BUILDING REGULATION & FIRE SAFETY ENGINEERING CONSULTANTS

Project:	**CAMPBELL'S STORES – SYDNEY HARBOUR**
Report:	**BCA ASSESSMENT AND AUDIT REPORT – DEVELOPMENT APPLICATION DOCUMENTATION**
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PART 1 BASIS OF ASSESSMENT

1.1 Location and Description

The premises, the subject of this report are located at Hickson Road, The Rocks and is known as the Campbell's Stores. The premises are currently occupied throughout and are currently being used as four separate retail restaurant Tenancies.

The overall site is bounded to the north east by the promenade adjoining Sydney Harbour, to the north west by the Hyatt Hotel, to the south east by adjacent ANSAC and Overseas Passenger Terminal sites and to the south west by Hickson Road. There is no vehicular access to the site other than to the loading dock area at the eastern end of the current development.

It is proposed to refurbish the entire development to create 12 to 16 separate retail restaurant tenancies over three storeys as well as construct a new Bay 12 building portion.

1.2 Purpose

The purpose of this report is to provide a detailed BCA assessment of the existing building to identify any current areas of deficiency and non-compliance with the deemed-to-satisfy provisions of the Building Code of Australia, 2015 (BCA2015) (if any) and of the relevant Building Regulatory Legislation applicable at the time of original construction of the overall building.

Fire Safety Upgrading requirements are also to be provided, where it is considered occupant fire and life safety is currently deficient. The report also takes into consideration the existing level of compliance of the subject development, the proposed future alterations and additions and makes recommendations on works required to achieve general compliance with either the Deemed to Satisfy or performance based provisions of BCA2015 as applicable as well as those items that will need to be included in the future Fire Engineering Assessment.

N.B. The upgrading strategy contained within Part 4.0 of this report should not be construed as an upgrading to achieve strict compliance with the current deemed to satisfy provisions of the BCA. Any upgrading recommendations contained within Part 4.0 of the report are to address any current deficient (if any) occupant fire and life safety provisions within the building.

1.3 Basis of Assessment

The content of this report reflects: -

(a) detailed inspection of the building on 25 May 2015;

(b) the performance and deemed-to-satisfy provisions of the Building Code of Australia, 2015 incorporating the NSW variations where applicable;

(c) The Disability (Access to Premises – Buildings) Standards 2010;

(d) a review of the Development Application Architectural design documentation for the proposed refurbishment works to the existing development prepared by Johnson Pilton Walker Pty Ltd dated 16 October 2015 – Revision A Drawing Numbers EA-A-0000, EW-A-0001, EA-A-0002, EA-A-1001, EA-A-1002, EA-A-1003, EA-A-1004, EA-A-1005, EA-A-1006, EA-A-2000, EA-A-3002, EA-A-3003, EA-A-3006, EA-A-3009, EA-A-3010, EA-A-3011, EA-A-3012, EA-A-3013, EA-A-9000, EA-A-9001, EA-A-9002 and EA-L-1001;

(e) Copy of the Annual Fire Safety Statement dated 26 February 2013 displayed adjacent to the current Main Fire Indicator Panel in the Loading Dock area.

1.4 Limitations

This report does not include nor imply any detailed assessment for design, compliance or upgrading for: -

- the structural adequacy or design of the existing building;
- the inherent derived fire-resistance ratings of any existing structural elements of the building (unless specifically referred to); and
- the design basis and/or operating capabilities of any existing electrical, mechanical or hydraulic fire protection services (unless specifically referred to).

This report does not include, or imply compliance with:

(a) The relevant provisions of the Disability Discrimination Act (the provisions of disabled access to the subject building portion will be assessed under separate cover by a separate Access Consultant to include the relevant provisions of Part D3 and F2.4 of BCA2015 and the Disability (Access to Premises – Building) Standards 2010;

(b) The relevant provisions of Sections B, D3, G and H of BCA2015 (unless specifically referred to);

(c) Demolition Standards not referred to by the BCA;

(d) Occupational Health and Safety Act;

(e) Construction Safety Act;

(f) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Water Supply Authority, Electricity Supply Authority, RMS, Work Cover, SHFA, Department of Planning, City of Sydney Council, Transport Sydney and the like;

(g) Previous conditions of Development Consent issued by the local Consent Authority (City of Sydney Council / SHFA / Department of Planning) unless specifically referred to;

(h) This report does not assess the safety of the particular aspects of the building but merely the minimum standards called up by the provisions of BCA2015 where appropriate.

