matters as the BASIX certificate(s) requires to be included in the plans and specifications. (See-BASIX NOTES at the end of this Section)

**** 4.28 (4) EP&A Act provides that a certifying authority must not refuse an Application on the ground that any building product or system does not comply with a requirement of the Building Code of Australia if the building product or system is accredited in respect of that requirement in accordance with the EP&A Regulation 2000.**

Does the development involve building work (other than work in relation to a dwelling house or a building or structure that is ancillary to a dwelling house)? ☒ Yes ☐ No

If 'Yes' provide:

- (a) a list of any existing fire safety measures provided in relation to the land or any existing building on the land, and
- (b) a list of the proposed fire safety measures to be provided in relation to the land and any building on the land as a consequence of the building work.

Does the development involve the erection of a wall to a boundary that has a wall less than 0.9m from the boundary? ☐ Yes ☒ No

If 'Yes' provide:

A report by a professional engineer (within the meaning of the BCA) outlining the proposed method of supporting the adjoining wall.

Does the development involve the demolition or removal of a wall to a boundary that has a wall less than 0.9m from the boundary? ☐ Yes ☒ No

If 'Yes' provide:

A report by a professional engineer (within the meaning of the BCA) outlining the proposed method of maintaining support for the adjoining wall after the demolition or removal.

Does the development involve the erection of a temporary structure? ☐ Yes ☒ No

If 'Yes' provide:

- (a) documentation that specifies the live and dead loads the temporary structure is designed to meet,
- (b) a list of any proposed fire safety measures to be provided in connection with the use of the temporary structure,
- (c) in the case of a temporary structure proposed to be used as a place of public entertainment - a statement as to how the performance requirements of Part B1 and NSW Part H102 of Volume One of the *Building Code of Australia* are to be complied with (if an alternative solution, to meet the performance requirements, is to be used),
- (d) documentation describing any accredited building product or system sought to be relied on for the purposes of section 4.28 (4) of the Act,
- (e) copies of any compliance certificates to be relied on.

Does the development involve the use of a building as an entertainment venue or a function centre, pub, registered club or restaurant? ☐ Yes ☒ No

If 'Yes' complete the relevant portion(s) of the following statement:

The maximum number of persons proposed to occupy, at any one time, that part of the building used as:

- an entertainment venue is persons.
- a function centre is persons,
- a pub is persons.
- a registered club is persons.
- a restaurant is persons.

Does the development involve building work (see - note below) in respect of which an alternative solution under the Building Code of Australia ("BCA") in respect of a fire safety requirement is proposed?

☐ Yes ☒ No

If 'Yes' provide:

Either or both of the following from a "fire safety engineer" (i.e. a private accredited certifier holding Category C10 accreditation):

- (a) a compliance certificate (as referred to in s.6.4(e)(iv) EP&A Act) that certifies that the alternative solution complies with the relevant performance requirements of the BCA.
- (b) a written report that includes a statement that the alternative solution complies with the relevant performance requirements of the BCA.

NOTE

The above requirement only applies to building work in respect of:

- (a) a class 9a building that is proposed to have a total floor area of 2000 square metres or more, and
- (b) any building (other than a class 9a building) that is proposed to have:
 - (i) a fire compartment with a total floor area of more than 2000 square meters, or
 - (ii) a total floor area of more than 6000 square meters,

that involves an alternative solution under the BCA in respect of the requirements set out in EP1.4, EP2.1, EP2.2, DP4 and DP5 in Volume 1 of the BCA.

Does the proposed development comprise internal alterations to, or changes of use of, an existing building that is subject to an alternative solution relating to a fire safety requirement under the BCA?

☐ Yes ☒ No

If 'Yes' provide:

A written report by another accredited certifier who is accredited for the purpose of issuing a CDC for a building of that kind, which includes a statement that the proposed development is consistent with that alternative solution.

Does the Application involve a BASIX affected development, or a BASIX optional development for which a BASIX certificate has been obtained?

☐ Yes ☒ No

If 'Yes' provide:

- (a) the BASIX certificate(s) for the development (being a certificate(s) that has been issued no earlier than 3 months before the date of the Application being made, and
- (b) such other documents as the BASIX certificate(s) for the development requires to accompany the Application.

(See-BASIX NOTES at the end of this Section)

BASIX NOTES

BASIX (the Building Sustainability Index) is a system introduced by the NSW Government to ensure that homes are built to be more energy and water efficient.

BASIX is an on-line program that assesses a building's design, and compares it against energy and water reduction targets. The design must meet these targets before a BASIX Certificate can be printed from the on-line facility.

Any changes made to a building's design after a BASIX Certificate has been issued means that another BASIX assessment must be completed and a new BASIX Certificate obtained.

Buildings which are affected by the BASIX system ("*BASIX affected buildings*") are those that contain one or more dwellings (but do not include hotels or motels).

A BASIX Certificate **MUST** be obtained for every "*BASIX affected development*", which are any of the following developments (other than development that is "*BASIX excluded development*"-see below):

- (a) development that involves the erection (but not the relocation) of a BASIX affected building,
- (b) development that involves a change of building use by which a building becomes a BASIX affected building,
- (c) development that involves the alteration, enlargement or extension of a BASIX affected building, where the estimated construction cost of the development is \$50,000 or more,
- (d) development for the purpose of a swimming pool or spa, or combination of swimming pools and spas, that services or service only one dwelling and that has a capacity, or combined capacity, of 40,000 litres or more.

BASIX excluded development is

- (a) development for the purpose of a garage, storeroom, car port, gazebo, verandah or awning,
- (b) alterations, enlargements or extensions to a building listed on the State Heritage Register under the *Heritage Act 1977*,
- (c) alterations, enlargements or extensions that result in a space that cannot be fully enclosed (for example, a veranda that is open or enclosed by screens, mesh or other materials that permit the free and uncontrolled flow of air), other than a space can be fully enclosed but for a vent needed for the safe operation of a gas appliance,
- (d) alterations, enlargements or extensions that the Director-General has declared, by order published in the Gazette, to be BASIX excluded development.

A BASIX Certificate **MAY** be obtained for certain developments by an Applicant even though there is no obligation to do so. This is called "*BASIX optional development*".

BASIX optional development means any of the following development that is not BASIX excluded development:

- (a) development that involves the alteration, enlargement or extension of a BASIX affected building, where the estimate of the construction cost of the development is less than \$50,000
- (b) development for the purpose of a swimming pool or spa, or combination of swimming pools and spas, that services or service only one dwelling and that has a capacity, or combined capacity, of less than 40,000 litres.

If the proposed development involves the alteration, enlargement or extension of a BASIX affected building that contains more than one dwelling, a separate BASIX certificate is required for each dwelling concerned.

Further information about BASIX and to obtain a BASIX Certificate, go to <http://www.basix.nsw.gov.au>. You should review the website to determine whether your development is affected or exempt from the BASIX provisions.

SECTION H. List of Documents

Prepare and attach a list of all of the documents provided under SECTION G.

SECTION I. Copyright

Information for the Applicant: Upon an application being made for a complying development certificate, the Applicant (not being entitled to copyright) is taken to have indemnified all persons using the application and any accompanying documents in accordance with the Act against any claim or action in respect of breach of copyright (See Cl.129 EP&A Regulation 2000).

SECTION J. Authority to enter and inspect land

Information for the Applicant: A certifying authority must not issue a complying development certificate for development unless the certifying authority, or an accredited certifier or council on behalf of the certifying authority, has carried out an inspection of the site of the development.

By signing this Application, the Applicant, and if the Applicant is not the owner of the property, the owner also, authorise the certifying authority, or an accredited certifier or council, to enter the subject property at any reasonable time for the purpose of carrying out an inspection in connection with the assessment of this Application. The Applicant and the owner undertake to take all necessary steps make access available to the property to enable the inspection to be carried out.

SECTION K. Long Service Payment Levy

Information for the Applicant: Where a certifying authority completes a complying development certificate, that certificate must not be forwarded or delivered to the Applicant unless any long service payment levy payable under s.34 of the Building and Construction Industry Long Service Payments Act 1986 (or, where such a levy is payable by instalments, the first instalment of the levy) has been paid.

The Applicant should attach a copy of a receipt for any long service payment levy that has been made or make arrangements for a copy to be available to be provided to the certifying authority in the event that a complying development certificate is completed.

SECTION L. Signature of Applicant(s)

Signature of Applicant(s)



Name(s)

SHAFIQ R.A. KHAN

Date

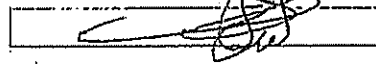
8/10/2019

SECTION M. Consent of owner(s)

Note: If the Applicant is not the owner of the property, the owner(s) must sign the following statement:

As the owner(s) of the above property, I/we consent to this application.

Signature of owner(s)



Name(s)

SHAFIQ R.A. KHAN

Date

8/10/2019

SECTION N. Delivery of the Application

Information for the Applicant. Applications for complying development certificates must be delivered:

- by hand, or
- sent by post, or
- transmitted electronically

to the principal office of the certifying authority.

Applications MAY NOT be sent by facsimile transmission.

SECTION O. Date of Receipt of Application

To be completed by the certifying authority immediately after receiving this Application.

This Application was received on

8/10/19

(insert date).

PART 1

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

21 General conditions of complying development certificates

Note. The Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Noise Control) Regulation 2008 contain provisions relating to noise.

(1) General

A complying development certificate for complying development under this Policy is subject to the conditions specified in this clause.

Note. The regulations made under the Act contain additional conditions of a complying development certificate.

(2) Conditions applying before works commence

A temporary hoarding or temporary construction site fence must be erected between the work site and adjoining lands before the works begin and must be kept in place until after the completion of works if the works:

- (a) could cause a danger, obstruction or inconvenience to pedestrian or vehicular traffic, or
- (b) could cause damage to adjoining lands by falling objects, or

- (c) involve the enclosure of a public place or part of a public place.

Note. See the entry for hoardings in Schedule 1. See also the entry for scaffolding, hoardings and temporary construction site fences in the General Exempt Development Code in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

- (3) Toilet facilities must be available or provided at the work site before works begin and must be maintained until the works are completed at a ratio of one toilet plus one additional toilet for every 20 persons employed at the site.

(4) Each toilet must:

- (a) be a standard flushing toilet connected to a public sewer, or
- (b) have an on-site effluent disposal system approved under the Local Government Act 1993, or
- (c) be a temporary chemical closet approved under the Local Government Act 1993.

- (5) A garbage receptacle must be provided at the work site before works begin and must be maintained until the works are completed.

(6) Conditions applying during works

Construction or demolition may only be carried out between 7.00 am and 5.00 pm on Monday to Saturday and no construction or demolition is to be carried out at any time on a Sunday or a public holiday.

- (7) Works must be carried out in accordance with the plans and specifications to which the complying development certificate relates.

(8) Run-off and erosion controls must be effectively maintained until the site has been stabilised and landscaped.

(9) Building, or demolition, materials and equipment must be stored wholly within the work site unless an approval to store them elsewhere is held.

(10) Demolition materials and waste materials must be sorted, and must be disposed of at a waste or resource management facility.

(11) The work site must be left clear of waste and debris at the completion of the works.

(12) Utility services

If the complying development requires alteration to, or the relocation of, utility services on the lot on which the complying development is carried out, the complying development is not complete until all such works are carried out.

(13) Post-works requirements

If:

- (a) the development involves the erection or change of use of a building within a water supply authority's area of operations, and
- (b) the water supply authority requires a certificate of compliance to be obtained with respect to the erection or change of use of the building,

the building cannot be occupied before such a certificate has been obtained.

(14) In this clause:

certificate of compliance, in relation to a water supply authority, means a certificate of compliance issued by the water supply authority under the Act under which the water supply authority is constituted.

water supply authority means:

- (a) the Sydney Water Corporation, the Hunter Water Corporation or a water supply authority within the meaning of the Water Management Act 2000, or
- (b) a council or county council exercising water supply, sewerage or stormwater drainage functions under Division 2 of Part 3 of Chapter 6 of the Local Government Act 1993.

PART 2

41 Complying development certificates—additional conditions

A complying development certificate for development that is complying development under this Part is subject to the following conditions (in addition to the conditions set out in clause 19):

- (a) any demolition work must be carried out in accordance with AS 2601—2001 *The demolition of structures*, published by Standards Australia on 13 September 2001,
- (b) any removal or pruning of vegetation must be carried out in accordance with AS 4970—2009 *Protection of trees on development sites*,
- (c) development must be carried out in accordance with all relevant requirements of the Blue Book,
- (d) the person having the benefit of the complying development certificate must give at least 2 days' notice in writing of the intention to commence the works to the owner or occupier of any dwelling that is situated within 20 metres of the lot on which the works will be carried out.

PART 3

Prescribed Conditions from Section 94 of the *Environmental Planning & Assessment Act 1979.*

94EC Contributions plans—complying development

- (1) *In relation to an application made to an accredited certifier for a complying development certificate, a contributions plan:*
- (a) *is to specify whether or not the accredited certifier must, if a complying development certificate is issued, impose a condition under section 94 or 94A, and*
 - (b) *can only authorise the imposition by an accredited certifier of a condition under section 94 that requires the payment of a monetary contribution, and*
 - (c) *must specify the amount of the monetary contribution or levy that an accredited certifier must so impose or the precise method by which the amount is to be determined.*
- (1A) *The imposition of a condition by an accredited certifier as authorised by a contributions plan is subject to compliance with any directions given under section 94E (1) (a), (b) or (d) with which a council would be required to comply if issuing the complying development certificate concerned.*
- (2) *This section does not limit anything for which a contributions plan may make provision in relation to a consent authority.*

Note:

Developer Contributions under the Councils Section 94 or 94A policy are required to be made. In this regards applicant is to attend Council after the CDC has been receipted by Council in order to allow the payment to be referenced against the specific development, upon the payment being made please forward a copy of the receipt to Vic Lilli & Partners.

Complete Construction Engineering Pty Ltd

STRUCTURAL ENGINEERING DESIGN CERTIFICATE

BUILDING ADDRESS:	83-85 GURNERS AVENUE
BUILDING DESCRIPTION:	MULTIPURPOSE HALL & UNDERGROUND CAR PARK
DRAWINGS	<u>MPH-S-1-MPH-S17</u>

- We, Complete Construction Engineering, being Structural Engineers within the meaning of the Building Code of Australia, hereby certify that this office is responsible for the primary structural design of horizontal and vertical structural components to Multipurpose Hall (MPH) and an underground car park at the above stated address. We certify that these works were designed in accordance with
- BCA/NCC 2019, Section B, Clause Specification C1.1 Fire resisting construction
- Australian Standards AS 3600:2018 – Concrete Structures, AS/NZS 4671:2001– Steel reinforcing materials, AS/NZS 1170.0:2002-Structural design actions General principles, AS/NZS 1170.1:2002-Structural design actions,- Permanent, imposed and other actions, AS/NZS 1170.2:2011 (R2016)- Structural design actions Wind actions, AS 1170.4:2007-Structural design actions-Earthquake actions in Australia, AS 4100:1998 – Steel Structures

I/We also certify that:

- I am an appropriately qualified person having current professional indemnity insurance appropriate for the size and scope of this project and have a good working knowledge of the relevant codes and standards reference above.
- I have completed the abovementioned works in accordance with the Architectural DA documentation.

Additional comments

None

The information contained in this Certificate is to the best of my knowledge and belief, true and accurate.

Signed: 	Digitally signed by Hasan Alijagic DN: cn=Hasan Alijagic, o=Complete Construction Engineering, ou=Civil, email=h_alijagic@bigpond.com, c=US Date: 2020.04.14 12:28:51 +10'00'	Name:	Dr Hasan Alijagic
	Qualifications/ Licence No.:	Civil/Str. Eng. PhD. Civil	Date:



COMPLETE CONSTRUCTION ENGINEERING
PTY LTD

Consulting & Building Construction

9. Penguin Parade. HINCHINBROOK NSW 2168

T: (02) 8798 9525, M: 0419 183 175

E-mail: h_alijagic@bigpond.com

Engineering Certificate-Civil

For: Al-Faisal College

Building Class: 9/9b

Location: 83-85 Gurners Avenue, Austral-MPH

Drawings: MPH-H-1

Date: 09.04.2020

Our Ref: 40/20

This certificate is required to certify the following

DETAILS

We, Complete Construction Engineering Pty Ltd, hereby certify that this office is responsible for hydraulic design to wet areas and kitchen to MPH building at the above mentioned location.

We certify that reasonable care has been taken to ensure that the hydraulic engineering aspects of the works as described above have been designed in accordance with the requirements of the Building Code of Australia (BCA)/National Construction Code (NCC) 2019, The Australian Standards listed below and in accordance with accepted engineering practice and principles:

- AS/NZS:3500.2-2018-Sanitary plumbing and drainage

CERTIFICATION

Responsibility for this certificate is acknowledged as follows:

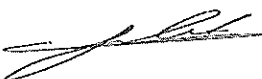
Name of the person signing : Hasan Alijagic BEng., MEng.Sci., PhD CEng.,

Position : Civil/Structural Engineer

MIEAust CPEng NER APEC Engineer IntPE(Aus)/NER No:829521

Digitally signed by Hasan Alijagic
DN: cn=Hasan Alijagic,
o=Complete Construction Engineering, ou=Civil,
email=h_alijagic@bigpond.com,
c=US
Date: 2020.04.09 18:17:13
+10'00'

Design Certificate - Mechanical Services

ADDRESS:	83 Gurners Ave, Austral NSW					
PROJECT NAME:	Al- Faisal College- Austral Campus					
I, <u>Jason Sabbouh</u> of <u>RMJ Engineering Pty Ltd</u> (Name) (Company) U15, 143-155 Bonds Rd Riverwood, NSW 2210 (Address)						
My Qualifications, accreditations, licenses are as follows:						
Qualifications and Experience:	BE(Mech); MEAust; M.airah					
	15 Years Consulting and Industry Experience					
Phone Numbers:	Bus:	(02) 9533 3304				
Hereby certify:						
That the <u>MECHANICAL SERVICES DRAWINGS</u> listed in Schedule A (Item being certified)						
have been checked and has been designed to comply with:						
a. The relevant clauses of the Building Codes of Australia, as follows:						
• BCA 2019 • Automatic Shutdown air handling systems Clause E2.3 NSW Table E2.2b • Mechanical Air Handling System Clause E2.2, Table E2.2a, • Carpark Ventilation Clause F4.11 • Section F4 • Section J5						
b. The relevant Australian Standards listed in the Building Code of Australia Australia (Specification A1.3) as follows:						
• AS1668.1- 2015 (Clause 5.5) • AS1668.2 - 2012						
c. The following additional Australian Standards (if applicable):						
d. Other practices, standards, Section J reports or fire safety engineering reports for the building / proposed works relied upon for this design certification:						
e. Exclusions:						
I am a properly qualified person and have a good working knowledge of the BCA clauses and standards referenced above. The information contained in this statement is true and accurate to the best of my knowledge.						
Signature:					Date:	16/04/2020

Design Certification Services Component

ADDRESS:	83 Gurners Ave, Austral NSW
PROJECT:	Al- Faisal College- Austral Campus

SCHEDULE A – RELEVANT PLANS AND SPECIFICATIONS

Design Drawing Numbers and Revision List and Specifications reference (*If relevant to design certification*):

NO.	TITLE	REVISION	DATE
M01	New Equipment Schedule and Works By Others	A	23/11/2019
M02	Basement	A	23/11/2019
M03	Ground Floor	A	23/11/2019
M04	Lower Roof	A	23/11/2019

Fire Services Design Statement – 16.4.2020

To: Pavlo Doroch

Company: Architecture Design Studio (NSW) Pty Ltd

Building Name: Car park and Multipurpose Hall

Address: 83 Gurner Avenue Austral NSW 2179

Building Use: School Building Class: 7a & 9b

I HEREBY CERTIFY THAT

The fire service design documentation submitted for certification have been design in accordance with the following:

FIRE SAFETY MEASURE	STANDARD OF PERFORMANE
Fire Detection System	AS1670.1 (2018), BCA 2019 E2.2a & Specification E2.2a
Building Occupant Warning System	BCA 2019 Clause E2.2, Spec E2.2a (clause 7), AS1670.1 (2018).
Fire Alarm Monitoring System	BCA 2019, Spec E2.2a & AS1670.3 (2018)

Design Drawing & Documentation

FS201 Basement Fire Detection & Alarm
FS202 Ground Floor Fire Detection & Alarm

Services Engineer Details

Company: Main Frame Electrical

Address: PO Box 5144 Erina Fair NSW 2250

Phone: 0434 069 085

Email: glenn@mfelectrical.net.au

Regards,

*GF Rodgers*Glenn Rodgers - 0434069085
Managing Director
Main Frame Electrical

Record of Opinion

Competence of fire safety practitioner

Environmental Planning and Assessment Regulation 2000-Clause 167A

I, Mariusz Para BPB1896, being the certifying authority for the following development:

Al-Faisal College – 83-87 Gurner Avenue, Austral –

Construction of one level multipurpose hall and associated car parking to an existing school.

consider that Glenn Rogers from Main Frame Electrical is competent to perform the following function(s) under the Environmental Planning and Assessment Regulation 2000 in relation to this development:

✓	Function(s)
	Endorse the fire safety alternative solution report relating to: N/A
✓	Endorse plans and specifications for: The installation of a new; ▪ Fire Detection and Alarm System. ▪ Building Occupant Warning System, and ▪ Fire alarm Monitoring system.
	Endorse the proposed Building Code of Australia exemption relating to: N/A

I made this determination based on the following documentation:

1. Dry Fire Design statement prepared by Main Frame Electrical dated 16 April 2020.
2. Dry Fire Drawings prepared by Main Frame Electrical dated 01.04.2020; FS201 Basement Fire Detection & Alarm and FS202 Ground Floor Fire Detection & Alarm

Signature:



Mariusz Para
BPB 1896
16 April 2020



COMPLETE CONSTRUCTION ENGINEERING
PTY LTD

Consulting & Building Construction

9. Penguin Parade. HINCHINBROOK NSW 2168

T: (02) 8798 9525, M: 0419 183 175

E-mail: h_alijagic@bigpond.com

Engineering Certificate-Civil

For: Al-Faisal College

Building Class: 9/9b & 7/7a

Location: 83-85 Gurners Avenue, Austral-MPH

Drawings: MPH-F-1& F-2

Date: 16.04.2020

Our Ref: 41/20

This certificate is required to certify the following

DETAILS

We, Complete Construction Engineering Pty Ltd, hereby certify that this office is responsible for design of fire hydrant, fire hose reels and sprinkler system to an underground car park and portion of the building, on ground floor, known as multi-function hall, at the above mentioned location.

We certify that reasonable care has been taken to ensure that the hydraulic engineering aspects of the works as described above have been designed in accordance with the requirements of the Building Code of Australia (BCA)/National Construction Code (NCC) 2019 and Australian Standards listed below:

- AS 2419.1-2005 - Fire hydrant installations System design, installation and commissioning
- AS 2118.1-2017- Automatic fire sprinkler systems, Part 1: General systems
- AS 2441-2005 Installation of fire hose reels

CERTIFICATION

Responsibility for this certificate is acknowledged as follows:

Name of the person signing : Hasan Alijagic BEng., MEng.Sci., PhD CEng.,

Position : Civil/Structural Engineer

MIEAust CPEng NER APEC Engineer IntPE(Aus)/NER No:829524

Digitally signed by Hasan Alijagic

DN: cn=Hasan Alijagic,
o=Complete Construction
Engineering, ou=Civil,
email=h_alijagic@bigpond.com
, c=US
Date: 2020.04.16 10:56:57
+10'00'

Record of Opinion

Competence of fire safety practitioner

Environmental Planning and Assessment Regulation 2000-Clause 167A

I, Mariusz Para BPB1896, being the certifying authority for the following development:

Al-Faisal College – 83-87 Gurner Avenue, Austral –

Construction of one level multipurpose hall and associated car parking to an existing school.

consider that Hasan Alijagic from Complete Construction Engineer Pty Ltd is competent to perform the following function(s) under the Environmental Planning and Assessment Regulation 2000 in relation to this development:

✓	Function(s)
	Endorse the fire safety alternative solution report relating to: N/A
✓	Endorse plans and specifications for: Drawings regarding, the installation of; ▪ Fire hose reel, ▪ Automatic Suppression system, and ▪ Fire hydrant.
	Endorse the proposed Building Code of Australia exemption relating to: N/A

I made this determination based on the following documentation:

1. Wet fire Design statement prepared by Complete Construction Engineer Pty Ltd dated 09 April 2020.
2. Drawings prepared by Complete Construction Engineer Pty Ltd dated 31.03.2020; MPH-F-1 & F-2.

Signature:



Mariusz Para
BPB 1896
16 April 2020

Complete Construction Engineering Pty Ltd

DESIGN CERTIFICATE – Civil and Stormwater Engineering

Project	Multipurpose Hall and underground car parking
Address	83-85 Gurners Avenue, Austral
CDC	-

I **HASAN ALIJAGIC** of Complete Construction Engineering Pty Ltd
(Full Name of Certifier) (Company)

9 Penguin Parade Hinchinbrook NSW 2168
(Address)

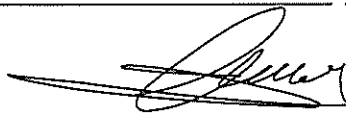
Hereby certify:-

1. That the Stormwater management plans MPH-11, MPH-12, dated 31.03.2020 relating to the above development has been designed in accordance with industry engineering practice and have been coordinated with CDC Plans. The design has also been checked to comply with the requirements of the following nominated Standards of Performance :-
2.
 - Plumbing and drainage- Australian Standard AS 3500.3- 2018
 - Liverpool City Council DCP
 - BCA/NCC 2019-Part 3.1.3-Drainage
 - BCA/NCC 2019-Clause F1.1-Stormwater drainage
3. I am an appropriately qualified professional hydraulic engineer and have:
 - a) Current professional indemnity insurance appropriate for the size and scope of this project to the satisfaction of the building owner or principal authorizing the design work; and one or more of the following:
 - i. Registration as a professional engineer in this discipline with the appropriate experience and competence in this field; OR
 - ii. Corporate membership in the Institution of Engineers, Australia; OR
 - iii. Eligible to become a corporate member of the Institution of Engineers, Australia and have appropriate experience and competence in this field of engineering.

Relevant qualifications and experience: BC Eng., MEngSci., PhD CEng.

Engineer Membership MIEAust. CPEng. NER APEC Engineer IntPE(Aust)/NER No: 829521

Signature



Digitally signed by Hasan Alijagic
DN: cn=Hasan Alijagic, o=Complete Construction Engineering, ou=Civil, email=h_alijagic@bigpond.com, c=US
Date: 2020.04.09 18:17:51 +10'00'



Reference: 20.167r01v01

9 April 2020

Al-Faisal College Ltd
149 Auburn Road
Auburn, NSW 2144

Attention: Mr Mohammed Azeem

Re: 83 Gurner Avenue, Austral
Proposed Multi-Purpose Hall
Traffic Impact Statement

Dear Mohammed,

TRAFFIX has been commissioned to assess the traffic impacts in support of a Complying Development Certification (CDC) application relating to a proposed multi-purpose hall development at 83 Gurner Avenue, Austral. The subject site is located within the Liverpool Council Local Government Area and has been assessed under that Council's controls.

This statement documents the findings of our investigations and should be read in the context of the Statement of Environmental Effects (SEE), prepared separately. The proposed development is considered to be a minor development with less than 200 parking spaces and generating less than 200 motor vehicles per hour. As such, the CDC will not require referral to the Roads and Maritime Services (RMS) under the provisions of State Environmental Planning Policy (Infrastructure) 2007.

➤ Site and Location

The subject site at 83 Gurner Avenue, Austral is located approximately 10.6 kilometres west of Liverpool town centre. More specifically, it is located on the northern side of Gurner Avenue, at the intersection of Fourth Avenue and Gurner Avenue.

The site is rectangular in configuration and is located within Al-Faisal College, which provides two (2) vehicular accesses onto Gurner Avenue.



➤ Description of Proposed Development

A full description of the proposed development can be found in the SEE, prepared separately. In summary, the development for which approval is now sought comprises the following components:

- Construction of a multi-purpose hall comprising of:
 - Two (2) sports courts;
 - A function room; and
 - A stage.
- Provision of 158 staff car parking spaces within the basement level
- Vehicular access to the basement carpark is to be via the existing ground level carpark

Reference should be made to the plans submitted separately to Council that are presented at a reduced scale in **Attachment 1**.

➤ Access and Internal Design

Access

The proposed development incorporates a total of 158 car parking spaces with access from the existing ground level carpark. The ground level carpark is accessed via two (2) existing accesses onto Gurner Avenue, being separated entry and exit driveways of approximately 7.0 metres each. These existing accesses are compliant with AS 2890.1 (2004) and will serve the additional parking spaces as part of the proposed multi-purpose hall development.

Internal Design

The basement level car park generally complies with the requirements of AS 2890.1 (2004), and AS 2890.6 (2009), with the following characteristics noteworthy:

- All 158 staff car parking spaces have been designed in accordance with AS 2890.1 (2004) User Class 1A, being a minimum width of 2.4 metres, length of 5.4 metres, and providing an aisle width of 5.8 metres.
- The ten (10) accessible parking spaces have been designed in accordance with AS 2890.6 (2009), being a minimum width of 2.4 metres, length of 5.4 metres, and providing an adjacent shared area with the same dimensions.
- All spaces adjacent to obstructions greater than 150mm in height are to be provided with an additional width of 300mm.
- The car park does not contain any blind aisles.
- All vehicles are able to exit in a forward direction.
- The internal ramp has a maximum gradient not exceeding 25% (1 in 4) with sag and summit transitions of 12.5% (1:8) respectively. These provisions satisfy the requirement of AS 2890.1 (2004).
- A minimum clear head height of 2.2 metres is to be provided for all trafficable areas.
- A minimum clear head height of 2.5 metres is to be provided for the accessible parking spaces and adjacent shared areas.



- All columns are located outside of the parking space design envelope as shown in Figure 5.2 of AS 2890.1 (2004).
- A swept path analysis of all critical movements has been undertaken to confirm geometry and compliance with the relevant standards. This swept path analysis is included in **Attachment 2**.

In summary, the internal configuration of the basement level car park has been designed in accordance with AS 2890.1 (2004) and AS 2890.6 (2009).

➤ Conclusion

On the basis of the above, the proposed multi-purpose hall development at 83 Gurner Avenue, Austral in our view is considered supportable.

We trust the above is of assistance and request that you contact the undersigned should you have any queries or require any further information. In the event that any concerns remain, we request an opportunity to discuss these with Council officers prior to any determination being made.

Yours faithfully,

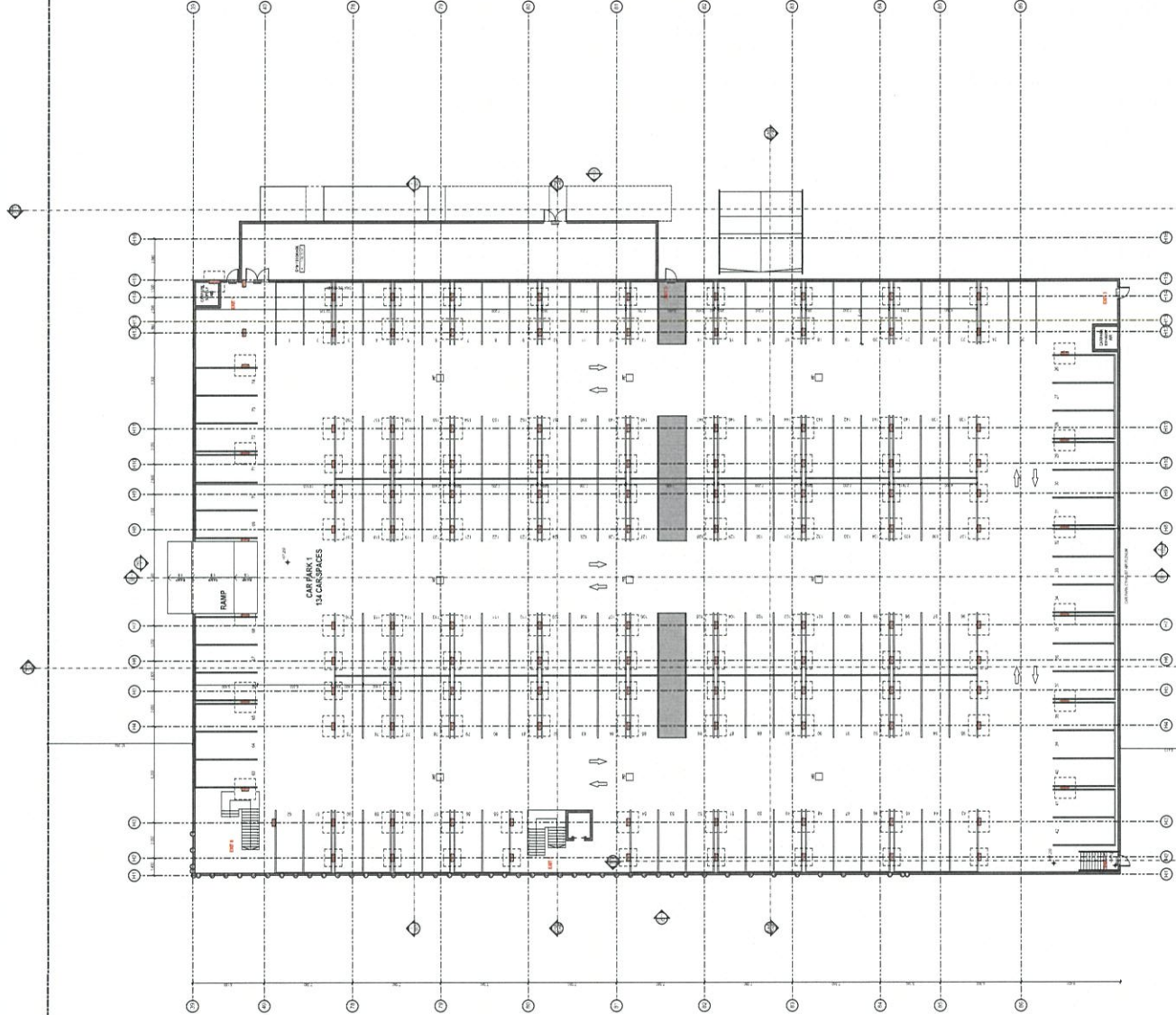
Traffix

Tom Wheatley
Executive Engineer

Encl: Attachment 1 – Reduced Plans
Attachment 2 – Swept Path Analysis

ATTACHMENT 1

Reduced Plans



Basement 1
1:200

Issue for CDC

PROJECT INFORMATION			
Project Name	ALP ADAL COLLEGE		
Client	ALP ADAL COLLEGE		
Location	100, College Avenue, Alameda, CA 94501		
Project No.	00000		
DESIGN INFORMATION			
Design Stage	Basement Plan		
Design No.	00000		
Design Date	00/00/00		
Design By	00/00/00		
Design Check	00/00/00		
Design Approved	00/00/00		
REVISIONS			
No.	Description	By	Date
1	Issue for CDC	00/00/00	00/00/00

This drawing is protected by copyright. It may only be used for the purpose for which it is issued.

Scale: 1:200

Sheet No: 00/00/00

Sheet Total: 00/00/00

ARCHITECTURE DESIGN STUDIO NSW PTY LTD
100, College Avenue, Alameda, CA 94501
Tel: 000 000 0000
Email: 00000@00000.com.au

ALP ADAL COLLEGE

ALP ADAL COLLEGE

ALP ADAL COLLEGE

ATTACHMENT 2

Swept Path Analysis

Notes:

This drawing is prepared for information purposes only. It is not to be used for construction.

TRAFFIX is responsible for vehicle swept path diagrams and/or drawing made-up only. Data drawing prepared by client.

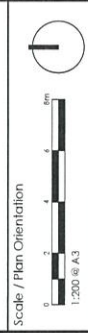
Vehicle swept path diagrams prepared using computer generated data based upon relevant Australian Standards (AS/NZS 2890.1:2004) and/or AS/NZS 2890.2:2002. Parking facilities - Off-street car parking, and/or AS/NZS 2890.1:2004 and/or AS/NZS 2890.2:2002. These standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability.

Rev.	Revision Note	By	Date
A	Design Review	SW	09-04-20

Swept Path Legend
Wheel Path
Vehicle Body Envelope
Clearance Envelope (300mm)

Architect

Client
Al Farid College Ltd



Project Description
83 Gunner Avenue,
Austral NSW

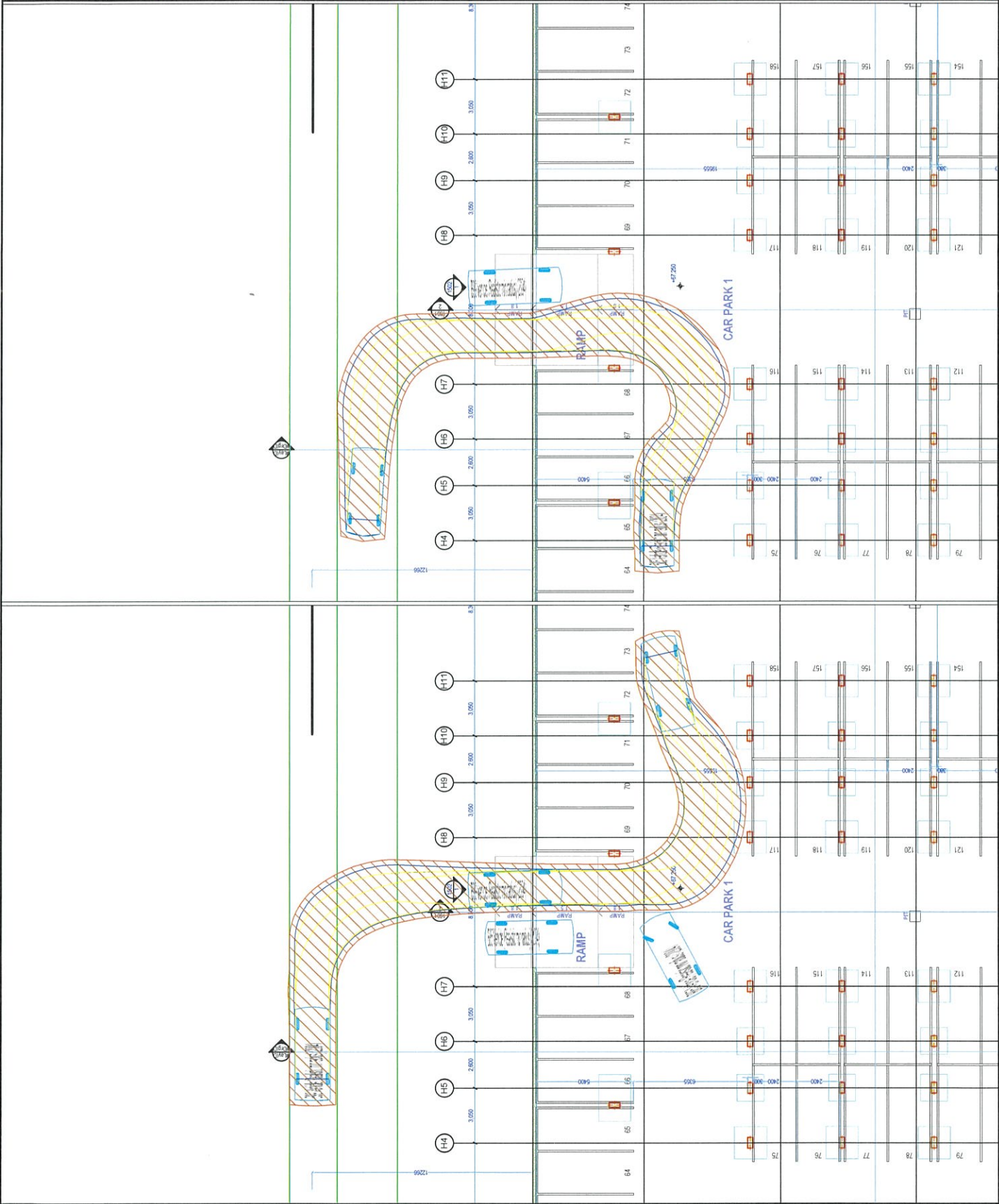
Drawing Prepared By



Suite 2/08, 50 Hall Street
Sunny Hills, NSW 2010
PO Box 1124
Strawberry Hills, NSW 2012
t: +61 2 8324 8700
f: +61 2 9830 4481
w: www.trafix.com.au

Drawing Title
Swept Path Analysis
Left: 899 Design Vehicle Entry Movement
Right: 885 Design Vehicle Exit Movement

Drawn: SW	Checked: TW	Date: 09-04-20
Project No. 20.167	Drawing Phase DA	Rev. TX.01 A



Building Code of Australia
'Deemed-To-Satisfy' Compliance
Section J Report

Proposed Multi-Purpose Hall with
Basement Carpark

At:
83 Gurner Avenue
AUSTRAL

Prepared for
AL-Faisal College, Liverpool

July, 2019

Prepared by

MAX BRIGHTWELL

Authors:

Bob Jones	Qualified Building Surveyor
Max Brightwell	BASIX Assessor

TABLE OF CONTENTS

1	EXECUTIVE SUMMARY	5
2	PURPOSE OF REPORT.....	5
3	PROPERTY	5
4	BASIS OF ASSESSMENT.....	5
5	ASSESSMENT	5
5.1	Building Class & Climate Zone	5
5.2	Definitions Pursuant to Part A1 of the BCA.....	5
5.3	Description of Development	6
6	PART J1 – BUILDING FABRIC FOR CONDITIONED AREAS.....	7
6.1	J1.2 Thermal Construction General	7
6.2	Subclause J1.2 (a) - Integrity of the Insulation	7
6.3	Subclause J1.2 (b) - Reflective Insulation	8
6.4	Subclause J1.2 (c) - Bulk Insulation	8
6.5	Specification J1.2.....	9
6.6	Roof & Ceiling Construction part J1.3	10
6.6.1	Application of Part J1.3	10
6.6.2	Assessment of Construction (Roof & Ceiling to the Ground Floor Conditioned Areas)	10
6.6.3	Opinion	10
6.6.4	Roof and Ceiling Construction – To The Ground Floor Conditioned Areas	10
6.6.5	Compliance for Roof and Ceiling (To The Ground Floor Conditioned Areas).....	10
6.7	Roof Lights J1.4.....	11
6.8	Walls Part J1.5	11
6.8.1	Application.....	11
6.8.2	Assessment for Construction for External and Internal Walls to the Conditioned Areas	11
6.8.3	Opinion	12
6.8.4	Wall Description – Spec. J1.5 (External Cavity Brick Walls to Conditioned Areas)	12
6.8.5	Compliance for External Cavity Brick Walls To Conditioned Areas.....	12
6.8.6	Wall Description – Spec. J1.5 (External Lightweight Walls to Conditioned Areas)	12
6.8.7	Compliance for External Lightweight Walls To Conditioned Areas.....	12
6.8.8	Wall Description – Spec. J1.5 (Internal Brick Walls Separating the Conditioned Areas From the Non-Conditioned Areas)	13
6.8.9	Compliance for Internal Brick Walls Separating Conditioned Areas From Non-Conditioned Areas.....	13
6.9	Floors Part J1.6	14
6.9.1	Application.....	14
6.9.2	Assessment for Construction For Ground Floor Slab.....	14

6.9.3	Opinion	14
6.9.4	Floor Description – Spec. J1.6 (Concrete Floor to the Ground Floor Slab Above the Basement Carpark)	14
6.9.5	Compliance for Concrete Floor to the Ground Floor Slab Above the Basement Carpark	14
7	EXTERNAL GLAZING PART J2.0	15
7.1	External Glazing	15
7.1.1	Application.....	15
7.1.2	Assessment of Construction.....	15
7.1.3	Opinion	15
7.1.4	Compliance	15
8	BUILDING SEALING PART J3.0	16
8.1	Building Sealing.....	16
8.1.1	Application of Part J3.1	16
8.1.2	Assessment of Construction [Building Sealing]	16
8.1.3	Opinion and Compliance	16
9	AIR MOVEMENT PART J4.....	17
10	AIR-CONDITIONING AND VENTILATION SYSTEM – PART J5	18
10.1	J5.2 Air-Conditioning Systems	18
10.2	J5.3 Mechanical Ventilation Systems – Including the Basement Carpark	19
11	ARTIFICIAL LIGHTING & POWER – PART J6	21
11.1	Artificial Lighting & Power.....	21
11.1.1	J6.2 Artificial Lighting.....	21
11.1.2	J6.3 Interior Artificial Lighting & Power Control	21
11.1.3	J6.5	21
11.1.4	Specification J6.3 – Time Switch	22
11.1.5	Specification J6.4 – Motion Detectors.....	22
11.1.6	Specification J6.5 - Daylight sensor and dynamic lighting control device	22
12	HEATED WATER SUPPLY – PART J7.....	24
13	FACILITIES FOR ENERGY MONITORING - PART J8	24
13.1	Facilities for Energy Monitoring – J8.3	24
13.1.1	J8.3(a).....	24
13.1.2	J8.3(b)	24
14	CONCLUSION.....	25
15	ANNEXURE 1 – Window Schedule	27
16	ANNEXURE 2 - Power Density for Specific Areas	31

1 EXECUTIVE SUMMARY

This Report has been prepared by suitably qualified and experienced personnel and shows compliance with the Building Code of Australia (BCA) Volume 1, 'Deemed to Satisfy' (DTS) Provisions for Section J.

The Report further describes and refers to parts of the BCA which leads to the conclusion that the subject building if constructed with the recommendations contained in this report will meet the DTS Provisions of Section J of the BCA.

2 PURPOSE OF REPORT

The purpose of this report is to:

- A. Complete a DTS compliance assessment in reference to Section J of the BCA in respect of the subject building.
- B. Advise of any areas of non-compliance of the building in respect to the DTS provisions of Section J of the BCA.
- C. Provide a Report covering compliance of the building with the relevant provisions of the BCA in respect to the DTS provisions contained in Section J.

3 PROPERTY

The premises, the subject to this Report is known as 83 Gurner Avenue, Austral.

4 BASIS OF ASSESSMENT

The assessment has been carried out using:

- A. Drawing Nos: 018 MPH-01 to 14, dated 17th April, 2019 drawn Hasan Alijagic.
- B. The Building Code of Australia 2016 and the NSW Amendments.
- C. Advice from the Applicant.

The referenced plans indicate that the Conditioned space is the entire ground floor of the multi-purpose hall but excluding the plant room, the 50sqm store room, the 78sqm back of stage room, the male & female amenities and the 30sqm store room.

5 ASSESSMENT

5.1 Building Class & Climate Zone

The proposed building has a Class 7a & 9b classification as determined by Part A3 of the BCA.

The climate zone designated in Table A1.1 of the BCA is climate Zone 6.

5.2 Definitions Pursuant to Part A1 of the BCA

'*Conditioned Space*' means a space within a building including a ceiling or under floor supply air plenum or return air plenum where the environment is

likely by the intended use of the space to have its temperature controlled by air-conditioning.

'Envelope' means the parts of a building's fabric that separate a conditioned space or habitable room from

- a) The exterior of the building, or
- b) A Non-conditioned space including:
 - (i) The floor of a rooftop plant room, lift machine room or the like, and
 - (ii) The floor above a carpark or warehouse, and
 - (iii) The common wall with a carpark, warehouse or the like.

5.3 Description of Development

The proposed development involves the construction of a multi-purpose school hall including a stage, storage rooms, kitchen, WC's and a function room and a basement carpark.

The materials of construction are cavity brick or lightweight clad for the external walls, the floors will be concrete and the roof to the conditioned areas is metal with a suspended ceiling.

6 PART J1 – BUILDING FABRIC FOR CONDITIONED AREAS

6.1 J1.2 Thermal Construction General

This clause contains a broad range of general requirements that apply to the building fabric. An important aspect of J1.2 is the testing needed to ensure the validity of the insulation products. Information received by the ABCB indicates that some insulation products may not have been tested in accordance with AS/NZS 4859.1 and the stated insulation levels on some manufacturer's literature may not be achievable. In most jurisdictions, the approval of insulation performance ultimately resides with the Building Control Authority, and this discretionary power should be exercised with care.

In order to ensure the performance of materials is correctly validated, test reports complying with the appropriate standard should be provided in accordance with part A2 of the BCA and this documentation forms an integral part of the building approval.

The 2002 edition of AS/NZS 4859.1 did not contain standard assumptions for calculating the R-Value benefit of reflective insulation so suppliers may use different criteria. For example, the assumption may be that the surface is free of dust while in practice it may be used in a dusty environment under a tiled roof. In the absence of a standard set of assumptions, the Building Control Authority may need to review each certificate for relevance to the application.

6.2 Subclause J1.2 (a) - Integrity of the Insulation

Subclause J1.2 (a) requires any insulation, when installed in a building, to form a consistent and continuous barrier with ceilings, walls bulkheads and floors. This is important as any gaps within the barrier will allow heat in or out, which will undermine the effectiveness of the overall energy efficiency measures.

However, it is recognised that certain gaps are essential, especially adjoining services and light fittings where the close proximity of insulation may create a fire hazard.

A key aspect of this Clause is the recognition that certain structural elements of the building (e.g. framing) contribute to achieving the required levels of thermal efficiency. For this reason, it is acceptable that wall insulation closely fit within a wall frame to achieve the desired overall level of performance for the wall. The wall elements, in conjunction with the insulation, are deemed to achieve the required level of performance.

Another part of this Clause worth noting is the reference to AS/NZS 4859.1. This Standard specifies the testing criteria for insulation including both reflective and bulk insulation. In broad terms, the Standard requires the manufacturer to provide a data sheet, which explains the thermal performance and the installation requirements of the product.

The manufacturer's data sheet should be utilised by both building designers and building surveyors as documentary evidence of the performance of the insulation and may be required to form part of the building approval documentation.

6.3 Subclause J1.2 (b) - Reflective Insulation

Insulating performance is achieved by the ability of the reflective insulation to "reflect" heat at one surface and not transmit it at another, combined with the insulating qualities of the thin air films adjacent to the reflective insulation. Some reflective insulation is also bonded to bulk or board insulation providing enhanced performance.

Accordingly, the reflectivity value and the presence of an airspace are critical, because without this airspace the reflection will not occur.

The other issue to consider is that generally, reflective insulation has a dull or anti-glare (painted side) and a shiny silver side. Both sides will achieve a degree of reflectivity. However, the shiny side is the most effective.

From an Occupational Health and Safety point of view, the dull coloured side is installed facing outwards to prevent eye injury, which could occur if the high reflectivity from the silver side was on the outside.

Note that reflective insulation has an overlap requirement of 50 mm. This is different to the Standard AS 4120 (the standard for the installation of wall wraps) requirements. Standard AS 4120 addresses wall sarking, and requires the achievement of a certain degree of water proofing. However, reflective insulation under Section J of the BCA is not installed -for waterproofing and only requires a small overlap to maintain a reflective capacity.

6.4 Subclause J1.2 (c) - Bulk Insulation

Subclause J1.2 (c) provides a list of requirements for bulk insulation. The term, bulk insulation, includes glass fibre, wool, cellulose fibre, polyester and polystyrene. These materials tend to have a high percentage of air voids that retard heat movement.

The thermal performance of bulk insulation is dependent on the material retaining the depth specified by the manufacturer, in accordance with the required test results. The depth of the insulation is critical because the air pockets within the material trap and retard heat flow. If the insulation is compressed it will lose some of these air pockets as the fibre contact increases, which in turn, will reduce its capacity to achieve the design R-Value.

Design alert: Insulation materials used in a Class 2 to 9 building must also comply with Clause C1.10 of the BCA for fire hazard properties. This may require the insulation used in these building to be of negligible fire hazard by complying with the non-combustibility, flammability, spread of flame and smoke development requirements of the Clause. The performance of the insulation used should be validated by test reports and these reports should form part of the building approval documentation.

6.5 Specification J1.2

This specification provides a list of common construction materials and their associated thermal performance. The values have been developed after extensive consultation with industry experts and reflect agreed values based on the latest scientific test information.

Other values for materials may be acceptable. However, these should be validated by supporting information as prescribed in A2.2. In other instances, references from reputable engineering texts such as those published by ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) and AIRAH (Australian Institute of Refrigeration, Air-Conditioning and Heating) would also be reliable and suitable as evidence for compliance with the BCA.

6.6 **Roof & Ceiling Construction part J1.3**

6.6.1 **Application of Part J1.3**

Clause J1.3 specifies that for a roof and ceiling that is part of the envelope, must achieve the Total R-Value specified in Table J1.3 for the direction of heat flow.

Table J1.3(a) states that for climate Zone 6, insulation generally, must achieve a minimum Total R-Value of R3.2 for a roof and ceiling notwithstanding the roof upper surface solar absorptance value of the metal roof.

The direction of heat flow indicated in the BCA is downward.

6.6.2 **Assessment of Construction (Roof & Ceiling to the Ground Floor Conditioned Areas)**

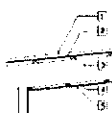
Drawings indicate that the roof to the ground floor conditioned areas is a skillion metal roof with a suspended ceiling. The roof and ceiling on its own will not achieve the required R-Value and will require insulation to comply.

No downlights are shown on plan.

6.6.3 **Opinion**

Table J1.3(a) shows DTS options for roof and ceiling construction under the provisions of the BCA. Compliance with the requirements of J1.3 (a), is obtained by materials complying with relevant standards as noted in Specification J1.3 as well as methods used during construction and installation.

6.6.4 **Roof and Ceiling Construction – To The Ground Floor Conditioned Areas**

Roof construction description:	Item	Item description	R- Value Unventilated	
			Up	Down
Skillion Metal roof suspended ceiling 	1	Outdoor air film (7m/s)	0.04	0.04
	2	Metal Roof	0.00	0.00
	3	Ceiling Air space non-reflective	0.15	0.22
	4	Plasterboard or similar	0.06	0.06
	5	Indoor air film (still air)	0.11	0.16
	Total R- Value		0.36	0.48

6.6.5 **Compliance for Roof and Ceiling (To The Ground Floor Conditioned Areas)**

Insulation of minimum R2.72 within the ceiling void of the ground floor conditioned areas will allow compliance with Part J1.3.

NOTE 1: No allowance has been given if a 'thermal blanket' is installed beneath the metal roof sheets.

6.7 Roof Lights J1.4

No roof lights are shown within the conditioned areas on the Architectural plans.

J1.4 is not applicable to this development.

6.8 Walls Part J1.5

6.8.1 Application

The construction of walls that are part of the envelope is a major contributing factor in the overall thermal performance of the building.

Each part of an external wall that is part of the envelope must satisfy one of the requirements outlined in Table J1.5(a) except opaque non-glazed openings in external walls such as doors, vents, penetrations, shutters or glazing..

Table J1.5(a) for external walls require a total R-Value of R2.8 however, Table J1.5(a) allows the Total R-value of the external wall to be reduced in the following circumstances:

- (i) For a wall with a surface density of not less than 220kg/m² by R0.5.
- (ii) For a wall that has a south orientation as described in figure J2.3 by R0.5, or
- (iii) Shaded with a projection shade angle in accordance with Figure J1.5 of:
 - (a) 30° to not more than 60° by R0.5, or
 - (b) more than 60° by R1.0.

The internal walls require an R-Value of R1.8 as required by Table J1.5(b)(b).

6.8.2 Assessment for Construction for External and Internal Walls to the Conditioned Areas

The external walls to the conditioned areas are cavity brick or lightweight clad fibre cement walls while the internal walls separating the conditioned areas from the non-conditioned areas are brick walls. The external and internal walls on their own will not achieve the required R-Value and will require insulation while the cavity brick external walls qualify for a reduction due to density and both the external and internal walls qualify for a reduction as per Spec. J1.5.

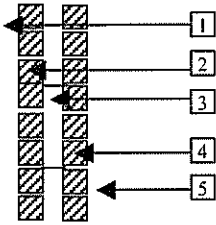
If the lightweight walls are metal frame there must be a '*thermal break*' consisting of a material with an R-Value of not less than R0.2 installed between the external cladding and the metal frame.

6.8.3 Opinion

Table J1.5(a) and Table J1.5(b) shows DTS options for external and internal wall construction under the provisions of the BCA.

Compliance with Table J1.5(a) and Table J1.5(b) for climate Zone 6 is obtained by materials complying with relevant standards as noted in Specification J1.5 as well as methods used during construction and installation.

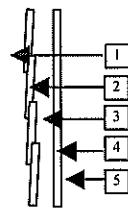
6.8.4 Wall Description – Spec. J1.5 (External Cavity Brick Walls to Conditioned Areas)

External wall construction description	Item	Item Description	R-Value
	1	Outdoor air film (7m/ss)	0.04
	2	Masonry Wall. 3.75Kg/Brick	0.14
	3	Masonry cavity (20mm to 50mm, non-reflective and unventilated)	0.17
	4	Masonry Wall 3.75Kg/Brick	0.14
	5	Indoor air film (still air)	0.12
Total R-Value			0.61

6.8.5 Compliance for External Cavity Brick Walls To Conditioned Areas

Allowing for a R0.61 reduction for Spec. J1.5 and a R0.5 reduction for density, insulation within the cavity walls surrounding the conditioned areas of minimum R1.69 will allow compliance with J1.5.

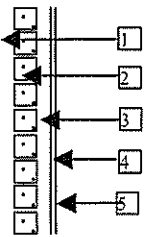
6.8.6 Wall Description – Spec. J1.5 (External Lightweight Walls to Conditioned Areas)

External Wall Construction Description	Item	Item Description	R-Value
	1	Outdoor air film (7m/ss)	0.04
	2	Hardies Fibre Cement	0.03
	3	Air space (90mm, non-reflective and unventilated)	0.17
	4	Plasterboard	0.06
	5	Indoor air film (still air)	0.12
Total R-Value			0.42

6.8.7 Compliance for External Lightweight Walls To Conditioned Areas

Insulation of minimum R2.38 within the external lightweight walls of the conditioned areas will allow compliance with J1.5, subject to a 'thermal break' being installed between the external cladding and any metal frame.

6.8.8 Wall Description – Spec. J1.5 (Internal Brick Walls Separating the Conditioned Areas From the Non-Conditioned Areas)

Internal wall construction description	Item	Item Description	R-Value
Masonry brick 	1	Indoor air film (7m/ss)	0.12
	2	Masonry Brick	0.14
	3	Airspace (non-reflective and unventilated)	0.17
	4	Plasterboard, gypsum (10mm, 880 kg/m³)	0.06
	5	Indoor air film (still air)	0.12
	Total R-Value		0.61

NOTE: Indoor air film replaces outdoor air film.

6.8.9 Compliance for Internal Brick Walls Separating Conditioned Areas From Non-Conditioned Areas

Allowing for a R0.61 reduction for Spec. J1.5, the internal walls separating the conditioned areas from the non-conditioned areas require insulation of minimum R1.19 to comply with Part J1.5.

6.9 Floors Part J1.6

6.9.1 Application

A floor that is part of the envelope of a building including a floor above or below a carpark must achieve the total R-Value specified in J1.6.

In Climate Zone 6 the total R-Value of Table J1.6 may be reduced by R0.5 provided R0.75 is added to the total R-Value required for the ceiling.

Table J1.6(a) allows a slab on ground without an in-slab or inscreed heating or cooling system to have a Nil rating.

Table J1.6(b) requires a suspended floor slab without an in-slab or inscreed heating or cooling system where the non-conditioned space is enclosed and where mechanically ventilated by not more than 1.5 air changes/hour to have an R-Value of R1.0 however if it cannot meet (b) above J1.6(d) requires the floor to have an R-Value of R2.0.

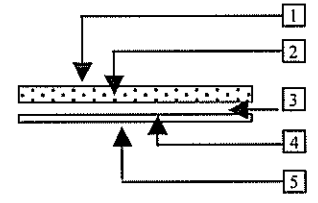
6.9.2 Assessment for Construction For Ground Floor Slab

Drawings indicate that the majority of the ground floor slab of the conditioned areas is above the basement carpark. As no advice has been received regarding the number of air changes per hour for the mechanical ventilation to the carpark the slab requires an R-Value of R2.0.

6.9.3 Opinion

Compliance with Table J1.6(d) for Climate Zone 6 is obtained by materials complying with the relevant standards as noted in Spec. J1.6 as well as methods used during construction and installation.

6.9.4 Floor Description – Spec. J1.6 (Concrete Floor to the Ground Floor Slab Above the Basement Carpark)

Floor Construction description	Item	Item Description	R-Value Unventilated
	1	Indoor air film	0.16
	2	Solid concrete	0.18
	3	Air Gap	0.22
	4	Villaboard or similar	0.03
	5	outdoor air fill	0.04
		Total R- Value	0.63

6.9.5 Compliance for Concrete Floor to the Ground Floor Slab Above the Basement Carpark

The concrete floor above the basement carpark receives an R0.63 reduction.

Insulation of minimum R1.37 to the floor void of the ground floor slab of the conditioned areas above the carpark will allow compliance with J1.6.

NOTE: Should the Mechanical Engineer certify the basement carpark requires less than 1.5 air changes/hour, then the ground floor slab only requires an R-Value of R1.0.

7 EXTERNAL GLAZING PART J2.0

7.1 External Glazing

7.1.1 Application

The DTS Provisions of the BCA are covered in J2.1 which applies to elements forming the envelope of a building.

7.1.2 Assessment of Construction

J2.4 Glazing – Method 2 states that glazing must be assessed separately for each storey and for each orientation of the subject building.

Assessment (Method 2 – DTS) is facilitated under the BCA to determine compliance with DTS using the BCA 'Glazing Calculator' developed by the Australian Building codes Board (ABCB) and provided on the ABCB website. This is the form of a Microsoft Excel spreadsheet.

7.1.3 Opinion

A Glazing system that achieves the minimum specifications as outlined in Annexure 1 of this Report will achieve compliance.

These generic window values for the total U-Value and Solar Heat Gain Co-efficient (SHGC) are from the National Fenestration Rating Council (NFRC) and can be supplied by most window manufacturers in Australia.

7.1.4 Compliance

The glazing for the conditioned areas will comply with Part J2.0 of the BCA if it meets the total U-Value and SHGC figures as depicted in Annexure 1.