1.5 Building Regulations

From investigations and review of available documentation, the original construction date of the building was in circa 1851, with alterations and additions occurring in 1858-1861, 1882-1887, 1895, 1915, 1958 and most recently 1970. The subject building has undergone internal alterations and additions since these original Construction periods extending primarily to general maintenance and internal tenancy fit outs. At this stage as advised by the client and documented in the proposed architectural design documentation that will form the basis of the Development Application Submission, the new works proposed to the development include the refurbishment of the entire development to change from the current four separate tenancies to 12 -16 retail restaurant tenancies.

An important point of note in the assessment for compliance of existing buildings is a change to the Building Regulatory Provisions. On 1 July 1997, The Building Code of Australia 1996 (BCA96) was introduced (now known as BCA2015), which is a performance based document.

This document is divided into two (2) sections, being a performance solution and a deemed-to-satisfy solution (Prescriptive requirements).

A building owner/applicant for new and/or existing buildings can choose either method in evidencing that the subject existing/proposed building provides for an adequate level of fire and life safety for the building occupants.

Accordingly, although an existing building may not meet the prescriptive deemed-to-satisfy provisions of BCA2015, it does not necessarily conclude that the building is unsafe, or warrants any fire safety upgrading works. The building may in fact still satisfy the performance provisions of BCA2015 as an alternative solution.

For the purposes though of carrying out a BCA Assessment and report of the existing building, the assessment contained within this report has been made against the current prescriptive deemed-to-satisfy provisions of the Building Code of Australia 2015 with such assessment identifying areas where further detailed Fire Engineered Alternate Solution reports will be required.

If any deficiencies are noted, it will then require addressing each deficiency, its level of non compliance, and its impact on the fire and life safety of the building occupants to determine if such a deficiency will require future upgrading.

From a Building Owners point of view provided the building is being maintained fully in accordance with the standards at the time of original construction / occupation and then as per further approvals, then the Owners obligations are considered to be met.

It is only when the buildings become extremely aged, the use changes or major refurbishment works (that exceed 50% of the volume of the building over a three year period) are carried out that additional fire safety measures and or fire safety upgrade works need to be further investigated.

Further comment on these fire safety upgrade obligations of the building owner will be made in Part 4.0 of this report. As the subject works are proposed throughout the entire development, there will be an expectation and requirement by the approval authority for the existing development to be upgraded to meet the current performance / deemed to satisfy provisions of BCA2015.

1.6 Organisational Responsibilities - Disability Discrimination Act 1992 (DDA)

All organisations have a responsibility, under the Federal Disability Discrimination Act (DDA), to provide equitable, dignified access to goods and services and to premises used by the public. Premises are broadly defined and would include all areas included within the subject development.

The DDA provides uniform protection against unfair and unfavourable treatment for people with a disability in Australia. It also makes it unlawful to discriminate against a person who is an "associate" (such as a friend, carer or family member).

Disability is broadly defined and includes disabilities which are:

- physical;
- intellectual;
- psychiatric;
- neurological;
- cognitive or sensory (a hearing or vision impairment);
- learning difficulties;
- physical disfigurement; and
- the presence in the body of disease causing organisms.

This broad definition means that everyone with a disability is protected. The Act supports the principle that people with a disability have the same fundamental rights as the rest of the community. Provisions apply to a wide range of life activities including:

- access to premises used by the public;
- education;
- provision of goods and services;
- employment;
- administration of Commonwealth laws and programs.

When a person with a disability wants to utilise premises including all buildings, outdoor spaces, car parking areas, pathways and facilities, then equitable, dignified access must be provided. The DDA requires that appropriate changes be made to provide access. A complaint can be made under the DDA if appropriate access is not provided.

On 15 March 2010 the Disability (Access to Premises - Buildings) Standards 2010, was tabled in Federal Parliament. These Standards have been under development for many years and significant public consultation has occurred during their development. The Premises standard has now been introduced on 1st May 2011 in line with the updated National Construction Code which incorporates the Building Code of Australia and the National Plumbing Code.

The aim of the Standards is to provide the building and design industry with detailed information regarding the required access provisions associated with the design and construction of new buildings and upgrade to existing buildings. They do not apply to existing buildings that are not undergoing upgrade.

They only apply to elements addressed within the Standards. All other elements related to premises will still be subject to the existing provisions of the DDA.

The Standards generally align with the BCA (see below) and reference a range of Australian Standards relating to access and other associated matters. The Disability (Access to Premises - Buildings) Standards 2010 aim to provide certainty for the building industry in relation to meeting the requirements for access in new and upgraded buildings.

The Access Assessment to be prepared under separate cover will need to incorporate the key elements of the Standards as well as additional access requirements to assist in achieving best practice in the provision of access for all to buildings.

The Building Code of Australia 2015, in conjunction with the DDA, applies to all new buildings; new building works to existing buildings and buildings undergoing significant refurbishment or alteration.