8 BUILDING SEALING PART J3.0

8.1 Building Sealing

8.1.1 Application of Part J3.1

The DTS Provisions of the BCA are covered in J3.1 and apply to elements forming the envelope of a Class 2 to 9 building, other than:

- a) a building in climate zones 1, 2, 3 and 5 where the only means of air-conditioning is by using an evaporative cooler; or
- b) a permanent building ventilation opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or
- c) a building or space where the mechanical ventilation required by Part F4 provides sufficient pressurization to prevent infiltration.

8.1.2 Assessment of Construction [Building Sealing]

The proposed development is located in Climate Zone 6 as per table A1.1 '*Climate Zones for Thermal Design*' and is required to comply with Part J3.0.

8.1.3 Opinion and Compliance

The building is required to comply with the provisions of the BCA J3.0 for parts J3.2, J3.4, J3.5, J3.6 and J3.7 inclusive,

- J3.2 No chimneys or flues to conditioned spaces are indicated on the referenced drawing set for the new work, therefore compliance is not required for the subject building.
- J3.4(a) A seal to restrict air infiltration must be fitted to each edge of a door, openable window or the like forming part of the envelope of a conditioned space.
- J3.4(b) These requirements do not apply to a window complying with AS.2047, or a fire or smoke door or a roller shutter door, roller shutter grille or other security door or device installed only for out of hours security.
- J3.4(c) A seal required by (a) above for the bottom edge of an external swing door must be a draft protection device and for the other edges of an external door or the edges of an openable window the seal may be a foam or rubber compression strip, fibrous seal or the like.
- J3.4(d) The main entry door shall be a self-closing door.
- J3.5 A miscellaneous exhaust fan such as a bathroom exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a conditioned space.

- J3.6 Roofs, walls, floors and any opening such as a window, door or the like within the conditioned areas must be constructed to minimize air-leakage when forming part of the envelope of the external fabric of a conditioned space.
- Construction as required by J3.6 must be either by enclosure of internal lining systems that are close fitting at ceiling, wall and floor junctions or sealed by caulking skirting, architraves, cornices or the like.
- J3.7 An evaporative cooler must be fitted with a self-closing damper or the like when serving a heated space or an habitable room in a public area of a building.

9 AIR MOVEMENT PART J4

Part J4 is not applicable to this building.

10 AIR-CONDITIONING AND VENTILATION SYSTEM – PART J5

10.1 J5.2 Air-Conditioning Systems

(a) **Control:**

- (i) An air-conditioning system
 - (A) must be capable of being deactivated when the building or part of a building served by that system is not occupied; and
 - (B) when serving more than one air-conditioning zone or area with different heating or cooling needs, must:
 - (aa) thermostatically control the temperature of each zone or area; and
 - (bb) not control the temperature by mixing actively heated air and actively cooled air; and
 - (cc) limit reheating to not more than:
 - (AA) for a fixed supply air rate, a 7.5 K rise in temperature; and
 - (BB) for a variable supply air rate, a 7.5 K rise in temperature at the nominal supply air rate but increased or decreased at the same rate that the supply air rate is respectively decreased or increased; and
 - (C) which provides the required mechanical ventilation, other than in process- related applications where humidity control is needed, must have an outdoor air economy cycle:
 - (aa) in Climate Zones 2 or 3, when the air-conditioning system capacity is more than 50 kW_r; or
 - (bb) in Climate Zones 4, 5, 6, 7 or 8, when the air-conditioning system capacity is more than 35 kW_r; and
 - (D) which contains more than one water heater, chiller or coil, must be capable of stopping the flow of water to those not operating; and
 - (E) except for a packaged air-conditioning system, must have a variable speed fan when its supply air quantity is capable of being varied; and
 - (F) when serving a sole occupancy unit in a Class 3 building, must not operate when any external door of the sole occupancy unit that opens to a balcony or the like, is open for more than one minute.
- (ii) When an air-conditioning system is deactivated, any motorised outside air and return dampers must close.
- (iii) Compliance with (i) must not adversely affect
 - (A) smoke hazard management measures required by Part E2, and
 - (B) ventilation required by Part E3 and Part F14.

(b) **Fans** Fans of an air-conditioning system must comply with Specification J5.2a.

(c) **Pumps**

- (i) An air-conditioning system, where water is circulated by pumping at more than 2 L/s, must be designed so that the maximum pump power to the pump complies with Table J5.2.
- (ii) An air-conditioning system pump that is rated at more than 3 kW of pump power and circulates water at more than 2 L/s must be capable of varying its speed in response to varying load.
- (iii) A spray water pump of an air-conditioning system's closed circuit cooler or evaporative condenser must not use more than 150 W of pump power for each L/s of spray water circulated.

Table J5.2 MAXIMUM PUMP POWER

Cooling or heating load (W/m ² of the floor area of the conditioned space)	Maximum pump power (W/m ² of the floor area of the conditioned space)		
	Chilled water	Condenser water	Heating water
Up to 100	1.3	0.9	1.0
101 to 150	1.9	1.2	1.3
151 to 200	2.2	2.2	1.7
201 to 300	4.3	3.0	2.5
301 to 400	5.0	3.6	3.2
More than 400	5.6	5.6	3.6

Note: Values do not include any motor losses.

- (d) **Insulation**
- (i) The ductwork of an air-conditioning system must be insulated and sealed in accordance with Specification J5.2b.
 - (ii) Piping, vessels, heat exchangers and tanks containing heating or cooling fluid that are part of an air-conditioning system, other than those with insulation levels covered by MEPS, must be insulated in accordance with Specification J5.2c.
- (e) **Space heating** - A heater used for air-conditioning or as part of an air-conditioning system must comply with Specification J5.2d.
- (f) **Energy efficiency ratios**
- (i) Refrigerant chillers used as part of an air-conditioning system; and
 - (ii) Packaged air-conditioning equipment, must comply with Specification J5.2e.
- (g) **Time switches**
- (i) A time switch complying with Specification J6 must be provided to control
 - (A) an air-conditioning system of more than 10 kW; and
 - (B) a heater of more than 10 kW heating used for air-conditioning
 - (ii) The requirements of (i) do not apply to:
 - (A) an air-conditioning system that serves
 - (aa) only one sole occupancy unit in a Class 2 or 3 building; or
 - (bb) Class 4 part of a building; or
 - (cc) only one sole occupancy unit in a Class 9c building; or
 - (B) a building where air-conditioning is needed for 24 hour occupancy.

10.2 J5.3 Mechanical Ventilation Systems – Including the Basement Carpark

- (a) **Control**
- (i) A mechanical ventilation system, including one that is part of an air-conditioning system, except where the mechanical system serves only one sole occupancy unit in a Class 2 building or serves only a Class 4 part of a building, must
 - (A) be capable of being deactivated when the building or part of the building served by that system is not occupied; and
 - (B) when serving a conditioned space:

- (aa) not exceed the minimum outdoor air quantity required by Part F4, where relevant, by more than 20%; and
 - (bb) in other than Climate Zone 2, where the number of square metres per person is not more than 1 as specified in D1.13 and the air flow rate is more than 1000 L/s, have
 - (AA) an energy reclaiming system that preconditions outside air; or
 - (BB) the ability to automatically modulate the mechanical ventilation required by Part F4 in proportion to the number of occupants.
- (ii) The requirements of (a)(i)(B)(aa) do not apply where
 - (A) additional unconditioned outside air is supplied for free cooling or to balance process exhaust; or
 - (B) additional exhaust ventilation is needed to balance the required mechanical ventilation; or
 - (C) an energy reclaiming system preconditions all the outside air.
- (iii) Compliance with (a)(i) must not adversely affect
 - (A) smoke hazard management measures required by Part E2; and
 - (B) ventilation required by Part E3 and Part F4.
- (b) **Fans** - Fans of a mechanical ventilation system covered by must (a) comply with Specification J5.2a.
- (c) **Time switches**
 - (i) A time switch complying with Specification J6 must be provided to control a mechanical ventilation system with an air flow rate of more than 1000 Us.
 - (ii) The requirements of (i) do not apply to;
 - (A) a mechanical ventilation system that serves
 - (aa) only one sole occupancy unit in a Class 2 or 3 building; or
 - (bb) a Class 4 part of a building; or
 - (cc) only one sole occupancy unit in a Class 9c building; or
 - (B) a building where mechanical ventilation is needed for 24 hour occupancy.

11 ARTIFICIAL LIGHTING & POWER – PART J6

11.1 Artificial Lighting & Power

11.1.1 J6.2 Artificial Lighting

In a Class 7a & 9b building, for artificial lighting, the aggregate design illumination power load must not exceed the sum of the allowances obtained by multiplying the area of each space by the illumination power density in Table J6.2(a) and the aggregate design illumination power load is the sum of the design illumination power loads in each of the spaces served. (See Annexure 2 for Table J6.2(a) showing the max. illumination power density requirement for the different areas).

In determining the design illumination power load the following must be used:

- (i) Where there are multiple lighting systems serving the same space;
 - A. the total illumination power load of all systems; or
 - B. for a control system that permits only one system to operate at a time, the design illumination power load is;
 - a. based on the highest illumination power load; or
 - b. determined by the formula:
$$[H \times T/2 + P \times (100 - T/2)] / 100$$
Where:
 - H = the highest illumination power load; and
 - T = the time for which the maximum illumination power load will occur, expressed as a percentage; and
 - P = the predominant illumination power load.
- (ii) The requirements above do not apply to emergency lighting or lighting of a specialist process nature such as in an operating theatre, fume cupboard or clean workstation.

11.1.2 J6.3 Interior Artificial Lighting & Power Control

- (i) Artificial lighting of a room or space must be individually operated by a switch or other control device.
- (ii) An artificial lighting switch or other control device in (i) above must:
 - A. If an artificial lighting switch, be located in a visible position;
 - a. In the room or space being switched; or
 - b. In an adjacent room or space from where the lighting being switched is visible.

The requirements of (i) and (ii) above do not apply to Emergency lighting in accordance with Part E4.

11.1.3 J6.5

Artificial lighting around the perimeter of a building must be

- (i) Controlled by either a daylight sensor or a time switch that is capable of switching on and off electric power to the system at variable pre-programmed times and on variable pre-programmed days, and
- (ii) when the total perimeter lighting load exceeds 100w.
 - A. have an average light source efficacy of not less than 60 lumens/w, or
 - B. be controlled by a motion detector in accordance with Spec J6, and
 - C. when used for decorative purposes such as façade lighting or signage lighting have a separate time switch in accordance with Spec. J6.
- (iii) The requirements of (ii)(A) and (B) do not apply to Emergency lighting in accordance with Part E4.

11.1.4 Specification J6.3 – Time Switch

A time switch must be capable of:-

- (i) Switching on and off electric power to systems:
 - A. at variable pre-programmed times and on variable pre-programmed days, and
 - B. limiting the period the system is switching on to 2 hours beyond the time for which the building is occupied; and
- (ii) Being overridden by a manual switch for a period of up to 2 hours, after which the time switch must resume control.

11.1.5 Specification J6.4 – Motion Detectors

In a Class 5, 6, 7, 8, 9a or 9b building, a motion detector must:-

- (i) Be capable of sensing movement such as by infra-red, ultrasonic or microwave detection or by a combination of these means; and
- (ii) Be capable of detecting a person before they have entered 1 m into the space, and movement of 500mm within the useable part of the space; and
- (iii) Not control more than, in other than a carpark, an area of 500m² with a single sensor or group of parallel sensors and 75% of the lights in spaces using high intensity discharge; and
- (iv) Be capable of maintaining the artificial lighting when activated for a minimum of 5 minutes and a maximum of 30 minutes unless it is reset, and without interruption if the motion detector is reset by movement; and
- (v) Have a manual override switch which enable the lighting to that area, or a greater area, to be turned off, and is not capable of switching the lights permanently on.

11.1.6 Specification J6.5 - Daylight sensor and dynamic lighting control device

A daylight sensor and dynamic lighting control device for artificial lighting must -

- (i) For switching on and off:-
 - A. Be capable of having the switching level set point adjusted between 50 and 1000 lux; and
 - B. Have a delay of more than 2 minutes and a differential of more than 100 lux for a sensor controlling high pressure discharge lighting and 50 lux for a sensor controlling other than high pressure discharge lighting.

Have a manual override switch which enables the lighting in an area to be turned off but is not able to switch the lights permanently on or bypass the lighting controls

12 HEATED WATER SUPPLY – PART J7

Any heated water supply for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume 3 – Plumbing Code of Australia.

13 FACILITIES FOR ENERGY MONITORING - PART J8

13.1 Facilities for Energy Monitoring – J8.3

13.1.1 J8.3(a)

The building must have the facility to record the consumption of gas and electricity.

13.1.2 J8.3(b)

As the building is less than 2500sq metres in area J8.3(b) is not applicable.

14 **CONCLUSION**

This report provides an assessment of the Deemed-To-Satisfy requirements of Section J of the Building Code of Australia.

Should the recommendations contained in this report be adopted into the building during construction, the development will comply with the Deemed-To-Satisfy requirements of Section J.

NOTE: Summary of Recommendations

1. J1.2(a) Any insulation must be installed so that it abuts or overlaps adjoining insulation, forms a continuous barrier with ceilings, walls, bulkheads, floors or the like and does not affect the safe or effective operation of a service or fitting.
2. J1.2(b) Reflective insulation must be installed to achieve the required R-Value between a reflective side of the reflective insulation and a building lining or cladding. It must be closely fitted against any penetration, door or window opening, adequately supported and overlapped not less than 50mm or taped together.
3. J1.2(c) Bulk insulation must be installed so that it maintains its position and thickness and in a ceiling where there is no bulk or reflective insulation in the wall beneath, it overlaps the wall by not less than 50mm.
4. Provide a minimum R2.72 insulation to the ground floor ceiling of the conditioned areas.

NOTE: No allowance has been given if a '*thermal blanket*' is installed beneath the metal roof sheets.

5. Provide insulation of minimum R1.69 to all external cavity brick walls to the conditioned areas.
6. Provide insulation of minimum R2.38 to all lightweight external walls of the conditioned areas subject to a '*thermal break*' being installed as detailed in 6.8.7 of this Report, if the wall frame is metal.
7. Provide insulation of minimum R1.19 to all internal brick walls separating the conditioned areas from the non-conditioned areas.
8. Provide insulation of minimum R1.37 to the ground floor slab above the basement carpark.
9. Provide glazing to all windows and glass doors of the conditioned areas that have the U-Value and SHGC values as nominated in Annexure 1 of this report.
10. Provide seals to any openable windows and doors within the conditioned areas as mentioned in 8.1.3 of this report.
11. Any miscellaneous exhaust fan such as a bathroom exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a conditioned area.
12. Any evaporative cooler must be fitted with a self-closing damper or the like when serving a heated space or an habitable room or a public area of the conditioned areas.
13. All internal linings to the conditioned areas shall be close fitting at the junction of ceiling wall and floors or sealed by caulking skirting, architraves cornices or the like.

14. Any air-conditioning or mechanical ventilation system to the conditioned areas or basement carpark must comply with the requirements outlined in Heading 10.0.
15. Lighting and Power to the building including the basement carpark shall comply with the requirements outlined in Heading 11 and Annexure 2.
16. Any heated water supply for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume 3 – Plumbing Code of Australia.
17. The building must have the facility to record the consumption of gas and electricity.
18. The main entry door shall be self-closing and if not a fire door shall have a draft protection device attached to the underside of the door.



MAX BRIGHTWELL

15 ANNEXURE 1 – Window Schedule

Ground Floor (Page 1 of 2)

printed 05/07/2019

Report from Gurners Ave - 83 (ground)

NCC VOLUME ONE GLAZING CALCULATOR (first issued with NCC 2014)

Building name description

83 Gurners Ave, Austral.

Application

other

Climate zone

9

Storey		Facade areas							
G		N	NE	E	SE	S	SW	W	WW
Option A	170m ²			200m ²		170m ²			
Option B									
Grazing area (A)		31.8m ²		98.7m ²		99.3m ²			

Number of rows preferred in table below

17

17

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE AND PERFORMANCE CHARACTERISTICS										SHADING		CALCULATED OUTCOMES OK (if inputs are valid)					
Glazing element		Facing sector		Size			Performance			P&H or device		Shading	Multipliers	Size	Outcomes		
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	P/H	G (m)	Heating (S _e)	Cooling (S _e)	Area used (m²)	Element share of % of allowance used	
1	HD15	N		2.40	1.84		7.0	0.60	2.700	4.000	0.68	1.60	0.99	0.86	4.42	19% of 90%	
2	H17	N		1.20	1.80		7.0	0.60	4.500	2.500	1.80	1.30	0.67	0.47	2.16	3% of 90%	
3	H18	N		1.20	1.80		7.0	0.60	4.500	2.500	1.80	1.30	0.67	0.47	2.16	3% of 90%	
4	HD10	N		2.40	4.80		7.0	0.60				0.00	1.00	1.00	11.52	41% of 90%	
5	HD09	N		2.40	4.80		7.0	0.60				0.00	1.00	1.00	11.52	41% of 90%	
6	HD08	E		2.40	1.84		3.0	0.30	6.000	4.000	1.50	1.60	0.80	0.70	4.42	5% of 98%	
7	HD07	E		2.40	5.60		3.0	0.30	6.000	4.000	1.50	1.60	0.80	0.70	13.44	14% of 94%	
8	HD06	E		2.40	5.60		3.0	0.30	6.000	4.000	1.50	1.60	0.80	0.70	13.44	14% of 96%	
9	HD05	E		2.40	5.60		3.0	0.30	6.000	4.000	1.50	1.60	0.80	0.70	13.44	14% of 98%	
10	HD04	E		2.40	5.60		3.0	0.30	6.000	4.000	1.50	1.60	0.80	0.70	13.44	14% of 98%	
11	HD03	E		2.40	1.84		3.0	0.30	6.000	4.000	1.50	1.60	0.80	0.70	4.42	5% of 98%	
12	HD02	E		2.40	1.84		3.0	0.30	8.000	4.000	2.00	1.60	0.67	0.59	4.42	4% of 98%	
13	HD01	E		2.40	1.84		3.0	0.30	8.000	4.000	2.00	1.60	0.67	0.59	4.42	4% of 98%	
14	H1	S		1.20	1.80		4.0	0.70	2.000	2.500	0.80	1.30	0.94	0.90	2.16	3% of 88%	
15	H2	S		1.20	1.80		4.0	0.70	2.000	2.500	0.80	1.30	0.94	0.90	2.16	3% of 88%	
16	FG	S		4.60	11.96		4.0	0.70	2.000	4.600	0.43	0.00	0.85	0.79	55.02	93% of 88%	
17	FG	S		4.20	6.50		3.0	0.30	8.000	4.000	2.00	-0.20	0.01	0.29	27.30	25% of 98%	

page 1 of 2

Ground Floor (Page 2 of 2)

printed 05/07/2019

Report from Gurners Ave - 83 (ground)

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS							SHADING			CALCULATED OUTCOMES OR (if inputs are valid)							
Glazing element		Facing sector		Size		Performance		P&H or device		Shading	Multipliers	Size	Outcomes				
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m ²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	P/H (m)	G (m)	Heating (S _H)	Cooling (S _C)	Area used (m ²)	Element share of % of allowance used	

IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR

The Glazing Calculator has been developed by the ABCB to assist in developing a better understanding of glazing energy efficiency parameters.

While the ABCB believes that the Glazing Calculator, if used correctly, will produce accurate results, it is provided "as is" and without any representation or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all.

Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.

if inputs are valid



IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR

The Glazing Calculator has been developed by the ABCB to assist in developing a better understanding of glazing energy efficiency parameters. While the ABCB believes that the Glazing Calculator, if used correctly, will produce accurate results, it is provided "as is" and without any representation or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all. Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.

Copyright © 2014 – Australian Government, State and Territory Governments of Australia. All Rights Reserved

page 2 of 2

Void Area (Page 1 of 2)

Printed 05/07/2019

Report from Gurners Ave - 83 (Void)

NCC VOLUME ONE GLAZING CALCULATOR (first issued with NCC 2014)

Building name/description
83 Gurners Ave, Austral

Climate zone
6

Application
Other

Storey
VOID

Facade areas

	N	NE	E	SE	S	SW	W	WN	Internal
Option A	170m ²		200m ²		170m ²		200m ²		
Option B									
Glazing area (A)	25.9m ²		19.4m ²		25.9m ²		13m ²		

26 (as currently displayed)

Number of rows preferred in table below

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE AND PERFORMANCE CHARACTERISTICS										CALCULATED OUTCOMES OK (if inputs are valid)						
Glazing element		Facing sector		Size			Performance		SHADING		Shading	Multipliers	Size	Outcomes		
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P&H or device		P/H (m)	G (m)	Heating (S _a)	Cooling (S _c)	Area used (m²)	Element share of % of allowance used
									P (m)	H (m)						
1 H19		W		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	25% of 40%
2 H20		W		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	25% of 40%
3 H21		W		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	25% of 40%
4 H22		W		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	25% of 40%
5 H23		N		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	1.00	0.96	3.24	12% of 93%
6 H24		N		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	1.00	0.96	3.24	12% of 93%
7 H25		N		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	1.00	0.96	3.24	12% of 93%
8 H26		N		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	1.00	0.96	3.24	12% of 93%
9 H27		N		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	1.00	0.96	3.24	12% of 93%
10 H28		N		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	1.00	0.96	3.24	12% of 93%
11 H29		N		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	1.00	0.96	3.24	12% of 93%
12 H30		N		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	13% of 93%
13 H31		E		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	17% of 65%
14 H32		E		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	17% of 65%
15 H33		E		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	17% of 65%
16 H34		E		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	17% of 65%
17 H35		E		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	17% of 65%
18 H36		E		1.20	2.70		7.0	0.70				0.00	1.00	1.00	3.24	17% of 65%
19 H37		S		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	0.99	0.93	3.24	13% of 94%
20 H38		S		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	0.99	0.93	3.24	13% of 94%
21 H39		S		1.20	2.70		7.0	0.70	0.450	2.000	0.23	0.80	0.99	0.93	3.24	13% of 94%

page 1 of 2

Void Area (Page 2 of 2)

printed 05/07/2019

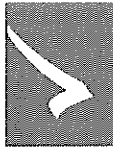
Report from Gurners Ave - 83 (Void)

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS										SHADING				CALCULATED OUTCOMES OK (if inputs are valid)					
Glazing element		Facing sector		Size			Performance			P&H or device		Shading		Multipliers		Size		Outcomes	
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)		P (m)	H (m)	P/H	G (m)	Heating (S _a)	Cooling (S _c)	Area used (m²)		Element share of % of allowance used	
22 H40		S		1.20	2.70		7.0	0.70		0.450	2.000	0.23	0.80	0.99	0.98	3.24		13% of 94%	
23 H41		S		1.20	2.70		7.0	0.70		0.450	2.000	0.23	0.80	0.99	0.98	3.24		13% of 94%	
24 H42		S		1.20	2.70		7.0	0.70		0.450	2.000	0.23	0.80	0.99	0.98	3.24		13% of 94%	
25 H43		S		1.20	2.70		7.0	0.70		0.450	2.000	0.23	0.80	0.99	0.98	3.24		13% of 94%	
26 H44		S		1.20	2.70		7.0	0.70		0.450	2.000	0.23	0.80	0.99	0.98	3.24		13% of 94%	

IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR

The Glazing Calculator has been developed by the ABCB to assist in developing a better understanding of glazing energy efficiency parameters. While the ABCB believes that the Glazing Calculator, if used correctly, will produce accurate results, it is provided "as is" and without any representation or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all. Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.

if inputs are valid



Copyright © 2014 – Australian Government, State and Territory Governments of Australia. All Rights Reserved

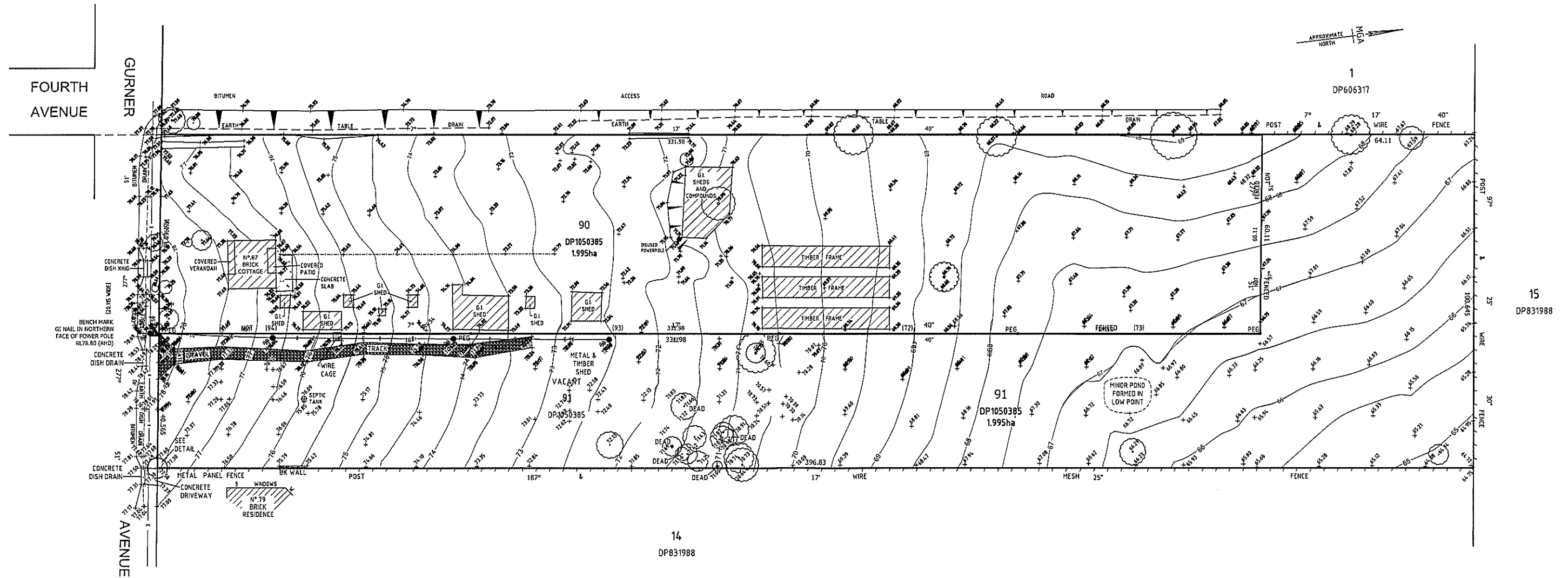
page 2 of 2

16 ANNEXURE 2 - Power Density for Specific Areas

Table J6.2a MAXIMUM ILLUMINATION POWER DENSITY	
Space	Maximum illumination power density(W/m²)
Auditorium, church and public hall	10
Board room and conference room	10
Carpark – general	6
Carpark - entry zone (first 20 m of travel)	25
Common rooms, spaces and corridors in a Class 2 building	8
Control room, switch room, and the like	9
Corridors	8
Courtroom	12
Dormitory of a Class 3 building used for sleeping only	6
Dormitory of a Class 3 building used for sleeping and study	9
Entry lobby from outside the building	15
Health-care - children's ward	10
Health-care - examination room	10
Health-care - patient ward	7
Health-care - all patient care areas including corridors where cyanosis lamps are used	13
Kitchen and food preparation area	8
Laboratory - artificially lit to an ambient level of 400 lx or more	12
Library = stack and shelving area	12
Library - reading room and general areas	10
Lounge area for communal use in a Class 3 building or Class 9c aged care building	10
Museum and gallery - circulation, cleaning and service lighting	8
Office – artificially lit to an ambient level of 200 lx or more	9
Office – artificially lit to an ambient level of less than 200 lx	7
Plant room	5
Restaurant, café bar, hotel lounge and a space for the serving and consumption of food or drinks	18
Retail space including a museum and gallery whose purpose is the sale of objects	22
School - general purpose learning areas and tutorial rooms	8
Sole-occupancy unit of a Class 3 building	5
Sole-occupancy unit of a Class 9c aged care building	7
Storage with shelving no higher than 75% of the height of the aisle lighting	8
Storage with shelving higher than 75% of the of the aisle lighting	10
Service area, cleaner's room and the like	5
Toilet, locker room, staff room, rest room and the like	6
Wholesale storage and display area	10

Notes:

1. In areas not listed above, the maximum illumination power density is:
 - (a) For an illuminance of not more than 80 lx, 7.5 W/m²
 - (b) For an illuminance of more than 80 lx and not more than 160 lx, 9 W/m²
 - (c) For an illuminance of more than 160 lx and not more than 240 lx, 10 W/m²
 - (d) For an illuminance of more than 240 lx and not more than 320 lx, 11 W/m²
 - (e) For an illuminance of more than 320 lx and not more than 400 lx, 12 W/m²
 - (f) For an illuminance of more than 400 lx and not more than 480 lx, 13 W/m²
 - (g) For an illuminance of more than 480 lx and not more than 540 lx, 14 W/m²
 - (h) For an illuminance of more than 540 lx and not more than 620 lx, 15 W/m².
2. For illuminance levels greater than 620 lx, the average light source efficacy must not be less than 80 Lumens/W.





QPC & C Pty Limited
ABN 78 074 731 963

Office Address:
Level 1, 1 Bells Road,
Oatlands, NSW, 2117

Postal Address:
PO Box 300,
Oatlands, NSW, 2117

P 02 9638 5522
E info@capital-qpc.com.au

www.capital-qpc.com.au

REGISTERED QUANTITY SURVEYORS COST REPORT

Client: Al-Faisal College

Project Description: Multi-Purpose Centre

Project Address: 83 Gurner Avenue, Austral NSW

QPC&C Reference No: Q2020-CR70

Date of Assessment: 8th April 2020

www.capital-qpc.com.au

Contents

Section 1.0	Introduction
Section 2.0	Development Description
Section 3.0	Construction Cost Summary
Section 4.0	Basis of Estimate
Section 5.0	Review of Documentation
Section 6.0	Disclaimer

Tables within Report

Table 1	-	Development Information
Table 2	-	Cost Estimate Summary
Table 3	-	Drawing Register

Appendix

Appendix A	-	Council Form
Appendix B	-	Elemental Cost Estimate
Appendix C	-	Schedule of Finishes

1.0 Introduction

An instruction was received from Al-Faisal College on 31st March 2020 to complete a cost estimate for submission with DA documentation to Council. To this end we have carried out the following:

2.0 Development Description

The development proposes the construction of a multi purpose centre over a basement.

Item	Area	Comments
Basement Area	4,234 m2	163 x Car Spaces
Commercial Area	1,961 m2	1 x Units
Balcony Areas	2,343 m2	Measured to inside face on enclosing balustrades & walls
Total Areas	8,539 m2	

Table 1 - Development Information

- Note: Areas above exclude any vertical shafts (i.e. lifts, stairs, services etc).

3.0 Construction Cost Summary

The construction cost estimate as calculated by our firm can be summarised as follows:

Item	Amount	Comments
Total Cost of Works (Clause 255)	\$7,984,703	<i>See section 4.1</i>
Total Cost of Works (Clause 25J)	\$7,960,943	<i>See section 4.2</i>
Capital Investment Value	\$7,258,821	<i>See section 4.3</i>

Table 2 - Cost Estimate Summary

4.0 Basis of Estimate

We advise that this is a genuine estimate of the construction costs prepared in accordance with the DA issue Architectural Plans and draft Schedule of Finishes only. A more detailed estimate can be prepared upon receipt of Structural Engineering and Services Documentation.

4.1 Section 255 (EPA Regulation 2000)

In accordance with Section 255 of the EP&A Regulation the development cost includes for goods & services tax, builders margin and all associated preliminaries & labour but excludes any project contingency.

4.2 Section 25J

In accordance with Section 25 J of the EP&A Regulation the proposed cost of carrying out the development is to be determined by adding up all the costs and expenses that have been or are to be incurred by the applicant in carrying out the development. Including the following:

- Demolition (*Included*)
- Excavation (*Included*)
- Decontamination or Remediation (*Excluded*)
- Erection of a Building (*Included*)

The following are not to be included in the proposed cost:

- The cost of any development that is provided as affordable housing. (*Not Considered*)
- The costs of any development that is the adaptive reuse of a heritage item (*Not Considered*)
- The costs of fittings and furnishings. (*Considered*)

4.3 Capital Investment Value

In accordance with NSW Planning Circular PS 10-008 the Capital Investment Value of a development or project includes all costs necessary to establish and operate the project, including the design and construction of buildings, structures, associated infrastructure and fixed or mobile plant and equipment. (Excluding contingency, land cost, development contributions, finance fees & interest and GST)

4.5 Quality

A schedule has been prepared to establish a quality basis to determine the costs of finishes. The finishes nominated are of a reasonable standard which is appropriate for the projects type and location.

The finishes and therefore costs may be subject to change based on future selections made by the developer or builder.

4.5 Exclusions

The following items have been excluded from this cost estimate:

- Land Costs, Rates, Legals, Stamp Duty & the like
- Interest & Finance Charges
- Electrical Substation / Electricity Upgrades
- Decontamination or Remediation
- Kitchen Fitout
- Wall & Ceiling Finishes
- Rock Excavation
- Acoustic treatments exceeding the nominal allowance
- National Broadband Network Implications

5.0 Review of Documentation

The estimate has been prepared based on a review of documentation supplied, including:

Consultant	Reference	Drawings:	Issue
Architecture Design Studio	Pn_0726	0401; 0990; 1000 - 1002; 1601; 1602; 1701;	05

Table 3 - Drawing Register

6.0 Disclaimer

This cost estimate has been prepared for the purpose of providing an indicative development cost suitable for DA submission to Council. All reasonable professional care and skill have been exercised to validate the accuracy and authenticity of the information supplied. Any form of contractual, tortuous or other form of liability for any consequences, loss or damage, which may result from other persons acting upon or using this estimate, will not be accepted.

Kind Regards,



Tony Sassine B.App.Sci (Hons), AAIQS
Managing Director



QPC & C Pty Limited
ABN 78 074 731 963

Office Address:
Level 1, 1 Bells Road,
Oatlands, NSW, 2117

P 02 9638 5522
E info@capital-qpc.com.au

www.capital-qpc.com.au

Appendix A

COUNCIL FORM

www.capital-qpc.com.au

Registered Quantity Surveyor's Detailed Cost Report

for development costs in excess of \$1,000,000

DATE OF REPORT:

8th April 2020

DEVELOPMENT APPLICATION No.

CONSTRUCTION CERTIFICATE No.

APPLICANT'S NAME:

APPLICANT'S ADDRESS:

DEVELOPMENT DESCRIPTION: *Multi-Purpose Centre*

DEVELOPMENT ADDRESS: *83 Gurner Avenue, Austral NSW*

DEVELOPMENT DETAILS

Gross Floor Area - Commercial	<i>2,787</i>	m2
Gross Floor Area - Residential		m2
Gross Floor Area - Retail		m2
Gross Floor Area - Car Parking	<i>4,234</i>	m2
Gross Floor Area - Other	<i>0</i>	m2

Total Gross Floor Area	<i>7,021</i>	m2
Total Site Area	<i>4,029</i>	m2
Total Car Parking Spaces	<i>163</i>	No.

Total Development Cost	\$ <i>7,984,703</i>
Total Construction Cost	\$ <i>7,828,140</i>
Total GST (Included Above)	\$ <i>725,882</i>

ESTIMATE DETAILS

Excavation	\$ <i>450,571</i>
Cost per m2 of site area	\$ <i>111.83 /m2</i>
Demolition & Site Prep	\$ <i>42,824</i>
Cost m2 metre of site area	\$ <i>10.63 /m2</i>
Construction - Commercial	\$ <i>3,733,882</i>
Cost per m2 of commercial area	\$ <i>1339.92 /m2</i>
Construction - Residential	\$
Cost per m2 of residential area	\$
Construction - Retail	\$
Cost per m2 of retail area	\$
Car Park	\$ <i>1,296,489</i>
Cost per m2 of site area	\$ <i>321.77 /m2</i>
Cost per space	\$ <i>7,954 /space</i>

Fit-Out - Commercial	\$ <i>2,290,791</i>
Cost per m2 of commercial area	\$ <i>822.06 /m2</i>
Fit-Out - Residential	\$
Cost per m2 of residential area	\$
External Works / Landscaping	\$ <i>13,583</i>
Cost per m2 of site area	\$ <i>3.37 /m2</i>
Professional Fees	\$ <i>156,563</i>
% of Development Cost	% <i>1.96</i>
% of Construction Cost	% <i>2.00</i>

Total Development Cost: <i>Incl GST</i>	\$ <i>7,984,703</i>
---	----------------------------

I certify that I have:

- ✓ Inspected the plans the subject of the application for development consent or construction certificate.
- ✓ Prepared and attached an elemental estimate generally prepared in accordance with the Australian Cost Management Manuals from the Australian Institute of Quantity Surveyors.
- ✓ Calculated the development costs in accordance with the definition of development costs in the Section 94A Development Contributions Plan of the council at current prices.
- ✓ Included GST in the calculation of development cost
- ✓ Measured gross floor areas in accordance with the Method of Measurement of Building Area in the AIQS Cost Management Manual Volume 1 (Appendix A2)

Signed:



Name: *Tony Sassine*

AIQS Membership Number: *1565*

Position & Qualifications:

Managing Director, B.App.Sci (Hons), AAIQS



QPC & C Pty Limited
ABN 78 074 731 963

Office Address:
Level 1, 1 Bells Road,
Oatlands, NSW, 2117

P 02 9638 5522
E info@capital-qpc.com.au

www.capital-qpc.com.au

Appendix B

ELEMENTAL ESTIMATE

www.capital-qpc.com.au

ELEMENTAL COST PLAN SUMMARY

Client: Al-Faisal College
Project Description: Multi-Purpose Centre
Project Address: 83 Gurner Avenue, Austral NSW
Date: 8th April 2020

ELEMENT	GFA Rate	% TOTAL	ELEMENTAL COST
SITE PREPARATION	\$4.59	0.45%	\$32,234
EXCAVATION	\$48.31	4.77%	\$339,148
SUBSTRUCTURE	\$139.00	13.71%	\$975,876
SUPERSTRUCTURE			
Upper Floors	\$164.80	16.26%	\$1,157,007
Roof	\$82.18	8.11%	\$576,934
External Walls	\$127.22	12.55%	\$893,165
Windows	\$12.67	1.25%	\$88,938
External Doors	\$2.46	0.24%	\$17,300
Internal Walls	\$4.99	0.49%	\$35,004
Internal Screens	\$0.56	0.05%	\$3,900
Internal Doors	\$5.45	0.54%	\$38,270
FINISHES			
Wall Finishes	\$31.14	3.07%	\$218,618
Floor Finishes	\$59.14	5.83%	\$415,200
Ceiling Finishes	\$15.96	1.57%	\$112,046
FITTINGS			
Fitments	\$16.04	1.58%	\$112,598
Sanitary Fixtures	\$1.36	0.13%	\$9,540
SERVICES			
Water & Gas Supply	\$9.31	0.92%	\$65,350
Heating, Ventilation & AC	\$47.27	4.66%	\$331,877
Fire Protection	\$29.98	2.96%	\$210,458
Electrical Light & Power	\$24.73	2.44%	\$173,608
Transportation Systems	\$10.68	1.05%	\$75,000
Special Services	\$0.00	0.00%	\$0
EXTERNAL WORKS	\$1.46	0.14%	\$10,224
Subtotal - Elements			\$5,892,293
Preliminaries	\$103.65	10.23%	\$727,698
Profit & Overheads	\$70.72	6.98%	\$496,499
Total Construction Cost	7,021 m2	100%	\$7,116,491
Professional Fees			\$142,330
Total Development Cost (Excluding GST)			\$7,258,821
Goods & Services Tax			\$725,882
Total Development Cost (Including GST)			\$7,984,703

ELEMENTAL COST PLAN BREAKUP

Client: Al-Faisal College
Project Description: Multi-Purpose Centre
Project Address: 83 Gurner Avenue, Austral NSW
Date: 8th April 2020

Item	Qty	Unit	Rate	Total
SITE PREPARATION				
Demolition		Excl.		\$ -
Site Clearance	4,029	m2	\$ 8.00	\$ 32,233.76
EXCAVATION				
Basement Excavation in OTR	6,563	m3	\$ 35.00	\$ 229,691.25
Trim, level and compact entire building area.	4,234	m2	\$ 15.00	\$ 63,509.10
Detailed Foundation Excavation	270	m3	\$ 170.00	\$ 45,947.69
SUBSTRUCTURE				
Concrete, Reo & Labour to Footings	270	m3	\$ 550.00	\$ 148,654.28
Basement Perimeter Walls	805	m2	\$ 220.00	\$ 177,197.24
Extra over for shoring to above.	221	m2	\$ 350.00	\$ 77,197.75
Basement Internal Walls	104	m2	\$ 220.00	\$ 22,865.92
BM Concrete Columns	90	m3	\$ 1,300.00	\$ 116,407.20
Concrete Slab on Ground (Basement)	4,234	m2	\$ 90.00	\$ 381,054.60
Concrete Slab on Ground (Driveway)	62	m2	\$ 125.00	\$ 7,727.50
Suspended Concrete Slabs		Excl.		\$ -
Subsoil Drainage				
Car Wash Pit		Excl.		\$ -
Stormwater Pits	4,234	m2	\$ 8.00	\$ 33,871.52
Discharge Control Pit	1	No.	\$ 900.00	\$ 900.00
Detention Tank	1	Units	\$ 10,000.00	\$ 10,000.00
SUPERSTRUCTURE				
Upper Floors				
Concrete Suspended Slabs	4,305	m2	\$ 220.00	\$ 947,058.20
GF Feature Columns	18	m3	\$ 1,500.00	\$ 26,376.00
External GF Stairs / Steps	96	m3	\$ 1,300.00	\$ 124,605.14
Internal GF stairs	2	No.	\$ 1,500.00	\$ 3,000.00
Stair Shaft (BM - GF)	3	No.	\$ 12,469.42	\$ 37,408.25
Lift Shaft	1	No.	\$ 16,568.10	\$ 16,568.10
Termite Protection to Perimeter Wall	199	m	\$ 10.00	\$ 1,991.40
Roof				
Framed Roof Structure	3,119	m2	\$ 95.00	\$ 296,263.20
Roof Lining to above incl plumbing.	3,119	m2	\$ 90.00	\$ 280,670.40
Awnings		incl.		
External Walls				
Perimeter Walls	1,919	m2	\$ 305.00	\$ 585,252.91
Extra over for cladding		Excl.		\$ -
External Screens / Louvers	684	m2	\$ 450.00	\$ 307,912.50
Windows				
Commercial Glazing to aluminium windows & doors.	198	m2	\$ 450.00	\$ 88,938.00
External Doors				
Fly Doors		N/A		
Fire Doors	8	No.	\$ 850.00	\$ 6,800.00
Basement Roller Doors / Tilt Doors	1	Item	\$ 10,500.00	\$ 10,500.00
Internal Walls				
Party Walls		N/A		\$ -
Internal Walls	700	m2	\$ 50.00	\$ 35,004.00

Internal Screens				
Storage Cages		Excl.		\$ -
Shower Screen	6	No.	\$ 650.00	\$ 3,900.00
Internal Doors				
Unit Entry Doors		N/A		
Internal Bifold Doors	24	m	\$ 1,100.00	\$ 26,565.00
Internal Doors	11	No.	\$ 200.00	\$ 2,200.00
Hardware to above	11	No.	\$ 55.00	\$ 605.00
Toilet partitions	16	No.	\$ 450.00	\$ 7,200.00
Fire Doors	2	No.	\$ 850.00	\$ 1,700.00
FINISHES				
Wall Finishes				
Plasterboard to Perimeter Walls	1,919	m2	\$ 25.00	\$ 47,971.55
Plasterboard to Party Walls		N/A		\$ -
Insulation to above	1,919	m2	\$ 15.00	\$ 28,782.93
Plasterboard to Internal Walls	1,400	m2	\$ 25.00	\$ 35,004.00
Shadowline to above	1,185	m	\$ 15.00	\$ 17,780.48
Painting to above	5,238	m2	\$ 12.00	\$ 62,854.61
Wall tiles to Bathrooms	4	No.	\$ 3,000.00	\$ 12,000.00
Skirtings	1,185	m	\$ 12.00	\$ 14,224.38
Floor Finishes				
Timber flooring to internal areas	1,818	m2	\$ 220.00	\$ 400,052.40
Tiling to kitchen areas	34	m2	\$ 85.00	\$ 2,879.80
Waterproofing to Bathrooms.	4	No.	\$ 750.00	\$ 3,000.00
Tiling to bathroom areas	109	m2	\$ 85.00	\$ 9,267.55
Tiling to Balconies.		Excl.		\$ -
Tiling to Lobbies		Excl.		\$ -
Tiling to exposed podium		Excl.		\$ -
Ceiling Finishes				
Plasterboard to ceiling	1,961	m2	\$ 45.00	\$ 88,259.85
Access hatches per unit	1	No.	\$ 250.00	\$ 250.00
Painting to plaster ceilings	1,961	m2	\$ 12.00	\$ 23,535.96
FITTINGS				
Fitments				
Kitchenette / Store Joinery	1	No.	\$ 15,000.00	\$ 15,000.00
Cafe Joinery		N/A		\$ -
Kitchen Benchtops		Incl.		\$ -
Kitchen Splashback		Incl.		\$ -
Joinery to Storage Rooms	4	No.	\$ 850.00	\$ 3,400.00
Vanity Joinery to bathrooms.	8	No.	\$ 550.00	\$ 4,400.00
Mirror above Vanity	8	No.	\$ 120.00	\$ 960.00
Tactiles	1	Item	\$ 5,000.00	\$ 5,000.00
Internal Stair Handrails	4	No.	\$ 1,700.00	\$ 6,800.00
External Balustrades	239	m	\$ 280.00	\$ 67,037.60
Mail Boxes		Excl.		\$ -
Required Signage	1	Item	\$ 5,000.00	\$ 5,000.00
Appliances				
Allowance for commercial grade appliances	1	Item	\$ 5,000.00	\$ 5,000.00
Oven 600mm		Incl.		\$ -
Cooktop 600mm		Incl.		\$ -
Rangehood 600mm		Incl.		\$ -
Dishwasher 600mm		Incl.		\$ -
Microwave		Excl.		\$ -
Sanitary Fixtures				
Toilet Suite Dual Flush	18	No.	\$ 350.00	\$ 6,300.00
Urinals		Excl.		\$ -
Bath Tubs & Tapware		Excl.		\$ -
Vanity Basin & Mixer	8	No.	\$ 120.00	\$ 960.00
Shower Mixer & Rose	6	No.	\$ 180.00	\$ 1,080.00
Laundry Tub & Tapware		Excl.		\$ -
Bathroom Accessories	4	No.	\$ 300.00	\$ 1,200.00

SERVICES				
Water & Gas Supply				
Sanitary plumbing and drainage	1	Item	\$ 50,000.00	\$ 50,000.00
Stormwater Pits, Etc.	1	Item	\$ 3,000.00	\$ 3,000.00
Allowance for standard sewer connection	1	Item	\$ 10,000.00	\$ 10,000.00
Supply of Hot Water Units	1	No.	\$ 850.00	\$ 850.00
Gas Reticulation	1	No.	\$ 1,500.00	\$ 1,500.00
Heating, Ventilation & AC				
Air Conditioning Ducted	1,961	m2	\$ 60.00	\$ 117,679.80
Ventilation to Wet Areas	4	No.	\$ 500.00	\$ 2,000.00
Ventilation to Kitchen	1	No.	\$ 500.00	\$ 500.00
Stair Pressurisation		Excl.		\$ -
Mechanical Ventilation to Basement	4,234	m2	\$ 50.00	\$ 211,697.00
Fire Protection				
Booster - Sprinkler		Excl.		\$ -
Fire Sprinklers to Basement	4,234	m2	\$ 40.00	\$ 169,357.60
Fire Sprinklers to Upper Levels		Excl.		\$ -
Booster - Hydrant		Excl.		\$ -
Diesel Pump		Excl.		\$ -
Fire Hydrant Points (assumed)	4	No.	\$ 3,000.00	\$ 12,000.00
Fire Hose Reels	2	No.	\$ 550.00	\$ 1,100.00
Fire Extinguishers	4	No.	\$ 300.00	\$ 1,200.00
Fire Indicator Panel (FIP)	1	Item	\$ 25,000.00	\$ 25,000.00
Emergency Warning & Intercommunication System (EWIS)		Excl.		\$ -
Thermal Detectors		Excl.		\$ -
Smoke Detectors to Units & Lobbies	10	No.	\$ 180.00	\$ 1,800.00
Electrical Light & Power				
Electrical Services	1,961	m2	\$ 50.00	\$ 98,066.50
Temporary Electrical Boards	2	No.	\$ 1,000.00	\$ 2,000.00
Connection Fees	1	No.	\$ 250.00	\$ 250.00
Substation		Excl.		\$ -
Light fittings internally	1,961	m2	\$ 15.00	\$ 29,419.95
Light fittings to Basement	4,234	m2	\$ 8.00	\$ 33,871.52
Light fittings to Common External Areas	1	Item	\$ 10,000.00	\$ 10,000.00
Transportation Systems				
Passenger Lifts	1	No.	\$ 75,000.00	\$ 75,000.00
Dumbwaiter		Excl.		\$ -
Car Lift		Excl.		\$ -
Turn Tables		Excl.		\$ -
Special Services				
Garbage Chute Per Level		Excl.		\$ -
Garbage Carousel & Compactor		Excl.		\$ -
EXTERNAL WORKS				
Landscaping		N/A		\$ -
Outside Boundary Works	23	m	\$ 450.00	\$ 10,224.00
Fencing		N/A		\$ -
Subtotal (Trades)				\$ 5,892,293.37
Preliminaries & Labour	12.35%	%		\$ 727,698.23
Profit & Overheads	7.50%	%		\$ 496,499.37
Total Construction Cost (Excluding GST)				\$ 7,116,490.97



QPC & C Pty Limited
ABN 78 074 731 963

Office Address:
Level 1, 1 Bells Road,
Oatlands, NSW, 2117

P 02 9638 5522
E info@capital-qpc.com.au

www.capital-qpc.com.au

Appendix C

FINISHES SCHEDULE

www.capital-qpc.com.au

SCHEDULE OF FINISHES

Client:	Al-Faisal College
Project Description:	Multi-Purpose Centre
Project Address:	83 Gurner Avenue, Austral NSW
Date:	8th April 2020

BASEMENT

Perimeter Walls:	Piling & Shoring System / Dintel
Mechanical Ventilation	Included
Fire Sprinklers	Included

STRUCTURE

Generally	Concrete Framed Structure
Perimeter Walls	Rendered Finish
Upper Levels	Concrete Slabs
Roof Type	Framed Roof Structure
Roof Finish	Metal Sheetting
Windows & Doors:	Powdercoated Aluminium Framed
Balcony Balustrades:	Powdercoated Aluminium Framed
Passenger Lift	Included

INTERNAL

Doors:	Hollow doors
Door Furniture:	Satin Chrome Lever
Wardrobes:	N/A
Walls:	Plasterboard & Paint
Ceilings:	Plasterboard & Paint
Cornice:	Shadowline
Skirting/Architrave:	92mm MDF (Selected Profile)
Air Conditioning:	Ducted
Blinds:	Roller Blinds
Intercom:	Included
Alarm:	Excluded

FLOOR FINISHES

Internal Areas:	Timber
Kitchens:	Tiles
Bathroom, Ensuite, Laundry:	Tiles
Balcony:	Tiles

KITCHEN

Joinery:	Commercial Grade
Cupboard Hardware:	Stainless steel handles or concealed.
Benchtop:	Commercial Grade
Splashback:	Vitrified Tile
Sink:	Double Bowl Undermount

APPLIANCES

Oven:	60cm Stainless steel oven with digital clock.
Cooktop:	60cm Stainless steel 4 burner incl wok.
Rangehood:	60cm Stainless steel slide out range.
Dishwasher:	60cm Stainless steel dishwasher.
Microwave:	Excluded
Dryer:	Excluded
Hot Water System:	Gas Instantaneous fixed in recess box.

BATHROOM

Vanity:	Polyurethane Cabinet with 20mm stone top.
Basin:	Semi Recessed Square
Mirror:	Full width of vanity hung on wall.
Shower Screen:	Excluded
Toilet Suite:	Vitreous china suite with dual flush.
Accessories:	All accessories to be chrome.
Floor Waste:	Brass with Polished Chrome Finish

Building plan assessment application

Application number: 849270

Property address: 83 Gurner Ave, Austral 2179

Lot details: Lot 9, Deposited Plan 1207216

Property Number: 5597726

09/04/2020

Dear PAVLO DOROCH

Your building plan assessment application requires

FURTHER ASSESSMENT

The proposed location of one or more of your buildings or excavation works may impact our assets. You will need to engage a Water Servicing Coordinate to complete your assessment.

Please read the details below to understand the reasons why your application was referred.

REASONS

Application automatically referred by system

NEXT STEPS

1. Engage a Water Servicing Coordinator to complete your assessment
A list of Water Servicing Coordinators is available on our website www.sydneywater.com.au and go to the plumbing, building and developing page for a list of water servicing coordinators.
2. Take this referral to the Water Servicing Coordinator so they can complete the application for you.
3. You will need to use the following Sydney Water reference number when you contact the Water Servicing Coordinator .

REF-066787161

The Water Servicing Coordinator will charge for this service. Make sure you discuss prices with them before you select one as their prices can vary.

ANY QUESTIONS?

Email us

swtapin@sydneywater.com.au

Call us

1300 082 746

STRUCTURES

The structures and information you supplied are displayed below.

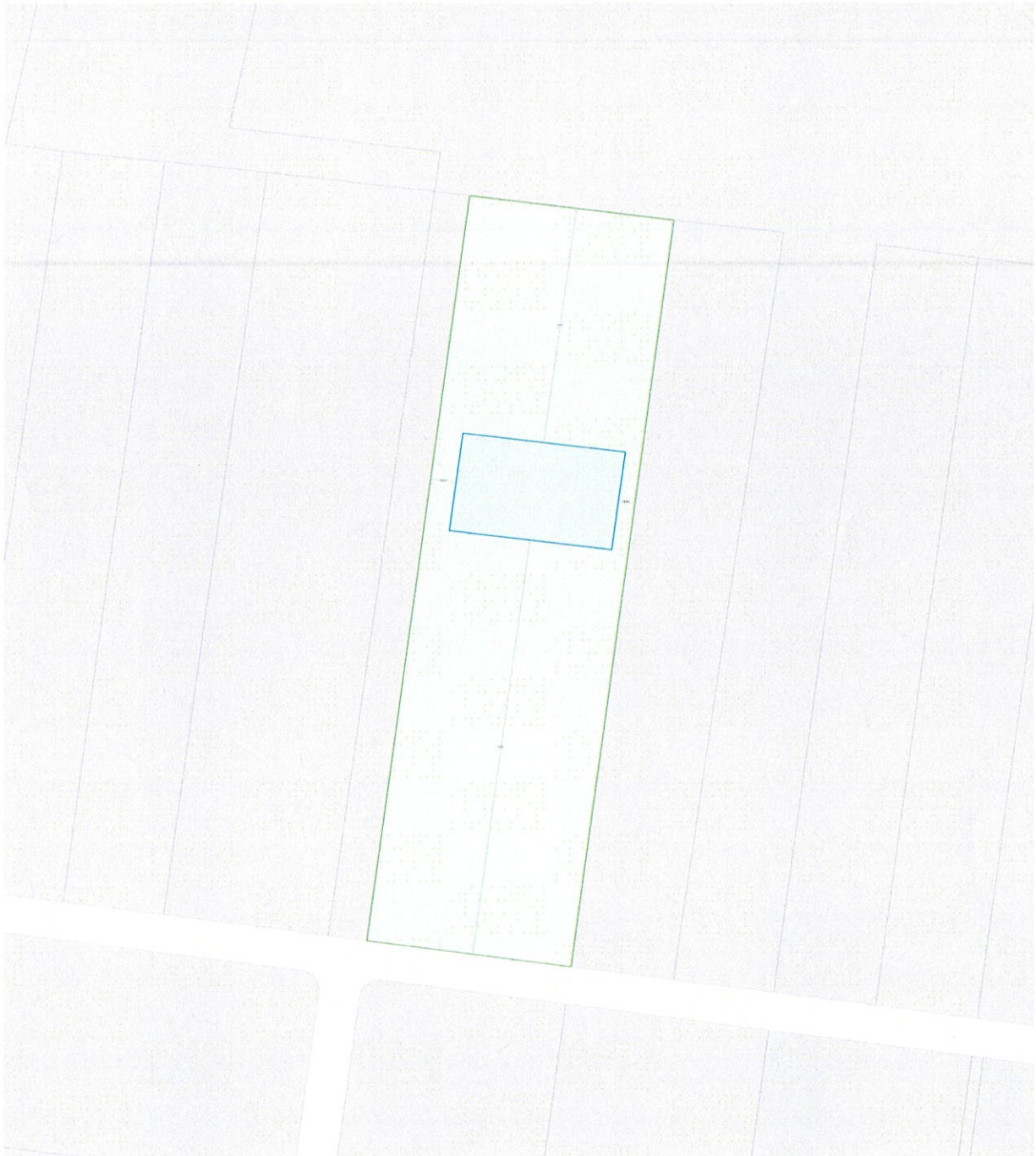
Structure(s) that may impact Sydney Water infrastructure		
Structure 1	Multi Purpose Hall	80.0 m x 52.0 m x 2.0 m

Please refer to the Appendix for list of negative impacts.

Your building plan application needs further assessment
Structure 1 of 1: Multi Purpose Hall

Application reference number: 849270
Property address: 83 Gurner Ave, Austral 2179
Lot details: Lot 9, Deposited Plan 1207216
Property Number: 5597726

This structure may impact Sydney Water infrastructure.



Appendix A

List of possible impacts to Sydney Water infrastructure requiring further assessment.

Structure 1	Multi Purpose Hall	80.0 m x 52.0 m x 2.0 m
-------------	--------------------	-------------------------

1. Presumed land under development.

A4

Plan 1 of 2



Scale: 1:500

Date of Production: 09/04/2020

Copyright Reserved Sydney Water 2020

No warranty is given that the information shown is complete or accurate.

SYDNEY WATER CORPORATION

DBYD Job No: 19346831

DBYD Sequence No: 96593296

DBYD Address:
83 Gurner Ave
Austral NSW 2179



Scale: 1:500

Date of Production: 09/04/2020

Copyright Reserved Sydney Water 2020

No warranty is given that the information shown is complete or accurate.

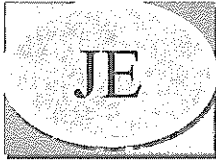
SYDNEY WATER CORPORATION

DBYD Job No: 19346831

DBYD Sequence No: 96593296

DBYD Address:
83 Gurner Ave
Austral NSW 2179

ELECTRICAL SERVICES



JoEliane Electrical Engineer Consultant Pty Ltd
67 Callagher Street, Mt. Druitt, 2770

Tel: 02 9832 4803 Fax: 02 9675 2592 M: 043832 4803
Email: joeliane@bigpond.com
ABN Number: 87 155 635 608

ELECTRICAL SPECIFICATION

**AL-FAISAL COLLEGE
MULTIPURPOSE HALL**

83 GURNER AVE AUSTRAL

Revision 2 date 03 April 2020

ELECTRICAL SERVICES

TABLE OF CONTENTS	Page
E1. SCOPE	1#
E1.1 # Intent.....	1#
E1.2# Drawings and Schedules	1#
E2# OUTLINE DESCRIPTION	1#
E3# DETAILS AND DIMENSIONS.....	3#
E4# GENERAL REQUIREMENT	3#
E4.1# Equipment, Materials And Workmanship.....	3#
E4.2# Ordering And Delivery Of Equipment.....	3#
E4.3# Discrepancies	4#
E4.4# Samples.....	4#
E5# MANDOTARY SITE INSPECTION	4#
E6# STANDARDS.....	4#
E7# WORK BY OTHERS.....	5#
E8# MECHANICAL	5#
E8.1# By Mechanical Services Contractor.....	5#
E8.2# By Electrical Contractor	5#
E9# HYDRAULIC	5#
E9.1# By Hydraulic Services Contractor	5#
E9.2# By Electrical Contractor	6#
E10# INSTALLATION PRINCIPLES.....	6#
E10.1# Technical Responsibility Of The Sub Contractor	6#
E11# SUPPLY CHARACTERISTICS.....	7#
E11.1#General	7#
E12# ELECTROMAGNETIC COMPATIBILITY	7#
E12.1#General	7#
E13# CABLES, CONDUITS AND SUPPORTS	7#
E13.1#Cables.....	7#
E13.2#Conduits and Fittings	8#
E14# LABELLING.....	9#

ELECTRICAL SERVICES

E15#	EQUIPMENT SCHEDULE	9#
	E15.1#Light Schedules	10#
	E15.2#Equipment Schedules.....	11#
	E15.3#Distribution Boards (DBGS4, DBL1S4 & DBGS5)	11#
	E15.4#Circuit Breakers and Fuses	11#
E16#	POWER OUTLETS	11#
E17#	DISTRIBUTION BOARDS	11#
	The distribution board shall be:-	11#
E18#	EARTHING SYSTEM.....	12#
	E18.1#Distribution Board	12#
E19#	DISTRIBUTION BOARD.....	12#
	E19.1#Balancing	12#
	E19.2#Labelling	12#
	E19.3#Circuit Schedules.....	13#
E20#	LUMINAIRE INSTALLATION	13#
	E20.1#General	13#
E21#	EMERGENCY & EXIT LIGHTING.....	14#
	E21.1#General	14#
	E21.2#Testing	15#
	E21.3#Emergency Lighting Log Book.....	15#
E22#	PERMANENTLY CONNECTED EQUIPMENT	16#
E23#	PUBLIC ADDRESS SYSTEM.....	16#
	E23.1 #Testing	16#
E24#	DATA CABLES.....	16#
	E24.1 #Requirement	16#
	E24.2 #Testing	17#
E25#	CCTV Security System.....	17#
	E25.1 #Requirement	17#
	E25.2 #Testing	17#
E26#	CABLE COLOURING	17#
E27#	GENERAL REQUIREMENT	18#

ELECTRICAL SERVICES

E27.1 #Practical Completion.....	18#
E27.2# Completion Statement	18#
E27.3#Cleaning.....	18#
E27.4# Coordination	18#
E27.5 #Quality Control	19#
E27.6# Interruption Of Supply	19#
E27.7# Earthing	19#
E27.8# Tests On Completion	19#
E27.9# Shop Drawings	19#
E27.10#As-Installed" Drawings And Maintenance Manuals	20#
E27.11#Defects Liability.....	21#
E27.12#Electromagnetic Interference.....	21#
E27.13#Essential Services Maintenance.....	22#
E27.14#Programme	22#
E28# COMMISSIONING.....	22#
E28.1# Pre-Commissioning (Unwitnessed)	22#
E28.2# Commissioning	22#
E29# ELECTRICAL DRAWINGS.....	23#

ELECTRICAL SERVICES

E1. SCOPE

E1.1 Intent

The aim of this specification and the accompanying drawings is to provide a high standard complete working installation, in accordance with all applicable Statutory Codes, Australian Standards and Authority requirements. Anything that is necessary for the proper functioning of any item mentioned in this Specification, but itself not specifically mentioned, shall be deemed to have been mentioned, allowed for and shall be provided.