Provision of access for a person using a wheelchair or mobility aid is often considered to be an indication of effective design to the built environment. However the majority of users of car parks, buildings and outdoor areas are pedestrians who also benefit greatly from wheelchair accessible design. Conversely, they can also be denied appropriate access if barriers are incorporated into designs.

In addition, older persons and people with disabilities within the community have a wide range of access needs that are not necessarily satisfied by just providing access for a person using a wheelchair. People also experience the effects of disability through impairment to:

- Sight;
- Hearing;
- Motor ability;
- Dexterity;
- Balance;
- Mental functioning etc.

Examples of a range of access challenges include:

- People who use wheelchairs face difficulties such as abrupt changes in levels (e.g. steps and steep slopes/gradients) and limited access under basins, benches and tables. They also need an increased circulation area, particularly at doorways and changes in direction.

- People who experience difficulty walking may have stiff hips, balance problems or uncoordinated movements which require attention to stairs and handrails, seating in waiting areas, slip resistant floor finishes and ramps with a gentle slope/gradient.

- People with manipulatory difficulties (finger or hand control) require appropriately selected handles, switches, buttons (in lifts) and taps to enable usage

- People with sensory disabilities, which affect either their hearing or vision, require clear, easy to understand signage and tactile indicators. This requires attention to a variety of factors including colour, contrast, print size, levels of illumination and the provision of appropriate communication systems in public areas.

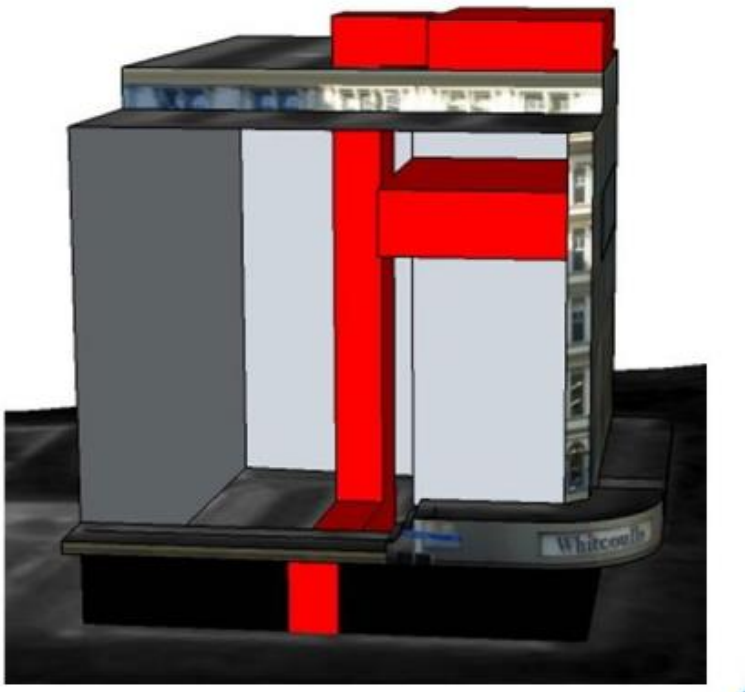
- People with intellectual disabilities may have difficulty finding their way in new environments. Therefore, direct access routes and clear directional signage with graphics are important.

As a wide range of physical issues impact on the provision of access for people with disabilities, responsive design, incorporating a continuous accessible path of travel, needs to be equitable and therefore inclusive of the needs of all of the community.
Access should cater for both pedestrians and users of wheelchairs and other mobility aids. In addition consideration must be given to the needs of users who may require assistance from other people as well as assistance animals.

When new building work takes place in an existing building and a building approval is required for that the new work (Construction Certificate or Complying Development Certificate in NSW or in case of Crown Developments – a S109R Crown Certification), the requirements for upgrading access are limited to the area of new work and the 'affected part'. Access requirements are not imposed outside the area of the new work.

For example, a building owner undertakes renovations on one level of their building. The application for building approval triggers the application of the Disability (Access to Premises – Building) Standards 2010 (known as the "Premises Standards"). While the Premises Standards will apply to the area of new work and the 'affected part' of the building they will not apply to the other levels not being upgraded.

These areas of the building outside the area of the new work will continue to be subject to the existing DDA complaints provisions. The "Affected Part" in existing buildings relates to providing an accessible path of travel from the principal public entrance to the new or modified part of an existing building. An example of this is shown in the sketch below. This shows works to two upper floors only within an existing building – the result is the upgrade of the Affected Part being the entrance and lift to access the floors being refurbished.



The upgrade only occurs if the applicant for the works is the "Building owner" or the building is leased to one entity. If the applicant is a tenant / lessee in a multi tenanted / leased premises, no upgrade to the based building is required.