E1.2 Drawings and Schedules

The Electrical Services drawings are listed on drawing ES-01.

The drawings and schedules generally describe the layout and locations of the electrical equipment.

These are to be considered as diagrammatic only, unless specifically dimensioned relative to other building elements. Dimensioned locations may be shown on the architectural drawings.

Allow for placing of equipment within 3 metres of the position shown on the drawings. However in relation to emergency and exit lights their final locations and spacings must comply with AS/NZS2293.

Determine final locations of all equipment by co-ordination with all other trades prior to final installation on site.

The Electrical Contractor shall be based upon a guarantee that all materials and equipment required for the work shall be obtained at such time as to enable the work to be completed in each element in accordance with the Builder's programme.

E2 OUTLINE DESCRIPTION

The aim of this project is to construct multipurpose hall building to the existing college. Supply and install of the complete electrical services as specified herein or on the drawings.

The electrical services comprise the following but not limited to:

1. Supply and installation of 8x1C x 185mm² + E PYROLEX sub-mains in existing conduits from the existing main switchroom to the closest pit to the proposed multipurpose hall building then supply and install 4x100mm underground conduits from the pit to the distribution board DBMP located in the plant room of the ground floor of the multipurpose hall building.
2. Supply and installation of 4 x1C x 120mm² +E XLPE sub-mains, on cable tray, to the mechanical control panel (MCC) located adjacent to the distribution board DMP in the plant room of ground floor of the multipurpose hall building.
3. Supply and installation of a communication cupboard in the plant room of the ground floor. The cupboard shall be minimum 47 RU sized as required plus 25% of spare capacity.

ELECTRICAL SERVICES

4. Supply and installation of 1x100mm communication conduit from the communication cupboard located in the plant room of the ground floor of the multipurpose building to the closest pit to house the communication cables.
5. Supply and installation of 1x50mm communication conduit from the communication cupboard located in plant room ground floor of the multipurpose hall building. to the closest communication pit to house the dry fire cables.
6. Supply and installation of all sub-main cablings including all conduits, cable trays, cable ladder, cable support systems, catenary, etc...
7. Supply and installation of the proposed distribution board DBPM.
8. Supply and installation of lighting and power services
9. Supply and installation of emergency lighting systems and exit signs.
10. Supply and installation of Krone patch panel in the communication cupboard. Use the patch panel as terminal point or limit of contract for the:
 - CCTV system
 - Data points
11. Wiring only of the CCTV system, the CCTV cameras will be supplied and installed by others. Wire all the CCTV cameras to the Krone patch panel or switch via CAT 6 UTP actassi Clipsal. Wiring from the patch panel to the VCR will be done by others.
12. Supply and installation of telephone and data outlets as shown. Wire all the data outlets to the Krone patch panel located in the communication cupboard. Link the data outlets from the communication cupboard to the file server in plant room via single mode fibre optic cables. the wiring shall be CAT 6 UTP actassi Clipsal.
13. Supply and installation of all light switches and socket outlets to be Clipsal type. The metal plate and colour to be nominated by the School's Manager Director. Switches cover shall be aluminium type. Colour will be as directed by the School's Manager Director.
14. Supply and installation of all light fittings and power socket outlets as shown on the drawings.
15. Earthing, testing and any other such works as are detailed in the following clauses or shown in the accompanying drawings, or are essential for the complete and proper functioning of the installation to the satisfaction of the local Endeavour Energy.
16. Commissioning and testing of all emergency lights and exit signs. Issue a testing certificate.

ELECTRICAL SERVICES

E3 DETAILS AND DIMENSIONS

The Electrical Contractor shall check construction on site at regular intervals to ascertain that the working dimensions and tolerances shown on the Electrical Contractor's drawings are being adhered to by the Builder and to assure himself that such will fit in with the Electrical Contractor's works as specified. Should any discrepancy arise, it shall be immediately reported to the Builder.

E4 GENERAL REQUIREMENT

E4.1 Equipment, Materials And Workmanship

Equipment and materials supplied under this contract shall be:

- New and undamaged when the installation is completed.
- Of approved design, manufacture and construction. Like items shall be of the same manufacture and range. All equipment and materials shall be checked with the school's Manager Director.
- Supplied by a recognised manufacturer experienced in the production of such equipment.
- Supplied complete with all required accessories and fittings together with any additional features, although not specifically mentioned, which are required for satisfactory operation and safety.
- Suitable for the application, site conditions and duty.
- Protected from deterioration, including corrosion protection.
- In accordance with the requirements of this Specification.

Carry out all work in a neat, substantial and workmanlike manner. Employ skilled and legally qualified tradesman at all times.

Install all equipment in accordance with the manufacturer's instructions and arrange for ease of maintenance and to prevent the transmission of vibration to the building structure.

Capacity and rating figures stated in these documents are minimum values, under the conditions which the equipment is to operate. If any derating applies due to the 'as installed' service conditions, the values stated are the derated values. Accurately assess derating for the installation and equipment selected.

Hot-dip galvanize all steel exposed to damp conditions and take all necessary precautions to prevent electrolysis due to different materials in contact.

Execute the work in such a manner as to cause the minimum inconvenience to the Proprietor and occupants of the premises.

E4.2 Ordering And Delivery Of Equipment

The Electrical Contractor shall be based upon a guarantee that all materials and equipment required for the work shall be obtained at such time as to enable the work to be completed in each element in accordance with the Builder's programme.

ELECTRICAL SERVICES

The Electrical Contractor shall be responsible for ordering all materials in a fixing time. Lack of such materials due to delay in ordering shall be notified to the Builder.

The Electrical Contractor shall request instruction from the Builder on any aspect requiring decision and shall do so in such time as to enable order and delivery to suit the programme established with the Builder.

E4.3 Discrepancies

Prior of installation bring to the notice of Joeliene Electrical Engineer Consultant any discrepancies or ambiguities found in the Specification and accompanying drawings or any design feature in conflict with Statutory requirements..

E4.4 Samples

Prior of purchasing any materials, submit for approval by the School's Manager Director samples of all fittings and materials to be used and installed in this project, as requested.

E5 MANDATORY SITE INSPECTION

Notwithstanding the site information given in this specification, it will be presumed that the Electrical Contractor has visited the sites and that he has acquire such information as may be necessary for the purpose of this work and that he has verified such dimensions as are relative to his equipment and tasks by actual measurement taken on site.

The tenderers shall work out the cable routes of all electrical sub-mains and communication sub-mains during the site inspection. Claim for extra remuneration by the Electrical Contractor, on the grounds of not being furnished with sufficient information, will not be considered.

Site inspection will be arranged during the tender period.

E6 STANDARDS.

REFERENCED DOCUMENTS: The works shall be in accordance with the following standards:

- Building Code of Australia
- The NSW Fire Brigade
- Supply Authority Service and installation Rules
- Telstra Australia and Austel

AS 3000 SAA WIRING RULES 2018.

AS 3008 ELECTRICAL INSTALLATIONS - SELECTION OF CABLES.
PART 1 - CABLES FOR ALTERNATING VOLTAGES UP TO AND
INCLUDE 0.6/11 KV.

AS 3013 ELECTRICAL INSTALLATION - CLASSIFICATION OF THE
FIRE AND MECHANICAL PERFORMANCE OF WIRING SYSTEM

AS 1136 SWITCHGEAR AND CONTROLGEAR ASSEMBLIES FOR
VOLTAGE UP TO 1000V A.C.

ELECTRICAL SERVICES

AS 1345	RULES FOR THE IDENTIFICATION OF PIPING, CONDUITS AND DUCTS.
AS 1882	EARTH AND BONDING CLAMP.
AS 2052	METALLIC CONDUITS AND FITTINGS.
AS 3137	LUMINAIRES.
AS 2053	U.P.V.C. CONDUITS AND FITTINGS

SUPPLY AUTHORITY REQUIREMENTS: Provide the works required by Supply Authority to complete the electrical services installation, including the installation of equipment supplied by the Authority.

Complete and submit all the necessary application forms as required by Supply Authority for the connection of the power supply.

E7 WORK BY OTHERS.

The following works associated with the Electrical Services installation of the project will be carried out by others. The Contractor must liaise with the appropriate personnel associated with the following works to ensure that all provisions are met and that all equipment locations are designated and demand loadings on such equipment are established and allowed for in the tender.

a) By The Builder:

Provision of electrical switchrooms to house the distribution boards.

E8 MECHANICAL

E8.1 By Mechanical Services Contractor

- Connect the sub-main, installed by the electrical contractor, to the mechanical control panel located in the plant room.
- Supply and installation of air conditioning units.

E8.2 By Electrical Contractor

Supply and install sub-mains from the proposed distribution board DBMP to the mechanical control panel (DBMP).

E9 HYDRAULIC

E9.1 By Hydraulic Services Contractor

- All hydraulic equipment including control panels associated with the Hydraulic services only.
- Termination of sub-main cables at the control panels, unless noted otherwise.

ELECTRICAL SERVICES

- All wiring from control panels to the hydraulic equipment including wiring facility requirements.

E9.2 By Electrical Contractor

Refer to Hydraulic plans for the quantity of hydraulic equipments and supply and install the necessary and suitable sub-mains to each of the hydraulic unit.

E10 INSTALLATION PRINCIPLES

The installation criteria shall generally conform to the technical requirements of this specification.

However, where alterations are made the electrical services shall additionally conform to the following:-

The final size of the sub-mains running from the existing main switchboard to the proposed distribution board (DB1) located in the existing building shall be sized based on the cable path and the voltage drop calculation. The cable size shown on the Single Line Diagram is for indication only.

Cables shall be sized, where relevant, for voltage drop.

Lighting levels to class room's areas shall conform to AS1680 requirements when measured 800mm above floor level.

Minimum average lighting levels to other areas shall conform to AS1680 requirements.

Emergency lighting shall conform to BCA and AS2293 requirements.

All penetrations required to be fire stopped shall be properly sealed by suitable fire rated material. Arrange with the builder to seal large penetrations. Sealing of small penetrations shall be by the electrical contractor.

E10.1 Technical Responsibility Of The Sub Contractor

The Contractor's responsibilities comprise:-

Selection of correct size and type of equipment and materials.

Advising final requirements of builder's works, such as plinths, trenches, switchroom and cupboards details, core hole sizes, block-outs for recessed lights etc.

Ensure all switchboards, control panels etc. supplied by other trades are capable of catering for the electrical supplies to such switchboards, control panels etc. as provided by the electrical services contractor under this contract.

Attending planning meetings called by the Project or Site Manager to review progress and installation details.

Provision of a fully functional electrical installation.

Provision of certificates of compliance for relevant essential services e.g. emergency, exit sign lighting and fire service etc.

ELECTRICAL SERVICES

E11 SUPPLY CHARACTERISTICS

E11.1 General

The electricity supply characteristics will be as follows:

- Supply and installation of 8x1C x 185mm² + E PYROLEX sub-mains in existing conduits from the existing main switchroom to the closest pit the proposed multipurpose hall building then supply and install 4x100mm underground conduits from the pit to the distribution board DBMP located in plant room ground floor of the multipurpose hall building.
- Supply and installation of 4 x1C x 120mm² + E XLPE sub-mains on cable tray from the DBMP to the mechanical control panel located in the plant room.

Each sub-mains shall be:

- 415 volts, three phase, four wire 50 Hz
- Maximum prospective fault level indicated by Supply Authority is 20 KA.
- The M.E.N. system of earthing shall apply to the installation

E12 ELECTROMAGNETIC COMPATIBILITY

E12.1 General

Electrical equipment shall be so designed that it will not cause interference with radio, television or other electrical equipment in the same locality. In the event of the inherent characteristics of equipment being such that interference is possible, such equipment shall be provided with effective interference suppressors to eliminate the interference.

E13 CABLES, CONDUITS AND SUPPORTS

E13.1 Cables

All cables shall be sized as stated on the drawings. Sizes shall be increased where necessary for reason of voltage drop or de-rating as per AS 3008.1.

Cables shall be of approved manufacture and shall comply with the latest Australian Standards. All cables shall have high conductivity plain annealed copper conductors.

Aluminium conductors are not acceptable.

PVC single insulated cables shall be 0.6/1 kV and V.75 type unless otherwise specified.

PVC Insulated and PVC Sheathed (PVC/PVC) cables shall be 0.6/1kV and V.75 rating unless otherwise specified.

All cables and conduits must be concealed. No exposed conduits and cables will be acceptable.

Security, intercom and PA system cabling shall not share the same support structure as data cabling.

ELECTRICAL SERVICES

Where cables are installed on a vertical cable ladder, the individual UTP cables shall be loomed together and fixed to the cable tray with Velcro cables 1000mm apart. There shall be no more than 24 individual cables in each loom, and looms shall not be stacked more than one layer high. Fibre optic cables shall be fixed to the cable ladder/tray with Velcro cable ties 1000mm apart, to provide adequate support for the cables.

All communications cables shall be supported with a maximum distance between supports as follows:

Copper	250mm (horizontal) or 500mm (vertical)
Copper cables on cable tray	750mm (horizontal) or 500mm (vertical)
Fibre Optic	250mm (horizontal) or 300mm (vertical)

E13.2 Conduits and Fittings

All conduits and fittings shall be not less than 20 mm diameter and shall comply with AS 2052 and 2053.

Unless particularly specified elsewhere, all conduits and fittings shall be as follows:
Rigid U.P.V.C. conduits and fittings shall be high impact resistance in accordance with AS 2053.

Light duty U.P.V.C. conduits and fittings shall be used where run:

- a) Within buildings, exposed or concealed.
- b) In concrete slab.
- c) In particular hazardous environments.

Heavy duty U.P.V.C. conduits and fittings shall be used where run:

- a) In building and concrete slabs where a medium level of mechanical protection is required.
- b) Underground.

Conduits in the proposed multipurpose hall shall be concealed by chasing walls, running in false ceiling, in concrete slabs.

Where conduits are running on the surface, the conduit works must be securely fixed parallel to building members, walls, doors, etc. and run straight and square. The end of each conduit must be either locknut into a box, socket direct into a box, fitting or accessory.

All conduits shall be concealed by chasing walls or running in false ceilings or underneath the building.

All conduits shall be straight, smooth, free from rags, burrs, etc.; sever sets in conduits will not be permitted under any circumstance.

Conduits shall be fixed in position before cables are drawn into them and all joints shall be made thoroughly watertight in an approved manner.

ELECTRICAL SERVICES

Where conduits are running in concrete slabs, they must be run in neutral axis above the bottom reinforcement terminating at outlets in deep type junction boxes. Conduits must be adequately separated and cross-overs must be kept to a minimum. Where conduits converge and bunch at switchboard positions, they must be spaced as far apart as possible. All conduits must be adequately braced.

Check the location and fixing of all conduits to be installed in concrete slab before concrete is poured. Ensure that the conduits are adequately covered and are not displaced or damaged during the pouring and consolidation of the concrete. Rectify the damage and reposition the displaced conduits before the pouring and consolidation of the concrete is continued.

Conduit outlet boxes for power outlets and switches shall not be mounted back to back in a brick wall such that it forms an undesirable sound patch between rooms.

E14 LABELLING

All equipment, patch panels, wall outlets and cables shall be labelled as to its designation and status.

Each label shall be "traffolyte" or similar material, machine engraved with bevelled edges fixed with at least two screws.

Major equipment labels shall be a minimum of 20mm high, minimum letter size 12mm.
Minor equipment labels shall be a minimum of 10mm high, minimum letter size 5mm.

Label colours shall be as follows:

Designation	Black on white background,
On & Off	White on black background,
Danger/Warning	White on red background,
Fire services/Lifts etc.	Red on white background.

Equipment labels shall be conspicuous. Where laminated plastic labels are adopted, the face shall be white with black machine engraved lettering. Generally equipment identification shall adopt 5mm high letters. All lettering and numbers shall be in metric SI units.

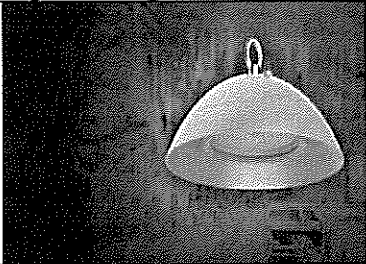
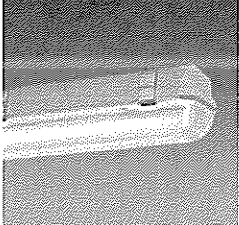
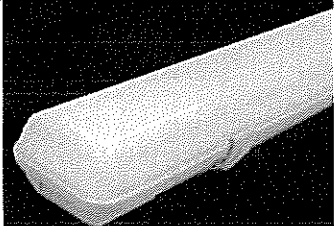
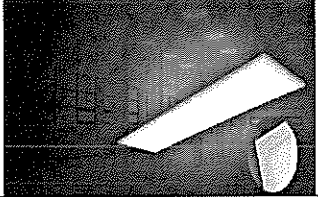
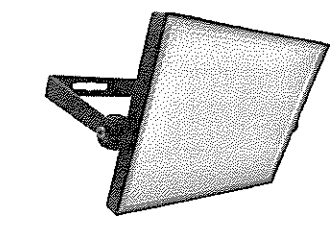
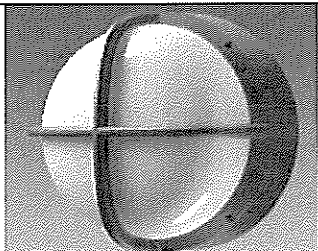
All installed cabling shall be labelled at both the outlet and the patch panels and all installed pathways and associated hardware to allow effective administrations. Labels shall be affixed and protected using clear heat-shrink, wrap around stick-on labels or similar.

E15 EQUIPMENT SCHEDULE

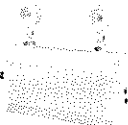
It is specified on the electrical drawings the type of lights are required. However, Alternative light schedules would be acceptable. The Contractor shall submit the alternative light schedules as follow:

ELECTRICAL SERVICES

E15.1 Light Schedules

Area	Light Fitting	Manufacturer and Cat No
High Bay lights		200W kascadeLED high Bay KHB200-50K-90-90 BY Enlighten
STAIR LIGHTS		2x18 Weatherforce LED light fitted with wire guard by Thorn lighting
Car Park lights		44W LED IP65 VICO BL44 BY Enlighten. 46W LED IP65 Vico BL44E for the emergency lights
Linear lights		26W Skyline LED panel SKY26-1230 By Enlighten
Internal Wall lights		CFLF50SEN FORCE LED flood light 50W IP65 by Sylvania
External Wall lights		EyeKon LED IP 65 code No: 1350-840 HF LANT. 16W by Thorn lighting

ELECTRICAL SERVICES

Emergency Light		Supalite LED Emergency flood light EFLLED-LI By Clevertronics
-----------------	---	--

E15.2 Equipment Schedules

E15.3 Distribution Boards (DBGS4, DBL1S4 & DBGS5)

Form	No of Poles	Manufacturer	Fault current

E15.4 Circuit Breakers and Fuses

Current rating	Cat No	Manufacturer	Fault current

E16 POWER OUTLETS

REQUIREMENT: Provide plug socket outlets, including power socket outlets as shown on the drawings. The mounting heights of outlets shall be as shown on the drawing and as directed by the designer.

All Socket outlets shall be labelled in accordance with their circuit breakers' number. The label shall be printed and not hand written.

Power socket outlets shall be of 10 amp capacity. All other plug socket outlets shall be rated at 15 Amp capacity unless indicated otherwise on the drawings.

E17 DISTRIBUTION BOARDS

The distribution board shall be:-

- Arranged in accordance with good trade practice. The switchboard shall comply with AS 3439 Part 1, for the specified fault level nominated by Supply Authority.
- constructed to AS 1136 and comply with the following criteria:
- Fault Level: 20 KA through fault of 0.1 sec. min.
- Form of Segregation: Form 2 distribution board.
- Degree of protection switchboard with doors: IP 40 min.
- Service Conditions: Normal

Each distribution board shall be earthed as per the S.A.A. wiring rules.

ELECTRICAL SERVICES

E18 EARTHING SYSTEM

REQUIREMENT: Supply and install a complete earthing system for the installation, in accordance with the S.A.A. Wiring Rules and the local supply Authority's requirements. Provide one main earthing point at the Main distribution board and run a separate earthing conductor with each sub-main.

Nominate a building footing and water service pipe and bond each to the main earth bar.

The main earth shall consist of driven electrodes connected to an earth terminal bar in the distribution board by means of stranded copper PVC insulated earthing cable.

The system of Copper earthing stakes, clamps and copper earthing conductors shall provide an "earth resistance" of not more than 2 ohms at the main switchboard.

Earth stakes shall be "Copperweld" or "Acelex" copper clad steel stakes, generally 19 mm diameter x 2000 mm long. Aluminium earth stakes are not acceptable.

The earth stakes shall be engraved with red filled lettering "Main Earth- Do Not Disconnect".

E18.1 Distribution Board

The distribution board must be earthed by means of earthing conductors provided with each sub-main cable unless specified otherwise.

An earth conductor shall be installed with the respective cables where PVC/PVC cabling or PVC building wire is used.

E19 DISTRIBUTION BOARD

The Electrical Contractor shall supply and install each distribution board in the location shown on the electrical drawings.

E19.1 Balancing

On each distribution board the load shall be balanced as evenly as possible over all three phases of the supply.

E19.2 Labelling

Equipment must be labelled as to their function. Each label shall be "traffolyte" or similar material, machine engraved with bevelled edges fixed with at least two screws.

Major equipment labels shall be a minimum of 20mm high, minimum letter size 12mm. Minor equipment labels shall be a minimum of 10mm high, minimum letter size 5mm.

Label colours shall be as follows:

Designation	Black on white background,
On & Off	White on black background,
Danger/Warning	White on red background,

ELECTRICAL SERVICES

Fire services/Lifts etc.

Red on white background.

Equipment connections must be labelled with circuit number and distribution board identification. Where equipment is connected to an RCD protected supply, the connection shall also be labelled:

"Residual Current Device Protected"

E19.3 Circuit Schedules

Electrical circuit schedules shall be placed in a suitable holder mounted to approval on the inside of each door compartment of the distribution board.

All schedules shall have typed legends and shall be protected by a plastic film lamination treatment.

Circuit names (i.e., function, equipment or area served) shall be utilised in addition to circuit numbering.

E20 LUMINAIRE INSTALLATION

E20.1 General

The Electrical Contractor shall:

- Supply all light fittings (fluorescent light fittings, emergency lights, exit signs, lamps, tubes, diffusers, etc.), and shall be of high quality long life construction and performance in accordance with AS3000, AS3100, AS3137 and with any other applicable standards and statutory requirements.
- Include everything necessary for installation to ensure efficient, quiet and safe operation.
- Be provided with diffusers, lamps and flexible cable with plug-top where specified.
- Not interfere with Supply Authority frequency injection signalling equipment.
- Not interfere with audio, visual and computer equipment.
- Pass routine tests and inspections before delivery.
- Include for the packing, cartage, freight, duty, insurance, Sales Tax if applicable, and delivery to and storage on site of all the light fittings.
- Ensure that the recessed fittings compatible with the ceiling system and shall arrange for any necessary support for the fitting from the ceiling by the Builder.
- Have a minimum power factor of 0.9 lagging (unless a lead-lag arrangement is utilised to comply with Authority requirements).

All fluorescent shall be LED type light.

The Electrical Contractor shall install lightings fittings accurately aligned and level with the visible structural features of the building.

ELECTRICAL SERVICES

The Electrical Contractor shall set out the positions of all light fittings.

All lighting fittings shall be securely fixed in position and mounted to facilitate easy lamp replacement.

Direct wire to all light fittings except for recessed 12V down lights which shall have a socket, flex and plug for the transformer.

Light switches shall be mounted as required by the Architect. The Contractor shall be responsible for liaison to determine the exact location of the light switchers.

The Contractor shall be responsible for the care of all lighting fittings prior to the handing over of the building and shall have any damaged fittings made good to the satisfaction of the project Manager.

All light fittings, diffusers, etc., shall be clean at the time of handing over of the building.

Submit a prototype or sample of each type of fitting before ordering final production and/or delivery.

Where prototypes are required to be submitted the prototypes should be sufficiently complete to give a clear indication of the final appearance and to determine its suitability for the required application with reference to the ceiling module, special location and similar details.

Where samples of standard fittings are required to be submitted, supply and deliver to the office of the Builder a sample production fitting of each standard type of fitting to be signed off by the Superintendent for approval.

After approval has been given, deliver these samples to sites where they will be held and used as a standard for acceptance or rejection of subsequent production fitting. Upon approval by the Builder the sample fittings may subsequently be incorporated into the project.

E21 EMERGENCY & EXIT LIGHTING

E21.1 General

Exit lights must be slimline type when appropriate and standard type elsewhere.

All fittings shall be type tested in accordance with AS 2293- 2018

Emergency and Exit light fittings shall be:

- Provided in accordance with AS 2293-2018, BCA and the NSW Fire Brigade requirements and also be provided with self contained individual units operating at 240V A.C. input volts.
- Be installed with a test circuit in compliance with AS2293- 2018 so that any emergency and exit lights can be tested without shutting down the general lighting.

Incorporate the following features for Exit and Emergency luminaires:-

i) A suitable classification to AS2293- 2018 to suit the spacings shown on the drawings.

ELECTRICAL SERVICES

- ii) Batteries rated to run the luminaire for two hours at 50oC with a minimum guaranteed life of two years.
- iii) Charger and inverter suitable for fluorescent lamp or tungsten halogen lamp, as required.
- iv) Control gear integral, or contained within a separate metal enclosure if not practical to have as an integral arrangement.
- v) Permanently fixed identification numbering.
- vi) Have self test facility.

Ensure exit signs shall:-

- i) Be single sided at walls or above doors.
- ii) Be double sided where fitted with directional arrows in open areas indicating direction of exits required.

Provide proof that all exit signs and emergency luminaires comply with AS2293-2018.

Duration of operation shall be not less than 2 hours. Emergency light fittings shall be non-maintained (except where incorporated as an integral part of fluorescent battens), self-contained, separate units complete with sealed lead acid battery and test switch.

Exit light fittings to have one lamp maintained from normal supply and one lamp available for operation on the battery pack.

The Electrical Contractor shall submit the proposed emergency and exit fittings for approval.

All emergency and exit lighting circuits shall originate from the un-switched bus section of the house services distribution board and be connected to circuit breakers, labelled as;

SECURITY AND EMERGENCY
LIGHTS
DO NOT SWITCH OFF

NOTE: Emergency and exit lighting luminaires are to be clearly identified by visible numbers.

E21.2 Testing

Ensure that the system is installed and fully tested to the satisfaction of the Inspecting Authority and the Builder.

Provide compliance certification for the installation.

E21.3 Emergency Lighting Log Book

In addition to the Installation Manual the Contractor shall also supply a vinyl covered hardback commercial quality book to log all testing of the Emergency and Exit Lighting.

The log book shall be installed in the main switchroom for house areas with a suitable log book holder fixed to the main switchroom wall, labelled "Emergency Lighting Log Book". Enter results of initial 2 hour test.

ELECTRICAL SERVICES

The book shall be of a type acceptable to the local Authorities having jurisdiction and shall contain the initial testing data for the installation.

E22 PERMANENTLY CONNECTED EQUIPMENT

The Contractor shall supply and install all cabling complete with the cable ladders/tray or conduits to all permanently connected equipment provided by other trades such as mechanical equipment, hydraulic pumps, air conditioning units, water heaters, hot plates etc.

All electrical suppliers to all the electrical equipment, shall terminate in an isolating switch of suitable rating mounted adjacent to that item of equipment.

E23 PUBLIC ADDRESS SYSTEM

The college has decided to utilise the ceiling speakers installed for the dry fire service for Public Address. Therefore, the system selected and installed shall have the facility and the features to do so. Furthermore, the ceiling speakers installed in the multipurpose hall building shall operate in two separate zones for public address only and as follow:

- Ceiling speakers installed inside the khall are classified as zone 1
- Ceiling speakers installed on the stage and the rooms are classified as zone 2
- The ceiling speakers shall be wired to provide the two zone facilities with priority for fire and operate as one zone in fire mode.

E23.1 Testing

Carry out a full test of the operational of the public address system under the witnessing of the School's Manager Director or the Electrical Engineer and issue a testing certificate.

E24 DATA CABLES

E24.1 Requirement

The Electrical Contractor shall supply and install double/single ports data outlets as shown on the electrical drawings together with all hubs necessary for a proper operation of the system. This shall include:

- Supply and installation of a communication cupboard in the plant room of ground floor. The cupboard shall be minimum 47 RU sized as required plus 25% of spare capacity.
- Supply and installation of patch panel in the communication cupboard. The patch panel shall be Krone type.
- Wiring of each computer outlet, via Cat 6 UTP ACTASSI Clipsal, to the new patch panel.
- Supply and install single mode fibre optic cables (6 cores) from the communication cupboard to the file server located in the plant room. This shall include the supply and installation of underground conduit, where necessary to house the fibre optic cable link.

ELECTRICAL SERVICES

The system and its components shall be designed and supplied by a reputable manufacturer with proven track records and servicing and maintenance establishment. Details of the system offered must be submitted with the tender.

Please note that data cables shall be connected to a dedicated patch panel.

E24.2 Testing

The electrical Contractor shall carry out the continuity testing on the cables and shall ascertain that the loss is less than 1 dB. This shall include light emission testing of the fibre optic cables.

Provide a testing certificate upon completion of the installation of the system. Furthermore, provide in tabulated form the following:

Cables ID (cable number), Cable length, Cable loss in DB, date, time etc..

E25 CCTV Security System

E25.1 Requirement

The electrical contractor shall wire all the CCTV cameras shown on the electrical drawings. Maximum of two CCTV cameras shall be looped together.

Supply and installation of patch panel in the communication cupboard located as shown on the electrical drawings.

Wire maximum of two CCTV cameras per 20mm conduit to the patch panel via 2x cat6 UTP ACTASSI Clipsal cables (1 cat6 cable /camera). The patch panel shall be Krone type.

Please note that CCTV cables shall be connected to a dedicated patch panel.

E25.2 Testing

Carry out a full test of the operational of the CCTV camera system under the witnessing of the School's Manager Director or the Electrical Engineer and issue a testing certificate.

provide in tabulated form the following:

Cables ID (cable number), Cable length, Cable loss in DB, date, time etc..

E26 CABLE COLOURING

The wiring colour for the communication cables shall be:

Data cables	blue
Wifi	yellow
CCTV	green

ELECTRICAL SERVICES

E27 GENERAL REQUIREMENT

E27.1 Practical Completion

The Certificate of Practical Completion shall be issued by the Proprietor's Representative when the following works have been affected:

- All equipment and reticulation systems are installed, tested and commissioned, in accordance with the specification and to the satisfaction of the Architect.
- The system has been fully tested as required by all Authorities.
- Approval certificates are obtained.
- The installation is commercially useable.

E27.2 Completion Statement

Submit the "Completion Statement" form included in this specification when all the works are complete and all defects rectified.

E27.3 Cleaning

Prior to practical completion, clean all works related to the contract including:

- equipment
- ductwork
- switchboards
- plantrooms
- work areas

Remove rubbish to designated area.

E27.4 Coordination

Coordination comprises:-

Coordinate Electrical services sub-contractors, suppliers etc. to ensure all electrical services systems are installed in accordance with the construction programme, are complete, have the correct components, have been installed correctly and are operating correctly.

Coordinating with all other trades and services and advising them of all Electrical Services requirements including:

- Subcontractors and suppliers to the Electrical Contractor
- Mechanical
- Hydraulic
- Structure
- Builder
- Any other service affecting or being affected by the Electrical Services.

ELECTRICAL SERVICES

Ensure all switchboards, control panels etc. supplied by other trades are capable of catering for electrical supplies provided by the electrical sub-contractor under this contract.

E27.5 Quality Control

Carry out the work to the entire satisfaction of the Proprietor's Representative and all relevant Authorities, who shall have the right to inspect work in progress, the completed works and all materials proposed for use.

E27.6 Interruption Of Supply

The interruption of supply is generally only permitted during construction. Obtain approval for all supply interruptions.

E27.7 Earthing

Earthing by the contractor comprises:-

- Earthing the installation as required by Supply Authority and the Australian Communications Authority.
- Determining from Supply Authority where the earth to neutral connection is to be made and completing the installation accordingly.
- Running an earth conductor to all items of equipment, even when they are of completely non-metallic construction, so that a metallic fitting may be substituted in the future.

Where computer equipment is installed, computer equipment run earths direct to the distribution board from which the computer power originates.

E27.8 Tests On Completion

At completion of the works: -

- Carry out all necessary tests, including labour and instruments, to prove the operation of the total installation and obtain all Certificates of Compliance from the various Authorities and submit these to the Electrical Engineer/the Architect/the Client's Representative.
- Include tests in accordance with fire safety requirements of Building Ordinances.
- Provide three working days minimum notice of the intended tests to permit such tests to be witnessed.
- General electrical installation tests shall be carried out in accordance with AS/NZS3017.

These tests are in addition to tests of fire safety tests noted above.

E27.9 Shop Drawings

Prepare and submit hard copy shop drawings for comment by the Proprietor's Representative prior to commencing work on site.

Prepare shop drawings on CAD in Windows ".DWG" format suitable for programs running under the "Windows" operating system.

Prepare two types of shop drawings for the project:

i) Design Shop Drawings

ELECTRICAL SERVICES

These shall show site specific detailing.

The design shop drawings will include detailed information on:

- Ratings of equipment (such as circuit breakers, cables, etc.)
- Distribution boards circuits, controls etc.
- Lighting and power layouts complete with circuit numbers
- Voice-data system layouts, block diagrams etc.
- Public address system
- Updating of all drawings to construction stage.
- Cable tray layouts
- Conduit layouts.

Together with all other information (including information provided by other trades) required to provide complete working drawings.

ii) Specialist Supplier's shop drawings

These drawings shall include:-

- Switchboards drawings
- Telephone System drawings
- System drawings
- TV system drawings
- Public address communication network diagram
- File server and computer outlets network diagram

Shop drawings which incorporate floor plans shall be at the same scale as the general electrical/architectural drawings.

E27.10 "As-Installed" Drawings And Maintenance Manuals

Keep a set of design shop drawings on site and continually update them so that at the completion of the project, an accurate set of "As-Installed" prints is available.

Provide the following information to Joeliene Electrical Engineer Consultant at least two (2) weeks before the date of Practical Completion:

- One set of marked up prints of design shop drawings showing all "As Installed" works including cable, conduit and cable tray routes etc.
- Two (2) sets of the following information:
 - a) Specialist workshop drawings.
 - b) Brochures of accessories and equipment
 - c) Brochures on all light fittings.
 - d) Details, operating instructions and recommended maintenance of other site-specific items such as Security installation, Fire Detection etc.

ELECTRICAL SERVICES

e) Compliance Certificates

As-Installed drawings and manuals by Contractor.

Provide two sets of "As-Installed drawings" and maintenance manuals for the installation.

Submit a draft copy of the drawings and manual to the Proprietor's Representative for checking two weeks prior to the Date of Practical Completion. Corrections and final copies shall be submitted within two weeks after the draft copies are returned to the contractor.

Prepare As-Installed drawings on CAD in "DWG" format suitable for programs running under the "Windows" operating system. The Contractor shall use the original design shop drawings and update them to incorporate all the "As-Installed" works, including conduit and cable tray routes etc. In addition to the two hard copy sets of drawings, provide a set of electronic files of the drawings on CD in "DWG" format.

The Maintenance Manual shall be contained in a suitable hard cover ring binders containing fully descriptive technical data and operating and maintenance instructions for all equipment provided under the contract. The manual shall be divided into sections with a suitable method of indexing to enable easy reference to sections. Typical items to be included are: -

- List of subcontractors and equipment manufacturers including contact details.
- Main switchboard operation and recommended maintenance
- Distribution boards operation and recommended maintenance
- Lighting details, method of control and recommended maintenance
- Emergency and exit lighting operation, testing procedures and recommended maintenance.
- Voice and data reticulation and equipment
- Accessories
- Any other equipment
- Copy of all specialist workshop drawings
- Brochures of accessories and equipment.
- Brochures of all light fittings.
- Copy of final "As-installed" drawings

E27.11 Defects Liability

Provide a guarantee and be responsible for the works covered in this specification for a period of 12 months from the completion of the works.

Include all works other than replacement of items that normally have a short life, ie. some lamp sources.

List any items not covered by normal maintenance in the defects liability period in the tender.

E27.12 Electromagnetic Interference

ELECTRICAL SERVICES

The generation of electromagnetic and radio interference by the installation shall not exceed the recommendation of AS4051 and other relevant standards and regulatory authority requirements.

E27.13 Essential Services Maintenance

Carry out the first 12 months maintenance of the following essential electrical services:

- Emergency and exit lighting to AS2293.2

E27.14 Programme

The Electrical Contractor shall ensure that the supply of bought-in items is available and installed to meet the construction programme. Take particular note of items that may have long lead times such as fire rated cables (these may have a lead time exceeding 12 weeks), switchboards etc.

E28 COMMISSIONING

E28.1 Pre-Commissioning (Unwitnessed)

Pre-commission all equipment supplied under the Contract in particular the emergency lights and Exit signs to ensure that it is operating without fault and that it conforms to the specification.

At least two (2) weeks prior to commencing pre-commissioning furnish the Manager Director with a programme for the pre-commissioning and checklists for testing the Contract equipment.

On completion of pre-commissioning and at least one (1) week prior to commissioning, submit a report to the Manager Director confirming that the Contract equipment has been tested, is fully operational and in accordance with the specification. Submit completed checklist and test results with the report.

The commissioning will commence two weeks from the date that the pre-commissioning report is received.

The scope of the pre-commissioning tests is to encompass the following:

- Exit signs and emergency lights in accordance with the relevant Australia Standards
- Continuity of telephone lines
- Resistivity of communication cables
- All Other equipment installed under the contract and not listed above

E28.2 Commissioning

A commissioning checklist shall be provided. This should be provided as early as practicable during the design or early construction stage, it should be specific to the project and should act as a minimum requirement in the commissioning process. It should not be used to exclude any additional work required to commission systems and equipment.

The Commissioning Plan, prepared by the commissioning personnel, should give a brief and concise description of work to be performed by the commissioning personnel and must indicate who is required to be present during various acts of commissioning:

- Periodic observation of cabling and equipment installation

ELECTRICAL SERVICES

- Witness tests
- Observe setting of major pieces of equipment
- Witness start up etc.

The commissioning plan should allow for correspondence throughout the commissioning process, documenting observations and milestones passed.

After installation of the system the commissioning process shall allow for action/reaction testing to be performed on all major plant and representative sampling of terminal equipment such as lighting etc.

Commissioning personnel must issue documentation of the results of site visits made during the check-out process citing systems that were found to perform acceptably or deficiently.

The commissioning process may continue after the owner has taken beneficial occupancy of the building (and the mechanical system has not yet been accepted by the owner).

Commissioning personnel is required to review close-out documents produced by the contractor.

- As-built drawings
- Operation and maintenance manuals
- Warranty statements
- Other certification

Commissioning personnel are required to be present at the demonstration/training periods given by the contractor to the owners operating and maintenance personnel.

On completion of the above, the commissioning personnel are required to provide a letter to the owner stating that the Electrical system is ready for acceptance and the Warranty period begins.

E29 ELECTRICAL DRAWINGS

The attached electrical drawings are:

- ES-01 Legend, General Notes and Index
- ES-02 DBMP line diagrams
- ES-03 basement car park lighting and power layout
- ES-04 Ground Floor lighting layout
- ES-05 Ground Floor Power layout

panels, orientated in the direction that it is being viewed to comply with AS1670.1.2015.

1.9 Samples and or brochures of the equipment included in this tender will be submitted to the consultant prior to its installation for approval to install.

All equipment will be new and in current manufacture approved for installation in Australia and be of sound commercially quality, approved for the installation of Fire Services from a recognised fire equipment supplier e.g. Brooks, Flamestop, Ampac, Incite, FireSense, Notifier Inertia, etc.



ARCHITECTURE DESIGN STUDIO NSW PTY LTD ABN: 90 616 216 196 | 11 Egerton St, Silverwater NSW 2128 | P: 02 9648 6663 W: ad-s.com.au

16th of April 2020

Re: Acoustic Verification and Compliance

Address: 83 Gurner Avenue Austral

This Certificate is to Verify that the building will not emit noise exceeding an LAeq of 5 dB(A) above background noise when measured at any lot boundary

I am an appropriately qualified person and as such certify that the design and performance of the construction methodology for the Multi Purpose Hall will comply with the above acoustic requirements.

Regards,

A handwritten signature in black ink, appearing to read 'Pavlo Doroch'.

Pavlo Doroch
Principal
Registered Architect no. 9170 in NSW



Complying development planning assessment for: Educational building (school hall) and car park

An assessment of the above development against the requirements and standards of applicable State Environmental Planning Policies and Environmental Planning Instruments

Order No. 19/0646 Date 23/8/2019 Applicant Name Architecture Design Studio

Details of this development

Development address 83 Gurner Avenue, Austral 2179

LGA Liverpool Title ref: 9/-/DP1207216

Development description Erection of a new school hall and under ground car park on the site of an existing school

Attached documents Architecture Design Studio. School - 83 Gurner Avenue, Austral. 0401; Site Plan. Plan dated 21/08/2019. MPH-01, part site plan. MPH-02 Underground car park. MPH-03 Ground floor plan. MPH-04, Void. MPH-05 Sections 114, 115, 116. MPH-06, Sections 112, 113. MPH-07, Section 111. MPH-08 East and west elevations. MPH-09 South and North Elevation. MPH-10, Roof plan. MPH-11, Stormwater plan-part 1. MPH-12, Stormwater plan-part 2. MPH 13, Void level ceiling. MPH-14, Ceiling MPH. Plans dated 17.04.2019

Applicable planning instruments

Planning zone R2 Low Density

LEP Austral Precinct - SEPP

State Environmental Planning Policy (Sydney Region Growth Centres) 2006.
State Environmental Planning Policy (Exempt and Complying Development) 2008
State Environmental Planning Policy (Educational Establishment and Child Care Facilities) 2017

Requirements for complying development (SEPP Clauses 1.17, 1.17A, 1.18 and 1.19)

Is development allowable with consent?

Yes

Is site

- A flood control lot
- A heritage item
- Bushfire prone
- Critical habitat
- A heritage conservation area
- A wilderness area

No

No

No*

No

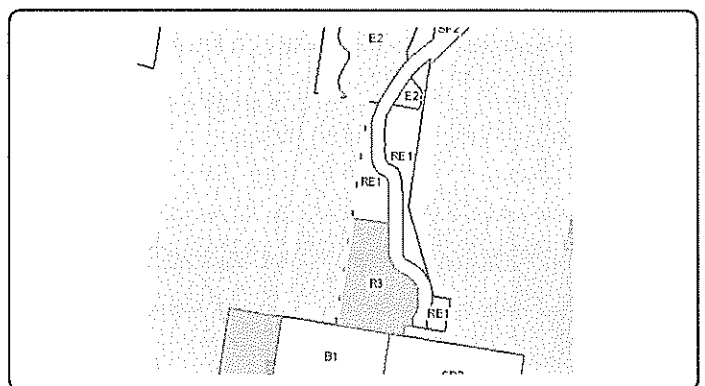
No

No

Is development specified complying development?

Yes

Site location and zoning



R.J. Graham

R.J. Graham, BA (Hons), Dip.Ed.
Grad Dip URP, RPIA (Fellow)



© R. J. Graham & Associates 2019

Planning summary

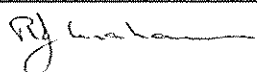
It is proposed to erect a new school hall on the site of an existing school - Al Faisal College, Liverpool. The site is within the area covered by Precinct 8 (Liverpool Growth Centres Plan) of the Sydney Region Growth Centres SEPP, and the objectives and standards of the Austral precinct plan apply to this development. Under the plan educational establishments are allowed with consent. As the site is occupied by an existing school, the development is able to be considered as complying development under Clause 39 (1) of the State Environmental Planning Policy (Educational Establishment and Child Care Facilities) 2017, and the standards set out in Schedule 2 of that Policy. The development satisfies all applicable requirements of 1.17, 1.17A, 1.18 and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development) 2008, and complies with the standards of

Matters to be noted for the Complying Development Certificate.

1. The development is to be undertaken in accordance with the attached plans and in accordance with the standards in the attached standards assessment. Any variation or alteration to those plans or standards will require further assessment under the State Environmental Planning Policy (Educational Establishment and Child Care Facilities) 2017, and the standards set out in Clauses 19, 39 and Schedule 2 of that Policy.
2. Any variation or alteration to those plans will require further assessment under the State Environmental Planning Policy (Exempt and Complying Development) 2008, and the State Environmental Planning Policy (Educational Establishment and Child Care Facilities) 2017, or the submission of a DA to Liverpool Council
3. The development must not contravene any existing condition of the most recent development consent (other than a complying development certificate) that applies to any part of the school, relating to hours of operation, noise, car parking, vehicular movement, traffic generation, loading, waste management, landscaping or student or staff numbers.
4. Any demolition work must be carried out in accordance with AS 2601—2001 The demolition of structures, published by Standards Australia on 13 September 2001,
5. Any removal or pruning of vegetation must be carried out in accordance with AS 4970—2009 Protection of trees on development sites.
6. Development must be carried out in accordance with all relevant requirements of the Blue Book.
7. The person having the benefit of the complying development certificate must give at least 2 days notice in writing of the intention to commence the works to the owner or occupier of any dwelling that is situated within 20 metres of the lot on which the works will be carried out.
8. A management plan showing how matters set out in Clause 19 of Schedule 2 of the State Environmental Planning Policy (Educational Establishment and Child Care Facilities) 2017 (relating to earthworks and drainage) are to be addressed is to be provided to the Principal Certifying Authority prior to the issue of the Complying Development Certificate.
9. The building is to be designed so as not to emit noise exceeding an LAeq of 5 dB(A) above background noise when measured at any lot boundary

Note:

*A small portion of the site is in a bushfire buffer zone, but the area proposed for the hall is not within that buffer zone



R.J. Graham, BA (Hons), Dip.Ed.
Grad Dip URP, RPIA (Fellow)



© R. J. Graham &
Associates 2019

Standards Assessment - Educational establishments

Project address- 83 Gurner Avenue, Austral 2179

Project - Proposed School Hall

Compliance assessment - State Environmental Planning Policy (Educational Establishments and Child Care Facilities)2017

Clause 19 (2) (a)	Does development meet the general requirements for complying development set out in clause 1.17A of <u>State Environmental Planning Policy (Exempt and Complying Development Codes) 2008</u> ,	Yes
Clause 19 (2) (b)	Is development exempt under ISEPP	No
Clause 19 (2) (c)	Is development permissible with consent in the R2 zone	Yes
Clause 19 (2) (d)	Will development relevant provisions of the BCA through CDC	To be conditioned
Clause 19 (2) (e)	Will development involve the removal or pruning of a tree or other vegetation that requires a permit or development consent for removal or pruning, unless that removal or pruning is undertaken in accordance with a permit or development consent	No
Clause 19 (2) (f)	Will a building be erected within 1m of a public sewer	No
Clause 19 (3) (a)	Will a building be erected within 1m of a public sewer	No
Clause 19 (3) (b)	Is development land identified on an Acid Sulfate Soils Map as being Class 1 or Class 2	No
Clause 19 (3) (e)	Is development on land that is land identified by an environmental planning instrument as being: (i) within a buffer area, or (ii) within a river front area, or (iii) within an ecologically sensitive area, or (iv) environmentally sensitive land, or (v) within a protected area,	No
Clause 19 (3) (f)	Is development non land that is identified by an environmental planning instrument, a development control plan or a policy adopted by the council as being or affected by: (i) a coastline hazard, or (ii) a coastal hazard, or (iii) a coastal erosion hazard,	No
Clause 19 (3) (g)	Is development on land in a foreshore area	No
Clause 19 (3) (h)	Is development on unsewered land	No
Clause 39	Does development comply with all applicable requirements of this Clause	Yes

Compliance with standards in Schedule 2

CLAUSE	STANDARD	PROPOSED	COMPLIES?
2. Building Height	Must not exceed 4 storeys or 22m from ground level	13.6m	☒
3. Side and rear boundary setbacks	Must be located more than 8m from any side or rear property boundary with land in a residential zone or more than 2.5m from any side or rear property boundary with land in an industrial or a business zone,	Side boundary 1 - R3 zone 19.4m Side boundary 2 - R2 Zone 28.6m Rear boundary - B1 Zone 60+m	☒ ☒ ☒
4. Front setback - no development within 70m of the school building	A new building must be setback a minimum of 5m from the front boundary.	19.4m - same as existing school buildings	☒
5(a) Design and materials	Any new external walls or roof of the building must be constructed of non-reflective material.	Non reflective materials to be used	☒
5(b) Design and materials	Any external walls of the building that face a public road or reserve must contain windows.	No wall faces a public road	☒
6 Noise	Building must be designed so as not to emit noise exceeding an LAeq of 5 dB(A) above background noise when measured at any lot boundary.	Condition	
7. Overshadowing	The development must not overshadow any adjoining residential accommodation so that solar access to any habitable room or principal private open space on the adjoining property: (a) is reduced to less than 3 hours of solar access between 9:00 am and 3:00 pm at the winter solstice, (b) is reduced in any manner if solar access to any habitable room on the adjoining property is already less than 3 hours.	No adjoining property will be overshadowed	N/A
8. landscape	Landscaping must be provided for a new building constructed adjacent to the boundary of land in Zone R1 General Residential, Zone R2 Low Density Residential, Zone R3 Medium Density Residential or Zone R4 High Density Residential	Building not constructed adjacent to a zone boundary	N/A
8. Privacy	A window in a new building, or a new window in any alteration or addition to an existing building, must have a privacy screen for any part of the window that is less than 1.5m above finished floor level if: (a) the finished floor level is more than 1.5m above ground level (mean), and (b) the window faces a building used for residential accommodation on an adjoining lot, and (c) the wall in which the window is located has a setback of less than 5m from the boundary of that adjoining lot.	(a) ffl is < 1m, (b) no window faces a dwelling on an adjoining lot, and (c) building is setback >5m from boundary	N/A
9. Landscape	Landscaping must be provided for a new building constructed adjacent to the boundary of land in Zone R1 General Residential, Zone R2 Low Density Residential, Zone R3 Medium Density Residential or Zone R4 High Density Residential	Building not constructed adjacent to a zone boundary	N/A
10. Waste	A garbage and waste storage area for recyclable and non-recyclable waste materials and receptacles for those materials must provided as part of the development	Existing waste disposal facilities on site are to be used	☒

Compliance with standards in Schedule 2

11. Earthworks	Earthworks and drainage are to satisfy a number of matters. Earthworks and drainage plan is required to be submitted as part of the application for a complying development certificate.
12. Drainage	



Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
883 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

PART SITE PLAN

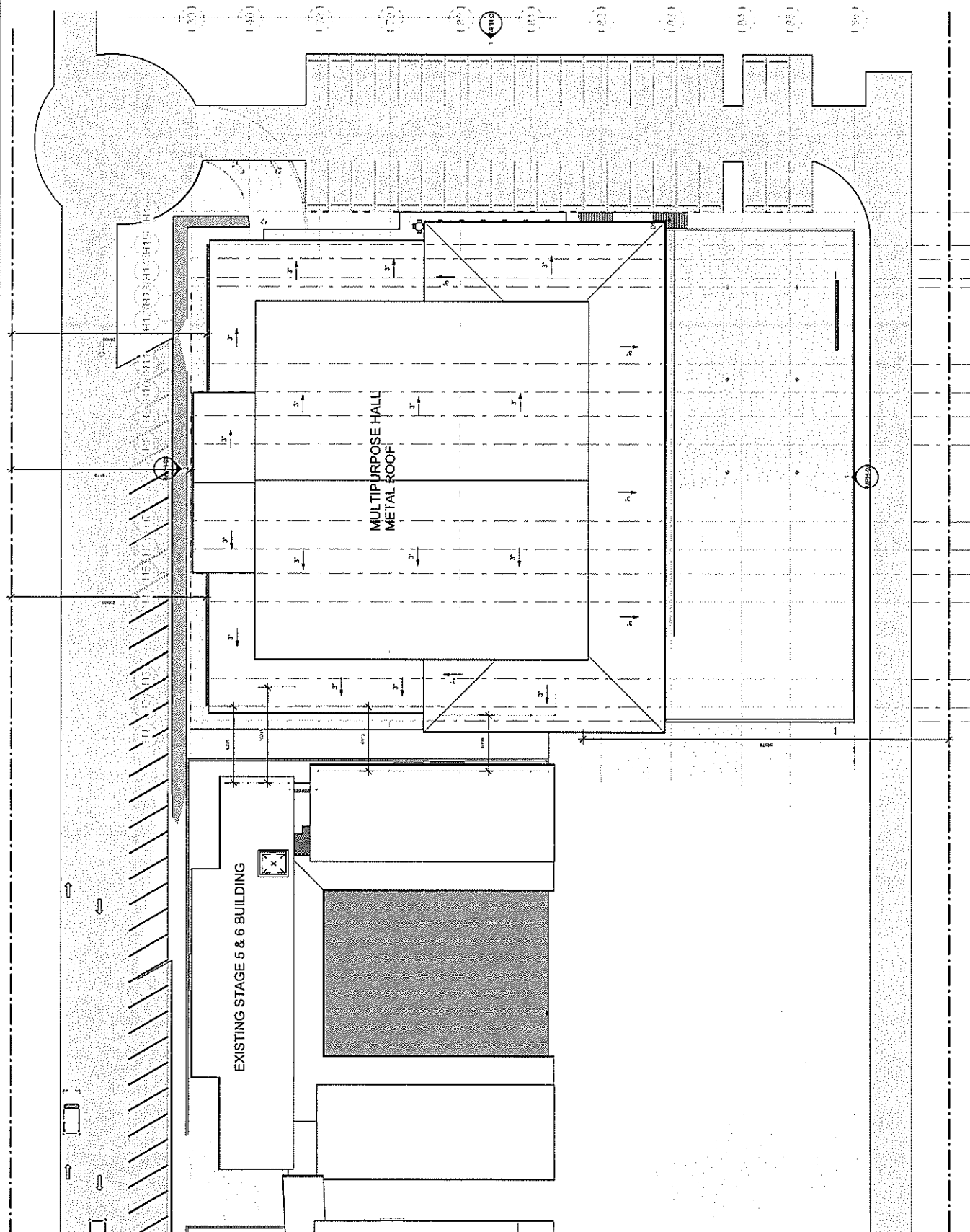
Project number 018

Date 17.04.2019

Drawn by
Hasan Alijagic

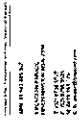
Checked by	Checker
------------	---------

MPH-01

Scale
1:200

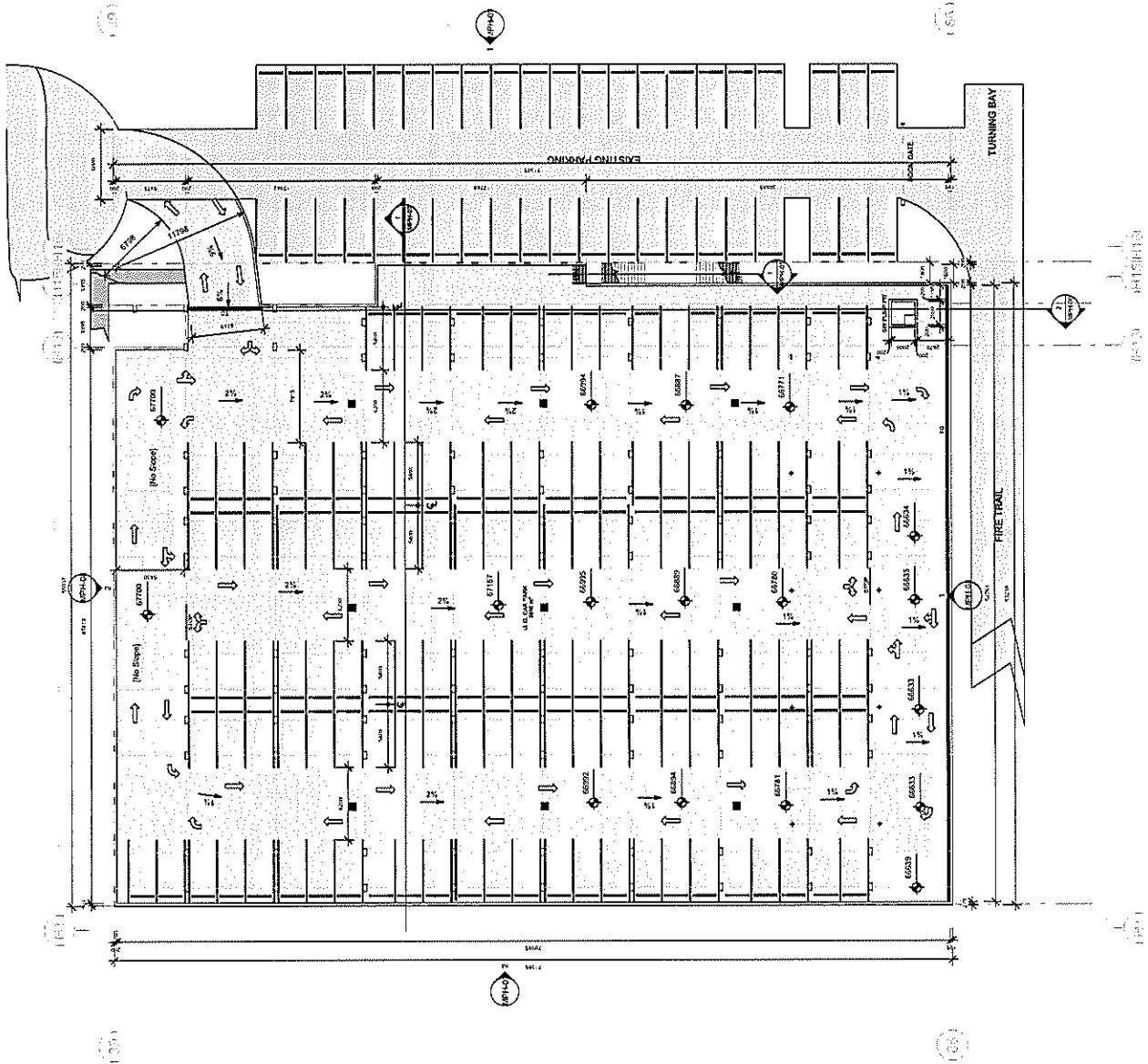
PART SITE PLAN MPH

1:200

[illegible][illegible]

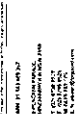
AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
83 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

Project number	018
Date	17.04.2019
Drawn by	Hasan Alijagic
Checked by	Checker
MP4-02	
Scale	1:200



1 UNDERGROUND CAR PARK

1 : 200



Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
333 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

GROUND FLOOR-MPH

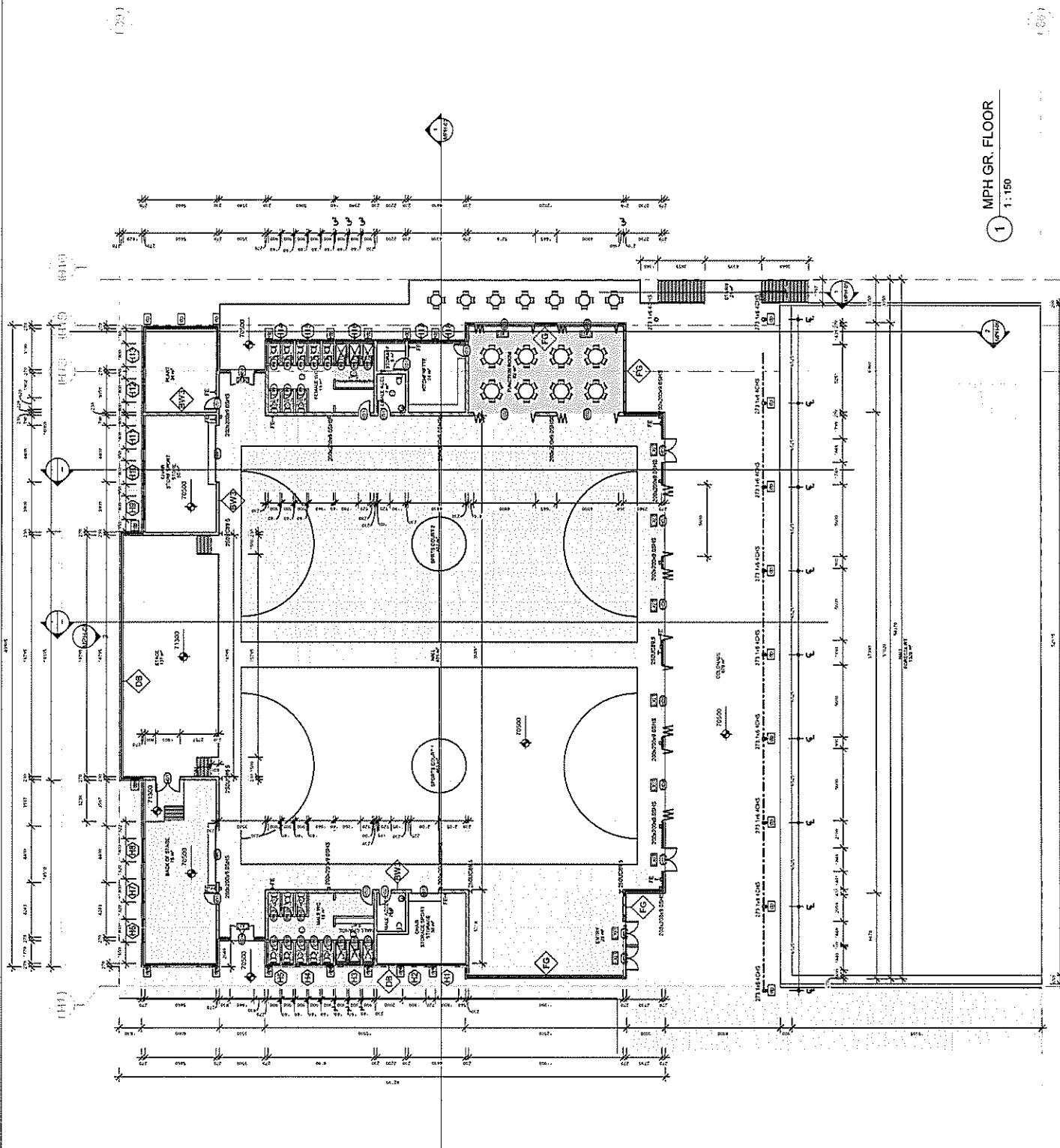
Project number 018

Date 17.04.2019

Drawn by
Hasan Alijagic

Checked by _____
Checker _____

MPH-03

Scale
1 : 150

1 MPH GR. FLOOR
1:150



Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
333 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

old

Project number	012
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

17.04.2019

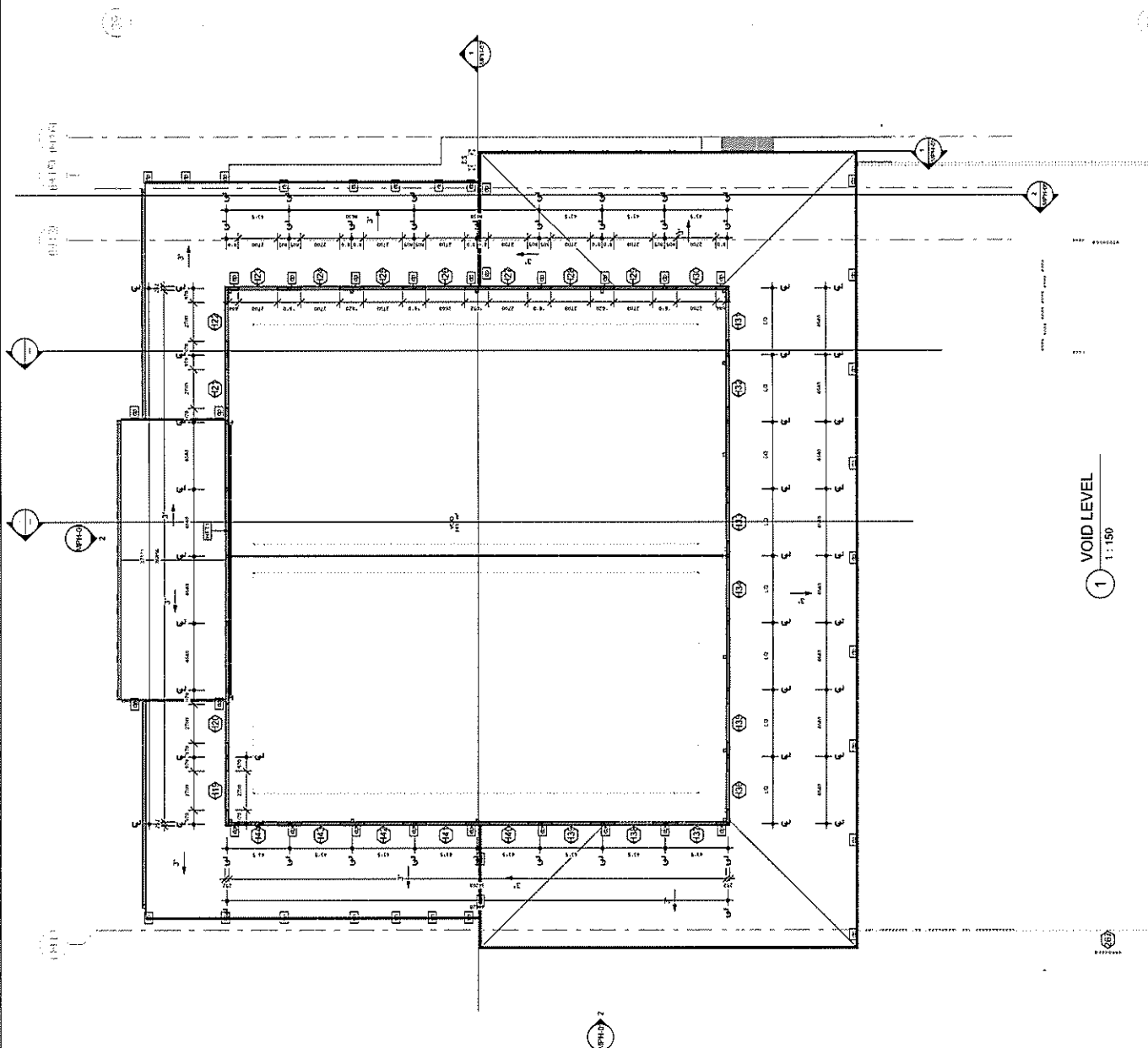
Drawn by
Hasan Alijaqic

checked by

Scale 1:150

WINDOW SCHEDULE- MPH						
Bank	Went	Height	Window Style	Comments	Remarks	
M1	1600	1200	SLIDING	SOUTH	MPH	
M2	1600	1200	SLIDING	SOUTH	MPH	
M3	1600	600	SLIDING	SOUTH	MPH	
M4	1500	600	SLIDING	SOUTH	MPH	
M5	1500	600	SLIDING	SOUTH	MPH	
M6	1600	1200	SLIDING	WEST	MPH	
M7	1600	1200	SLIDING	WEST	MPH	
M8	1600	1200	SLIDING	WEST	MPH	
M9	1600	1200	SLIDING	WEST	MPH	
M10	1600	1200	SLIDING	WEST	MPH	
M11	1600	1200	SLIDING	WEST	MPH	
M12	1600	1200	SLIDING	WEST	MPH	
M13	1600	1200	SLIDING	WEST	MPH	
M14	1500	600	SLIDING	NORTH	MPH	
M15	1500	600	SLIDING	NORTH	MPH	
M16	1500	600	SLIDING	NORTH	MPH	
M17	1600	1200	SLIDING	NORTH	MPH	
M18	1600	1200	SLIDING	NORTH	MPH	
M19	2700	1200	FIXED	WEST	MPH	
M20	2700	1200	FIXED	WEST	MPH	
M21	2700	1200	FIXED	WEST	MPH	
M22	2700	1200	FIXED	WEST	MPH	
M23	2700	1200	FIXED	WEST	MPH	
M24	2700	1200	FIXED	WEST	MPH	
M25	2700	1200	FIXED	WEST	MPH	
M26	2700	1200	FIXED	WEST	MPH	
M27	2700	1200	FIXED	NORTH	MPH	
M28	2700	1200	FIXED	NORTH	MPH	
M29	2700	1200	FIXED	NORTH	MPH	
M30	2700	1200	FIXED	NORTH	MPH	
M31	2700	1200	FIXED	EAST	MPH	
M32	2700	1200	FIXED	EAST	MPH	
M33	2700	1200	FIXED	EAST	MPH	
M34	2700	1200	FIXED	EAST	MPH	
M35	2700	1200	FIXED	EAST	MPH	
M36	2700	1200	FIXED	EAST	MPH	
M37	2700	1200	FIXED	SOUTH	MPH	
M38	2700	1200	FIXED	SOUTH	MPH	
M39	2700	1200	FIXED	SOUTH	MPH	
M40	2700	1200	FIXED	SOUTH	MPH	
M41	2700	1200	FIXED	SOUTH	MPH	
M42	2700	1200	FIXED	SOUTH	MPH	
M43	2700	1200	FIXED	SOUTH	MPH	
M44	2700	1200	FIXED	SOUTH	MPH	
M45	2700	1200	FIXED	SOUTH	MPH	
M46	2700	1200	FIXED	SOUTH	MPH	
M47	2700	1200	FIXED	SOUTH	MPH	
M48	2700	1200	FIXED	SOUTH	MPH	
M49	2700	1200	FIXED	SOUTH	MPH	
M50	2700	1200	FIXED	SOUTH	MPH	

DOOR SCHEDULE - MPH						
Mark	Height	Width	Finish	Comments		
M01	2400	1840	POWER COAT	MP01		
M02	2400	2400	POWER COAT	MP02		
M03	2400	1840	POWER COAT	MP03		
M04	2400	5000	POWER COAT	MP04		
M05	2400	5000	POWER COAT	MP05		
M06	2400	5000	POWER COAT	MP06		
M07	2400	5000	POWER COAT	MP07		
M08	2400	1840	POWER COAT	MP08		
M09	2400	4000	POWER COAT	MP09		
M10	2400	5000	POWER COAT	MP10		
M11	2400	500	PAINT	MP11		
M12	2400	500	PAINT	MP12		
M13	2400	500	PAINT	MP13		
M14	2400	500	POWER COAT	MP14		
M15	2400	500	PAINT	MP15		
M16	2400	500	PAINT	MP16		
M17	2400	500	PAINT	MP17		
M18	2400	500	POWER COAT	MP18		
M19	2400	500	POWER COAT	MP19		
M20	2400	500	PAINT	MP20		
M21	2400	500	PAINT	MP21		
M22	2400	4000	POWER COAT	MP22		
M23	2400	4000	POWER COAT	MP23		
M24	2100	2100	POWER COAT	MP24		
M25	2100	2100	POWER COAT	MP25		
M26	2000	500	PAINT	MP26		
M27	2000	500	PAINT	MP27		
M28	2000	500	PAINT	MP28		
M29	2000	500	PAINT	MP29		
M30	2000	500	PAINT	MP30		
M31	2000	500	PAINT	MP31		
M32	2000	500	PAINT	MP32		
M33	2000	500	PAINT	MP33		
M34	2000	500	PAINT	MP34		
M35	2000	500	PAINT	MP35		
M36	2000	500	PAINT	MP36		
M37	2000	500	PAINT	MP37		
M38	2000	500	PAINT	MP38		
M39	2000	500	PAINT	MP39		
M40	2000	500	PAINT	MP40		
M41	2000	500	PAINT	MP41		
M42	2000	500	PAINT	MP42		
M43	2000	500	PAINT	MP43		
M44	2000	500	PAINT	MP44		
M45	2000	500	PAINT	MP45		
M46	2000	500	PAINT	MP46		
M47	2000	500	PAINT	MP47		
M48	2000	500	PAINT	MP48		
M49	2000	500	PAINT	MP49		
M50	2000	500	PAINT	MP50		
M51	2000	500	PAINT	MP51		
M52	2000	500	PAINT	MP52		
M53	2000	500	PAINT	MP53		
M54	2000	500	PAINT	MP54		
M55	2000	500	PAINT	MP55		
M56	2000	500	PAINT	MP56		
M57	2000	500	PAINT	MP57		
M58	2000	500	PAINT	MP58		
M59	2000	500	PAINT	MP59		
M60	2000	500	PAINT	MP60		
M61	2000	500	PAINT	MP61		
M62	2000	500	PAINT	MP62		
M63	2000	500	PAINT	MP63		
M64	2000	500	PAINT	MP64		
M65	2000	500	PAINT	MP65		
M66	2000	500	PAINT	MP66		
M67	2000	500	PAINT	MP67		
M68	2000	500	PAINT	MP68		
M69	2000	500	PAINT	MP69		
M70	2000	500	PAINT	MP70		
M71	2000	500	PAINT	MP71		
M72	2000	500	PAINT	MP72		
M73	2000	500	PAINT	MP73		
M74	2000	500	PAINT	MP74		
M75	2000	500	PAINT	MP75		
M76	2000	500	PAINT	MP76		
M77	2000	500	PAINT	MP77		
M78	2000	500	PAINT	MP78		
M79	2000	500	PAINT	MP79		
M80	2000	500	PAINT	MP80		
M81	2000	500	PAINT	MP81		
M82	2000	500	PAINT	MP82		
M83	2000	500	PAINT	MP83		
M84	2000	500	PAINT	MP84		
M85	2000	500	PAINT	MP85		
M86	2000	500	PAINT	MP86		
M87	2000	500	PAINT	MP87		
M88	2000	500	PAINT	MP88		
M89	2000	500	PAINT	MP89		
M90	2000	500	PAINT	MP90		
M91	2000	500	PAINT	MP91		
M92	2000	500	PAINT	MP92		
M93	2000	500	PAINT	MP93		
M94	2000	500	PAINT	MP94		
M95	2000	500	PAINT	MP95		
M96	2000	500	PAINT	MP96		
M97	2000	500	PAINT	MP97		
M98	2000	500	PAINT	MP98		
M99	2000	500	PAINT	MP99		
M100	2000	500	PAINT	MP100		





Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
33 GURNERS AVENUE, AUSTRALIA
SYDNEY AUSTRALIA

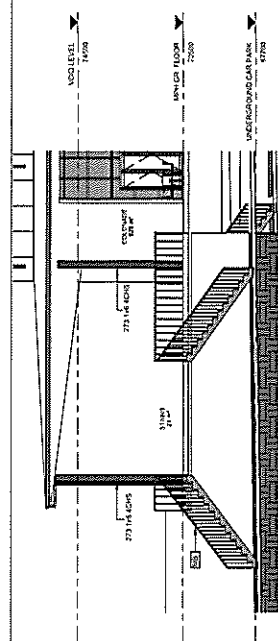
SECTIONS 114, 115, 116

project number 018

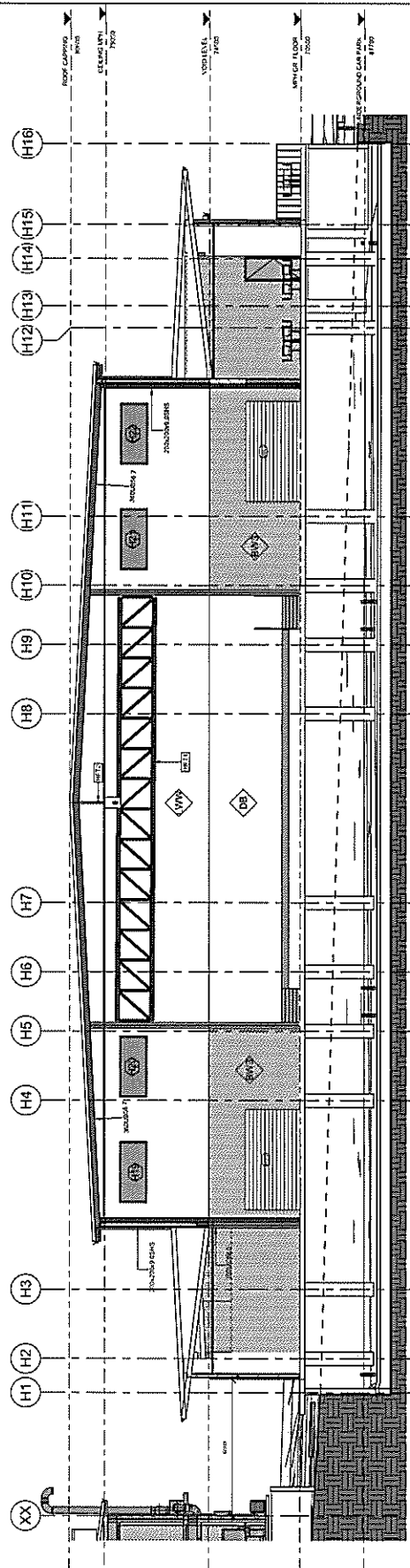
310 17.04.2019

drawn by
Hasan Alijagic

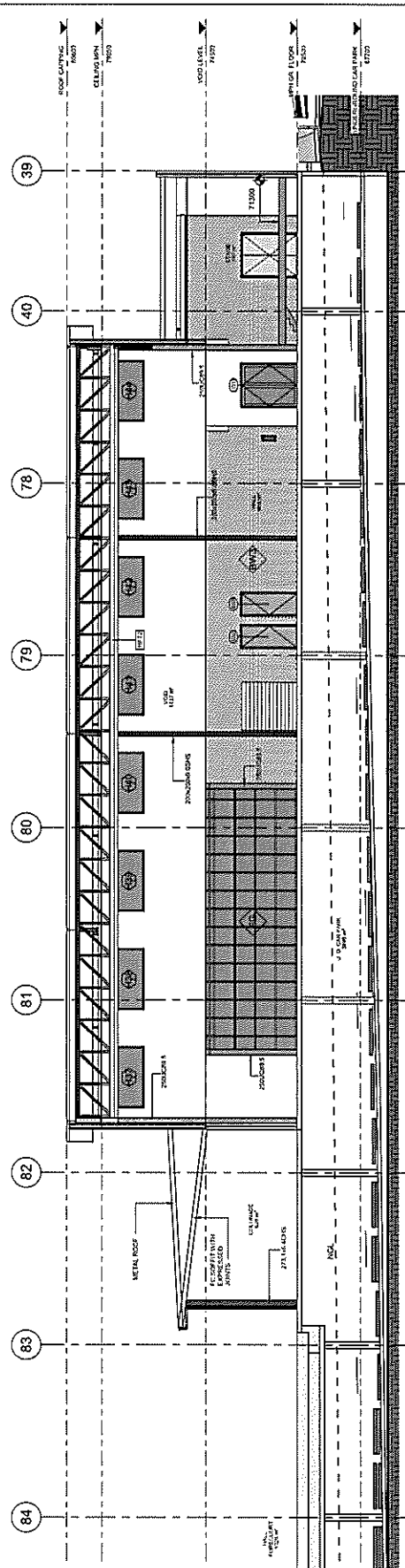
Scale	Ratio
1 : 100	



Section 116
1 : 100



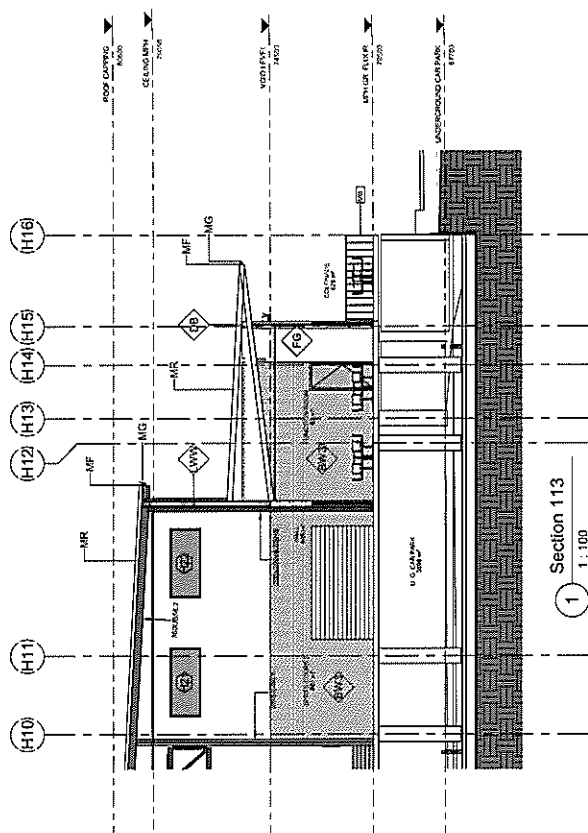
Section 115
1 : 100



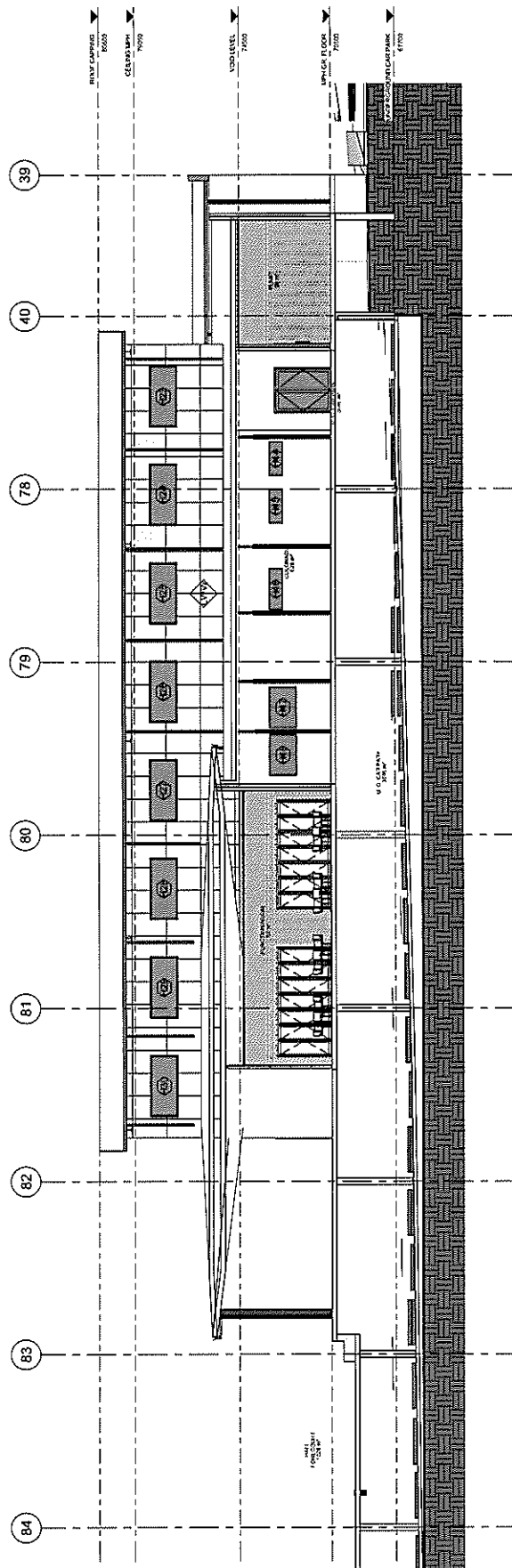
Section 114
1 : 100



Building Design - Construction - Consultancy



Section 113
1 : 100



Section 112
2 1:100

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
33 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

SECTIONS 112, 113

Project number	018
----------------	-----

Date 17.04.2019

Drawn by
Hasan Aliqadri

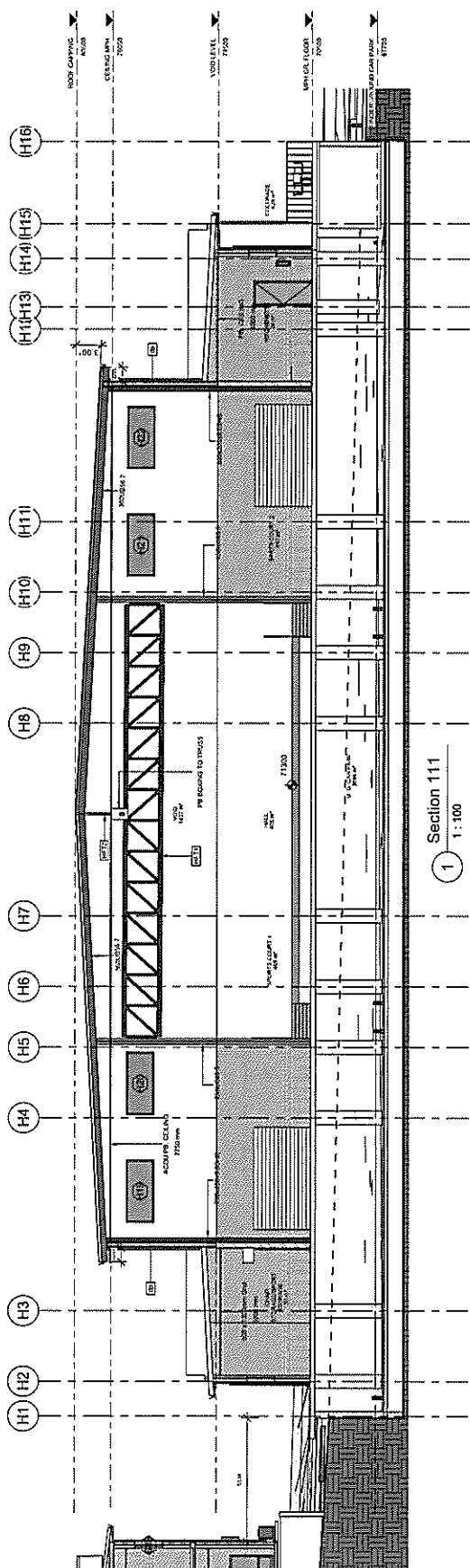
Checked by	Checker
------------	---------

90-H-06

Scale
1 : 100



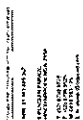
Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
83 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

SECTION 111

Project number	018
Date	17.04.2019
Drawn by	Hasan Alijagic
Checked by	Checker
	MPH-07
Scale	1 : 100



Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
33 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

EAST AND WEST ELEVATION

Project number 018

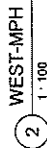
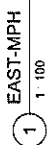
Date: 17.04.2019

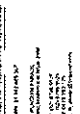
Drawn by
Hasan Alijagic

Checked by _____

Checker _____

MPH-08

Scale
1:100

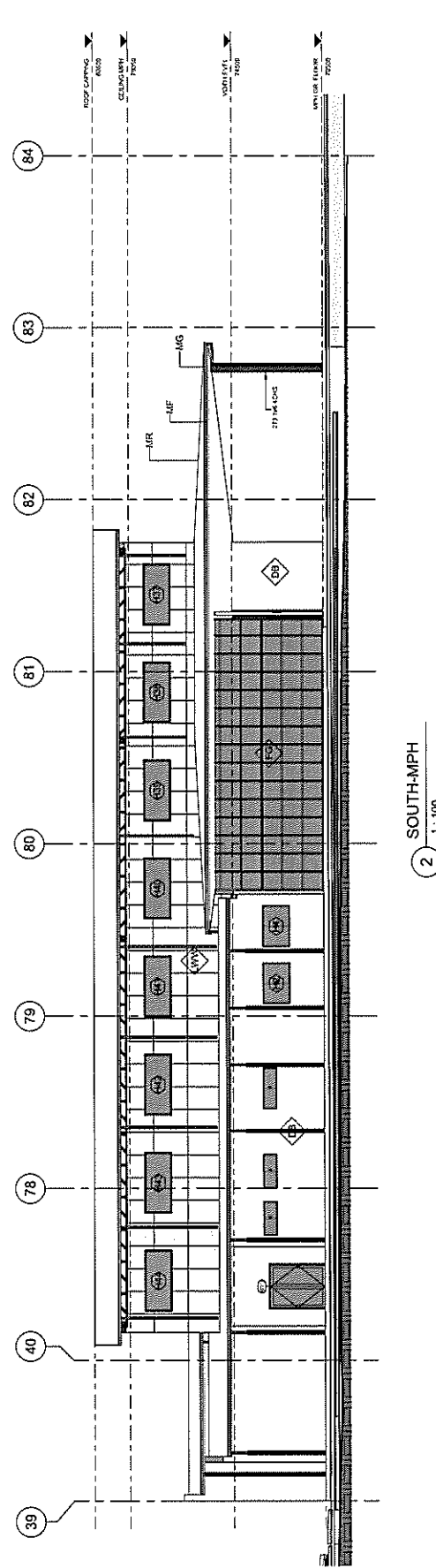
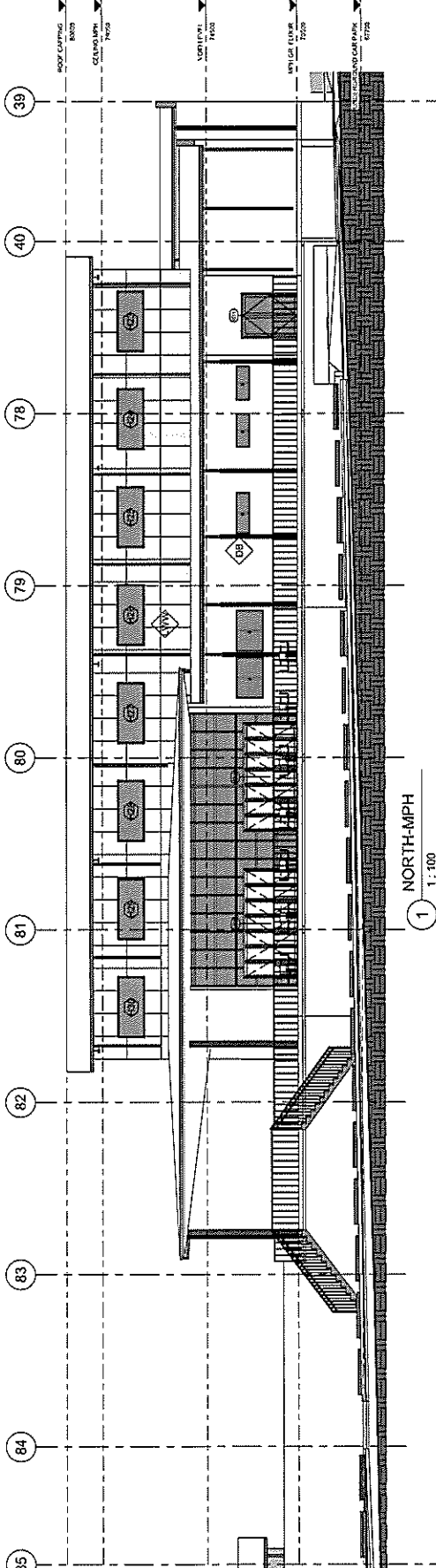


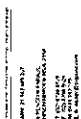
[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
83 GURNERS AVENUE, AUSTRAL.
SYDNEY AUSTRALIA

SOUTH AND NORTH ELEVATION

Project number	018
Date	17.04.2019
Drawn by	Hasan Alijagic
Checked by	Checker
MPH-09	
Scale	1 : 100





Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
33 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

ROOF PLAN

Project number 018

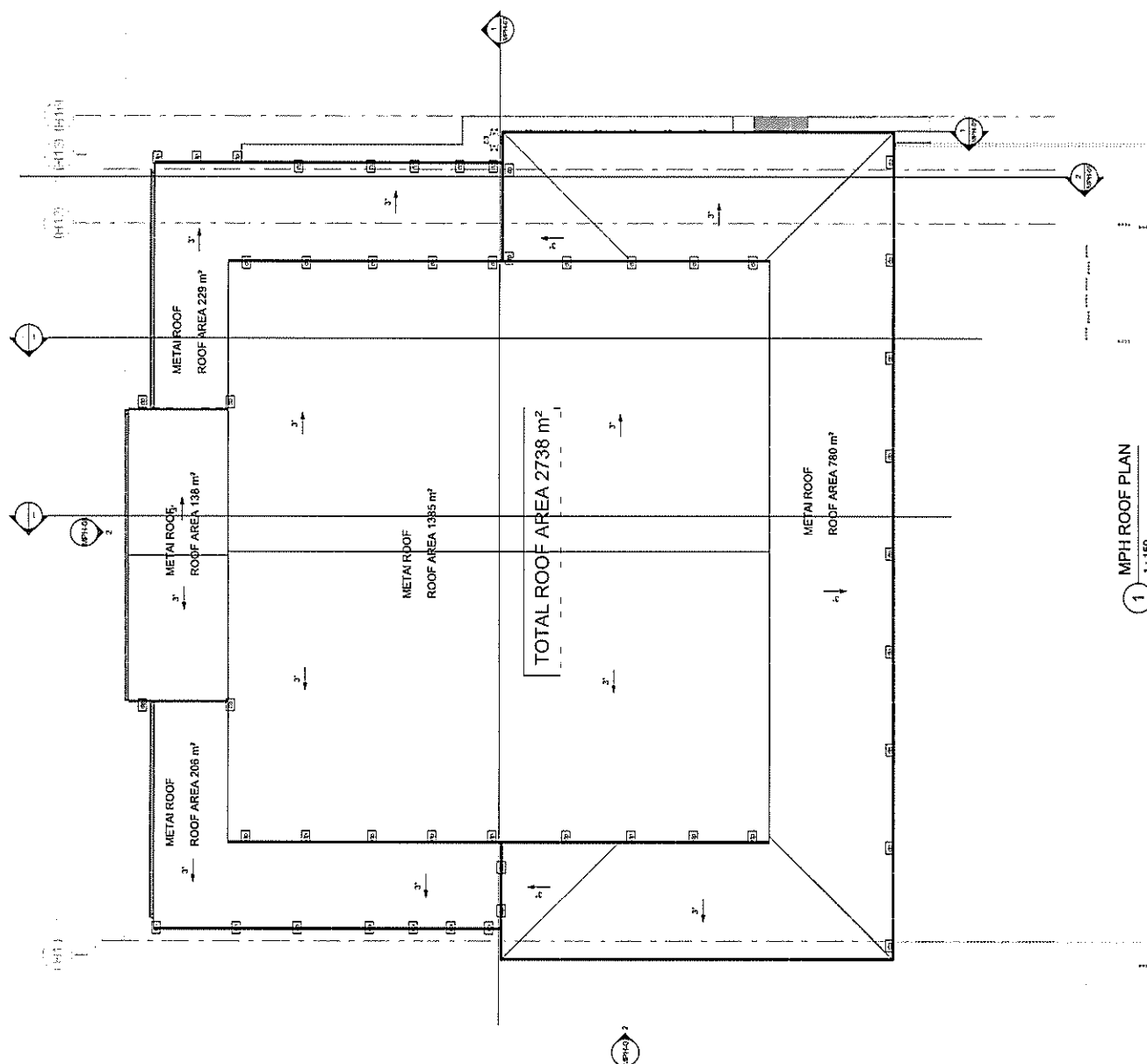
Date	17.04.2019
------	------------

Drawn by _____ Author _____

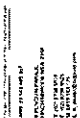
Checked by	Checker
------------	---------

MPH-10

Scale
1 : 150



1 MPH ROOF PLAN
1:150



Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
83 GURNERS AVENUE, AUSTRALIA
SYDNEY AUSTRALIA

STORMWATER PLAN-PART 2

Project number

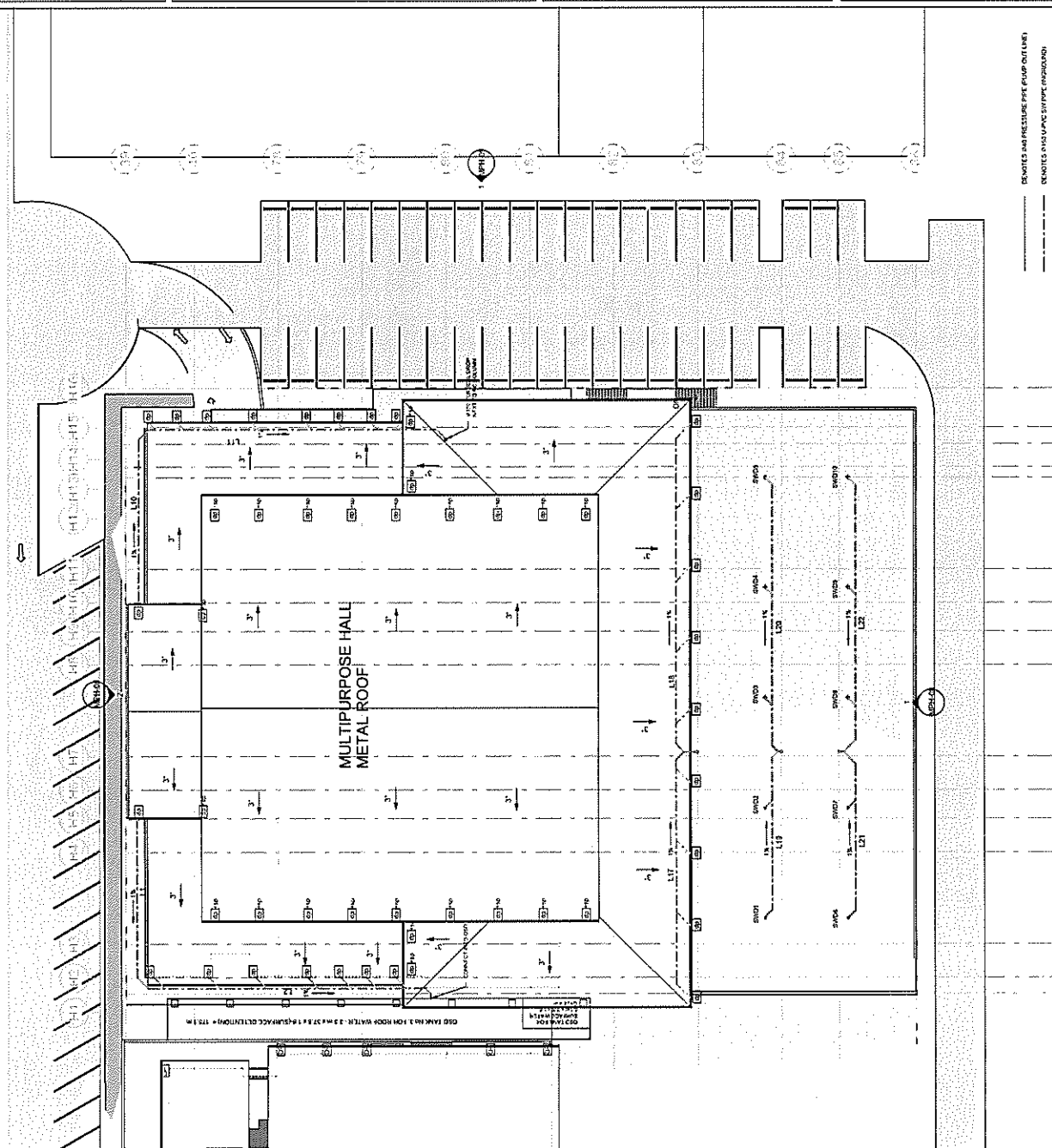
17.04.2019

Drawn by

Checked by _____
Checker _____

MPH-12

As indicated



DE NOTES 240 PRESSURE PUMP OUT LINE

DE NOTES 0145 UAPIC SW PUMP (H2O SOUND)

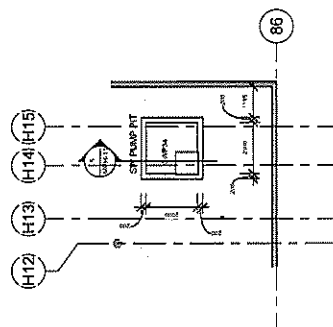
DE NOTES 0145 UAPIC SW PUMP (H2O PUMPED)

DE NOTES 0125 UAPIC SW PUMP (H2O SOUND)

DE NOTES 0100 ACT LINE

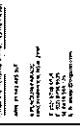
STORMWATER PLAN MPH PART 2

: 200



DETAIL 4

1 : 100



[illegible]

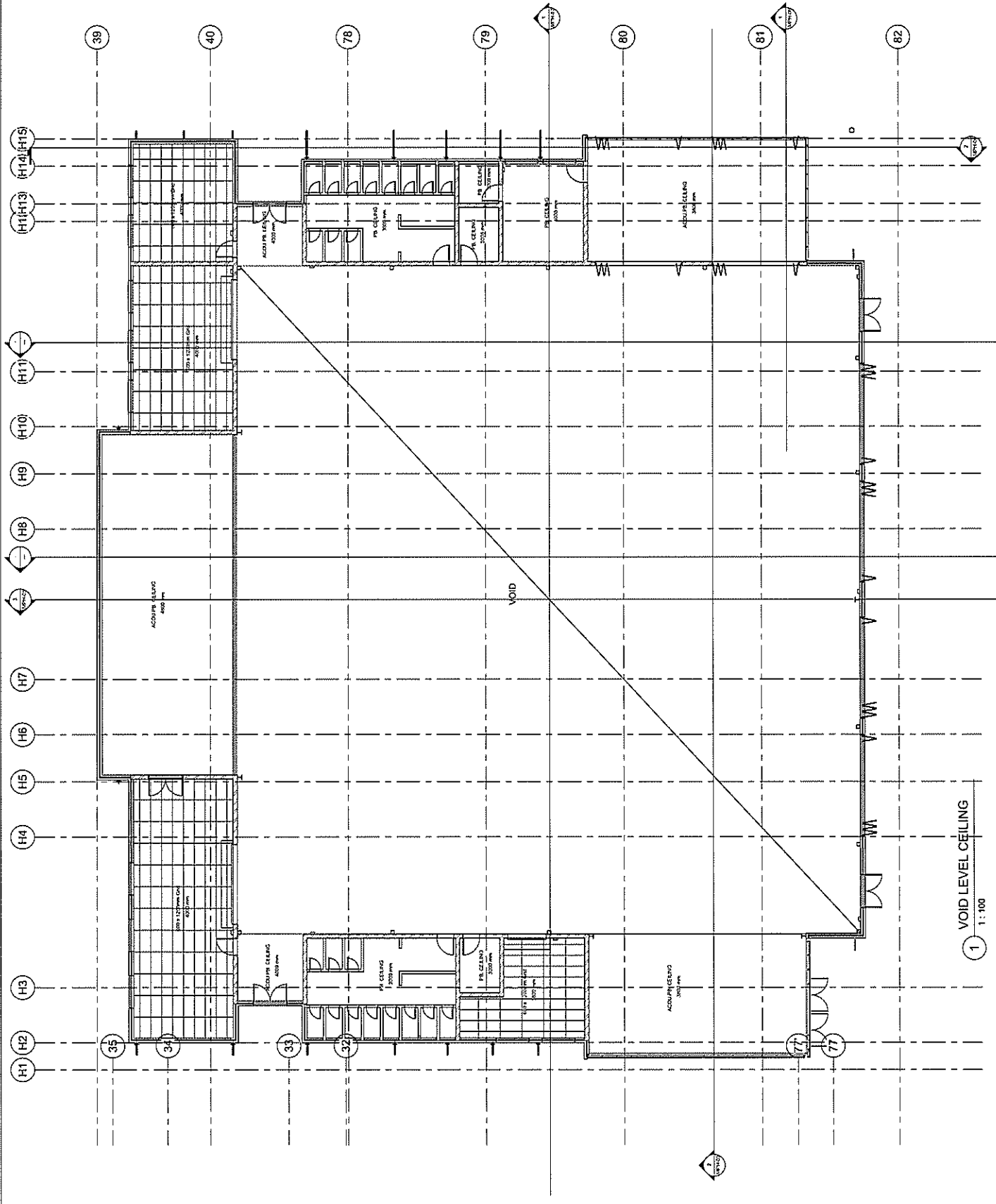
AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
83 GURNERS AVENUE, AUSTRAL,
SYDNEY AUSTRALIA

VOID LEVEL CEILING

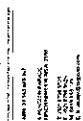
Project number	018
Date	17.04.2019

Drawn by	Author
Checked by	Checker

MPH-13

Scale
1:100

1
VOID LEVEL CEILING
1:100



Building Design - Construction - Consultancy

[illegible]

AL-FAISAL COLLEGE LIVERPOOL
MANAGING DIRECTOR
MR SHAFIQ R.A. KHAN
STAGE 4, 5, 6, 7 & 8
83 GURNERS AVENUE, AUSTRALIA,
SYDNEY AUSTRALIA

CEILING MPH

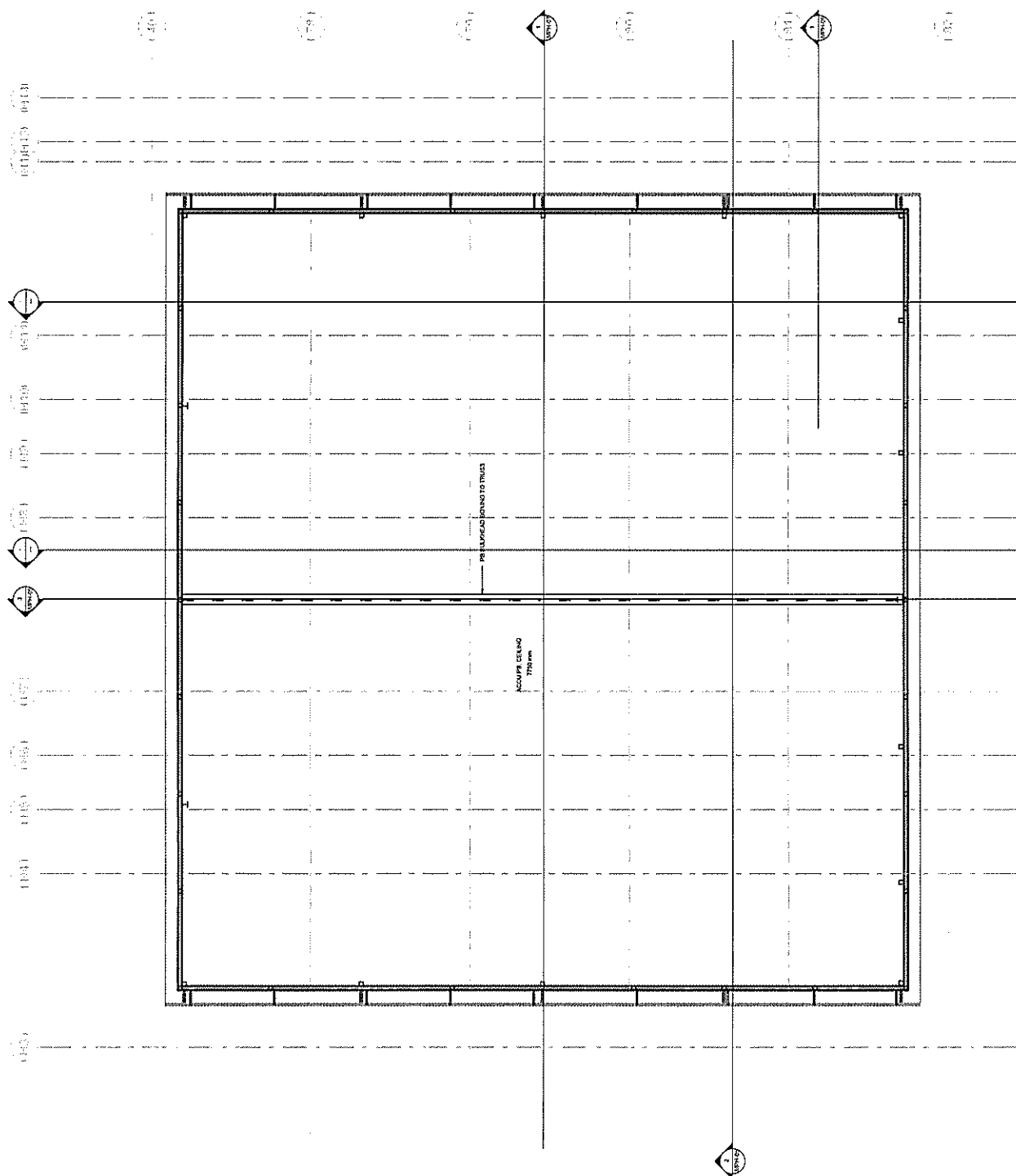
Project number	018
----------------	-----

Date: 17.04.2019

Drawn by _____ Author _____

Checked by _____
Checker _____

MPH-14

[illegible]

1
CEILING MPH
1 : 100

PRE ISSUE INSPECTION REPORT

CONSTRUCTION CERTIFICATE/COMPLYING DEVELOPMENT CERTIFICATE

(Clause 129B & 143B of the Environmental Planning and Assessment Regulation 2000
 Clause 131, 132 & 143B of the Environmental Planning and Assessment (Fire Safety) Regulation 2000)

Address: <u>83 Gurner Avenue,</u> <u>Austral.</u>	CC No: <u>—</u> CDC No: <u>J190315</u> Application date (CDC only): <u>8.10.2019</u>
DA No: <u>—</u>	

Current Fire Safety Measures in the existing building the subject of the inspection:

YES, see attached.

Do the plans and specifications accompanying the application for the Construction Certificate / Complying Development Certificate adequately and accurately depict the condition of the existing building the subject of the inspection: Yes / No (If no, provide details below)

YES

Are there any features of the site, or of any building on the site, that would result in the proposed development the subject of the application for the complying development certificate:- not being complying development, or not complying with the Building Code of Australia: (CDC only)

Yes / No (If yes, provide details below)

NO

Has any building or subdivision work authorised by the relevant development consent commenced on the site: Yes / No (If yes, provide details below)

NO

Does the building contain any obvious significant fire safety issues or issues with the egress routes from the part of the building involving the development works.

Yes / No (If yes, provide details below)

NO

Name: <u>Mariusz Para</u>	Accreditation No. <u>BPB1896.</u>
Date of inspection. <u>9/10/2019</u>	Signed: <u>[Signature]</u>

Fire Safety Statement

Part 9 of the Environmental Planning and Assessment Regulation 2000



Please note:

Information to assist building owners to complete each section of the statement is provided on pages 3, 4 and 5.

Section 1: Type of statement

This is (mark applicable box): ☒ an annual fire safety statement (complete the declaration at Section 8 of this form)
☐ a supplementary fire safety statement (complete the declaration at Section 9 of this form)

Section 2: Description of the building or part of the building

This statement applies to: ☒ the whole building ☐ part of the building

Address

83-87 GURNER AVENUE, AUSTRAL 2179

Lot No. (if known)

DP/SP (if known)

Building name (if applicable)

AL FAISAL COLLEGE LIVERPOOL

Provide a brief description of the building or part (building use, number of storeys, construction type etc)

SCHOOL

Section 3: Name and address of the owner(s) of the building or part of the building

Name

AL-FAISAL COLLEGE LIMITED

Address

149 AUBURN ROAD AUBURN NSW 2144

Section 4: Fire safety measures

Fire safety measure	Minimum standard of performance	Date(s) assessed	CFSP *
Automatic Fire Detection and Alarm System	BCA Spec E2.2a Part 4, and AS 1670 -2004	14/01/2020	MB
Building Occupant Warning System	AS 1670.1, AS 1670.4,	14/01/2020	MB
Emergency Lights	BCA Clause E4.2, E4.4, and AS 2293.1	14/01/2020	MB
Exit Signs	BCA Clause E4.5, E4.6, E4.8, and AS 2293.1	14/01/2020	MB
Portable Fire Extinguishers	BCA Clause E1 .6, and AS 2444	14/01/2020	MB
Fire Hose Reel System	AS 2441 (2005) BCA Clause E1 .4	14/01/2020	MB
Fire Hydrant System	AS 2419.1 (2005) BCA Clause E1 .3	14/01/2020	MB
Fire Blankets	AS 2444, AS 3504 (1995)	14/01/2020	MB
Fire Doors	AS 1905.1 2005	14/01/2020	MB
Fire Hazard Properties – Wall, Floor, Ceiling Linings	BCA 2010 Spec C1.10	14/01/2020	MB

* See notes on page 4 about how to correctly identify a Competent Fire Safety Practitioner (CFSP).

Section 5: Inspection of fire exits and paths of travel to fire exits (Part 9 Division 7)

83-87 GURNER AVENUE, AUSTRAL 2179

Version 3.0 | Effective from 1 February 2020 | NSW Department of Planning, Industry and Environment | 1

Fire Safety Statement

Part 9 of the Environmental Planning and Assessment Regulation 2000



Part of the building inspected WHOLE BUILDING- Part 9 division 7 CI 186 EPA Reg 2000	Date(s) inspected 14/01/2020	CFSP * MB

* See notes on page 4 about how to correctly identify a Competent Fire Safety Practitioner (CFSP).

Section 6: Name and contact details of competent fire safety practitioners (CFSPs)

Full name	Phone	Email	Accreditation No.*	Signature
MICHAEL BRAIN	0423 842 796	ENQUIRIES@SECUREFIREPROTECTION.COM.AU	Rex Barker	

* Where applicable – see notes on page 4 for further information.

Section 7: Name and contact details of the person issuing this statement

Full name SHAFIQ R.A. KHAN	Title/Position (if applicable) MANAGING DIRECTOR
Organisation (if applicable)	
Phone 02 8877 2000	Email ACCOUNTS@AFC.NSW.GOV.AU

The person issuing the statement must not be a CFSP listed in section 6.

Section 8: Annual fire safety statement declaration

I, Click here SHAFIQ R.A. KHAN (insert full name) being the: ☒ owner ☒ owner's agent
declare that:

- a) each essential fire safety measure specified in this statement has been assessed by a competent fire safety practitioner and was found, when it was assessed, to be capable of performing:
- i. in the case of an essential fire safety measure applicable by virtue of a fire safety schedule, to a standard no less than that specified in the schedule, or
 - ii. in the case of an essential fire safety measure applicable otherwise than by virtue of a fire safety schedule, to a standard no less than that to which the measure was originally designed and implemented, and
- b) the building has been inspected by a competent fire safety practitioner and was found, when it was inspected, to be in a condition that did not disclose any grounds for a prosecution under Division 7 of Part 9 of the Regulation.

Owner/Agent Signature

Date issued
25/3/2020

Section 9: Supplementary fire safety statement declaration

I, SHAFIQ R.A. KHAN (insert full name) being the: ☒ owner ☐ owner's agent

declare that each critical fire safety measure specified in the statement has been assessed by a competent fire safety practitioner and was found, when it was assessed, to be capable of performing to at least the standard required by the current fire safety schedule for the building for which this statement is issued.

Owner/Agent Signature

Date issued 25/3/2020

83-87 GURNER AVENUE, AUSTRAL 2179

Fire Safety Statement

Part 9 of the Environmental Planning and Assessment Regulation 2000



Note:

A current fire safety schedule for the building must be attached to the statement in accordance with the Regulation.

Fire Safety Statement

Information to help building owners complete the Fire Safety Statement form



Please note:

The following information has been provided to help building owners complete the fire safety statement template and does not comprise part of the form. The following pages do not have to be displayed in the building and need not be submitted to the local council and the Commissioner of Fire and Rescue NSW.

General

- Please print in CAPITAL LETTERS and complete all relevant sections in full.
- A reference to 'the Regulation' is a reference to the *Environmental Planning and Assessment Regulation 2000*.
- A 'CFSP' is a competent fire safety practitioner recognised under clause 167A of the Regulation.
- The completed fire safety statement form must be submitted to both the local council and Fire and Rescue NSW.
- Please contact your local council for further information about how to submit the completed statement.
- Completed statements can be emailed to Fire and Rescue NSW at afss@fire.nsw.gov.au. Alternately, statements can be posted to Fire and Rescue NSW, Locked Bag 12, Greenacre NSW 2190. For further information about this process, please visit the 'Lodge a fire safety statement' page at www.fire.nsw.gov.au.
- As soon as practicable after issuing the fire safety statement, the building owner must display a copy (together with a copy of the current fire safety schedule) in a prominent location within the building.
- Further information about building fire safety is available on the 'Fire safety' page of the Department's website at www.planning.nsw.gov.au.

Section 1: Type of statement

- Mark the applicable box to identify if the statement being issued is an annual fire safety statement or a supplementary fire safety statement.
- An annual fire safety statement is issued under clause 175 of the Regulation and relates to each essential fire safety measure that applies to the building.
- A supplementary fire safety statement is issued under clause 178 of the Regulation and relates to each critical fire safety measure that applies to the building.

Section 2: Description of the building or part of the building

- Mark the applicable box to identify whether the statement relates to the whole building or part of the building.
- In addition to the address and other property identifiers, a brief description of the building or part is to be provided. This could include the use(s) of the building (e.g. retail, offices, residential, assembly, carparking), number of storeys (above and/or below ground), construction type or other relevant information.
- If the description relates to part of a building, the location of the part should be included in the description.

Section 3: Name and address of the owner(s) of the building or part of the building

- Provide the name and address of each owner of the building or part of the building.
- The owner of the building or part of the building could include individuals, a company, or an owner's corporation.

Section 4: Fire safety measures

- The purpose of this section is to identify all of the fire safety measures that apply to a building or part of a building.
- Fire safety measures include both essential fire safety measures and critical fire safety measures. They include items such as portable fire extinguishers, fire hydrants, fire sprinklers, fire detection and alarm systems and lightweight construction.
- Essential fire safety measures are those fire safety measures which are assessed on an annual basis, while critical fire safety measures are those which are required to be assessed at more regular intervals (as detailed on the fire safety schedule). These terms are defined in clause 165 of the Regulation.
- For annual fire safety statements, the table in section 4 must list each of the essential fire safety measures that apply to the building or part of the building and the relevant standard of performance. The date(s) on which these measures were assessed and inspected must be within the 3 months prior to the date the annual fire safety statement is issued.

Fire Safety Statement

Information to help building owners complete the Fire Safety Statement form



- For supplementary fire safety statements, the table in section 4 must list each of the relevant critical fire safety measures that apply to the building or part and the relevant standard of performance. The date(s) on which these measures were assessed and inspected must be within 1 month prior to the date the supplementary fire safety statement is issued.
- The accreditation number of the CFSP who assessed a fire safety measure listed in section 4 must be nominated against the relevant measure(s) in the column titled 'CFSP'. If the CFSP is not required to be accredited, the name of the CFSP must be listed. Further information on the accreditation number is provided at section 6.

Section 5: Inspection of fire exits and paths of travel to fire exits (Part 9 Division 7)

- This section applies only to an annual fire safety statement.
- The purpose of this section is to identify that a CFSP has inspected the fire exits, fire safety notices, doors relating to fire exits and paths of travel to fire exits in the building or part of the building and found there has been no breach of Division 7 of Part 9 of the Regulation.
- The table in section 5 must detail the parts of the building that were inspected. The date(s) of the inspection(s) must be within the 3 months prior to the date the annual fire safety statement is issued.
- The accreditation number of the CFSP who inspected the whole or part of the building listed in section 5 must be nominated against the relevant part in the column titled 'CFSP'. If the CFSP is not required to be accredited, the name of the CFSP must be listed. Further information on the accreditation number is provided at section 6.

Section 6: Name and contact details of competent fire safety practitioners (CFSPs)

- A CFSP is a person engaged by the building owner(s) to undertake the assessment of fire safety measures in section 4 and the inspection of the buildings exit systems in section 5 (for an annual fire safety statement). Under clause 167A of the Regulation, the building owner(s) must form the opinion in writing that the person is a CFSP unless the person is required to be accredited (see below).
- The purpose of this section is to record the name and contact details of each CFSP who assessed a fire safety measure listed in section 4 or inspected the building or part of the building as specified in section 5.
- Each CFSP listed in the table must also sign the fire safety statement. Alternatively, a CFSP could provide the building owner or agent with a separate signed document to endorse the relevant part of the fire safety statement.
- An accreditation scheme for CFSPs is expected to start in January 2020.
- After the accreditation scheme begins, CFSPs will need to be selected from a register of recognised practitioners. The accreditation number of each relevant CFSP must be listed on the form. Until the accreditation scheme commences, or if a practitioner is of a class of persons that is not required to be accredited under clause 167A of the Regulation, there is no requirement to include an accreditation number on the form.
- Further information about the accreditation scheme can be found at www.fairtrading.nsw.gov.au.

Section 7: Name and contact details of the person issuing the statement

- The purpose of this section of the form is to detail the name and contact details of the person who is issuing the statement i.e. the person who completes and signs section 8 or section 9 of the form. This could be the owner(s) of the building or a nominated agent of the owner(s).
- Where a person issues the statement on behalf of an organisation (as the owner of the building), the name of the organisation and the title/position of the person must be provided. The person issuing the statement as a representative of the organisation must have the appropriate authority to do so.
- Where a person issues the statement on behalf of the owner(s) (as the owner's agent), this person must have the appropriate authority from the building owner(s) to undertake this function.
- In the case of a building with multiple owners, one owner may issue the statement, however each of the other owners must authorise the owner who issues the statement to act as their agent.
- The person issuing the statement must not be a CFSP who is listed in section 6. This recognises the different roles and responsibilities for building owner(s) and CFSPs in the fire safety statement process. This is important because the Regulation makes building owners responsible for declaring that fire safety measures have been assessed and the building inspected (for the purposes of section 5) by a CFSP. This ensures that building owners, who are ultimately responsible, remain engaged in the fire safety statement process.
- In addition, until an accreditation scheme commences and accredited practitioners are recognised as CFSPs under the Regulation, or if a practitioner is not required to be accredited, only the building owner(s) can determine that a person is competent to perform the fire safety assessment functions. The building owner(s) are also responsible for ensuring that essential fire safety measures are maintained in accordance with clause 182 of the Regulation. An agent cannot be made responsible for these requirements.

Fire Safety Statement

Information to help building owners complete the Fire Safety Statement form



Section 8: Annual fire safety statement declaration

- The person completing this section is the person who is issuing the annual fire safety statement in accordance with clause 175 of the Regulation and is the same person as detailed in section 7. The person issuing the statement must identify if they are the owner or the owner's agent.
- In issuing the statement, the building owner or agent is not declaring that each fire safety measure meets the minimum standard of performance, but rather that each fire safety measure has been assessed, and was found by a CFSP to be capable of performing to that standard, as listed in section 4. In performing this function, the building owner or owner's agent could obtain documentation from each CFSP to verify that the standard of performance has been met, prior to completing the form and issuing the statement.
- The person who issues the statement by completing section 8 or section 9 of the form must not be a CFSP who was involved in the assessment of any of the fire safety measures, or inspection of the building for the purposes of the statement. This is to ensure that building owners, who are ultimately responsible, remain engaged in the fire safety statement process.

Section 9: Supplementary fire safety declaration

- The person completing this section is the person who is issuing the supplementary fire safety statement in accordance with clause 178 of the Regulation and is the same person as detailed in section 7. The person issuing the statement must identify if they are the owner or the owner's agent.
- The information provided above in relation to section 8 on what the owner is declaring also applies to a supplementary fire safety statement.

© State of New South Wales, through Department of Planning, Industry and Environment 2019. The information contained in this publication is based on knowledge and understanding at the time of writing (1 November 2019). However, because of continuing knowledge, there are limitations of the need to ensure that the information is up-to-date, they rely on up-to-date and to check the currency of the information with the appropriate officer of the Department of Planning, Industry and Environment or the relevant participant relevant.



15 April 2020

AL-FAISAL COLLEGE LTD
149 AUBURN RD
AUBURN NSW 2144

Levy Receipt

Receipt No.

00421616

Received from: (Name of person or organisation paying for levy)

the amount of

AL-FAISAL COLLEGE LTD

\$27,398.00

Payment details:

Direct Depos \$27,398.00

being payment for Long Service Levy as detailed below

Levy Payment Form number	0359429
Council/Department/Authority	LIVERPOOL CITY COUNCIL
C.D.C. Number	J190315
Work address	83-87 GURNER AVE AUSTRAL NSW 2144
Estimated value of work	\$7,828,139.00
Levy payable (No exemption)	\$27,398.00
Total levy paid	\$27,398.00
Credit Card Surcharge (non-refundable)	\$0.00
Total Amount Paid	\$27,398.00

Signed: (Signature of authorised person)

Date

15/04/2020

414576