In this instance as building works are proposed for and on behalf of the owner and the works are proposed throughout the entire development, there will be an expectation that the entire development is upgraded to be fully Accessible Compliant in accordance with the Disability (Access to Premises – Buildings) Standards 2010 – separate Access Consultant to provide detailed input to the extent and scope of such works.

PART 2 BUILDING DESCRIPTION

For the purposes of the Building Code of Australia 2015 (BCA) the existing and proposed building the subject of this report may be described as follows.

2.1 Rise in Storeys (Clause C1.2)

The existing and proposed building has a rise in storeys of four (4), with the new Bay 12 containing a rise in storeys of five (5). **NB**: This is due to the fact that the rise in storeys is measured from the highest point adjacent to the building. Thus, when the rise in storeys is measured at northern eastern elevation to Bay 11, the resultant rise in storeys to the existing Campbell's Stores building is four (4) whilst Bay 12 is five (5) with the rooftop area being maintenance access only thus not counted in the rise in storeys, however the ground level bathroom area provides direct egress to open space thus is counted in the rise in storeys. The proposed works being primarily internal do not change the overall rise in storeys of the base building to the Campbell's Stores Building.

2.2 Classification (Clause A3.2)

The building has been classified as follows which are the proposed classes as a result of the Development Consent Application refurbishment works.

Class	Level	Description
6	Ground, Level 1, Level 2 (and Level 3 to Bay 12)	Retail Restaurants
7a and 7b	Part Ground Floor Elizabeth Street	Storage/ Loading Dock
10a / 10b	Ground Level	Awning over external seating area

NB: As the Plant areas are ancillary to the use of the rest of the building, for the purpose of classification, they assume the same class as the Retail portion being Class 6.

2.3 Effective Height (Clause A1.1)

The Campbell's Stores building has an effective height less than 25.0 metres and in fact less than 12.0m, other than Bay 12 that may slightly exceed the 12.0m – further confirmation to be provided as the Bathroom area beneath Bay 12 provides direct egress to open space thus counted in the rise in storeys and effective height measurement..

2.4 Type of Construction Required (Table C1.1)

If designed/constructed today, the base building would be required to be of Type B construction for a three storey class 6 development – other than Bay 11. However the Type of Construction is proposed to be assessed as Type A with the proposed development due to the existing / proposed overall fire compartment size – to be further discussed in Part 4.2 of this report.

2.5 Floor Area and Volume Limitations (Table C2.2 and C2.3)

The building is subject to maximum floor area and volume limitations of C2.2 of BCA2015 for Type A Constriction as follows:

- Class 6 & 7b - Maximum Floor Area 5,000m^2
  - Maximum Volume 30,000m^3

2.6 Fire Compartments

The following fire compartments have been assumed:

1. The entire building due to the existing base building timber construction is considered to form the one large single fire compartment. This single fire compartment will continue with the proposed building refurbishment works. The current internal floor area of all three to four levels of Bay 1 to 11 is as advised less than 5,000m^2.
2. The Loading Dock area is to be treated as a separate fire compartment.
3. The bathroom area at Ground Level beneath Bay 12 is treated as a separate fire compartment.
4. The new Bay 12 Portion will form its own separate fire compartment.

2.7 Exits

The following exits are proposed in the development:

- Ground Floor Tenancies – egress direct to open space
- Level 1 Tenancies – egress direct to Open space to Hickson Road, and
- Level 2 Tenancies egress via the non fire isolated stairs to either level 1 where access to Hickson road is available or to ground level where egress to the Promenade is available.
- Bay 12 – each floor egresses into a single fire isolated stairway.

2.8 Climate Zone (Clause A1.1)

The existing base building and proposed Bay 12 is located within Climate Zone 5.

PART 3 ESSENTIAL SERVICES

3.1 General

Following assessment of the documentation available, the 2013 version of the Annual Fire Safety Statement was located and assessed with such AFSS located adjacent to the current Main Fire Indicator Panel dated 26 February 2013.

In accordance with the provisions of Section 177 of the EP & A Regulations 2000, Essential Services / Fire Safety measures installed within a building are required to be annually certified by competent persons that they have been suitably installed and are being maintained in accordance with the relevant original installation standards.

Detailed below is a Fire Safety Schedule of the current fire safety measures contained within the development assessed during our site inspection. This schedule should be used for the ongoing current maintenance and inspection certification of the fire safety measures currently installed throughout the entire building.

Existing Fire Safety Schedule

Item	Existing Essential Fire Safety Measure	Minimum standard of performance, i.e. BCA clause and/or Australian Standard to be achieved
1.	Automatic fire detection and alarm system (+ building occupant warning system)	BCA Table E2.2a, Clause 4 of Specification E2.2a & AS 1670.1-2004
2.	Automatic fire suppression system (sprinkler system)	AS2118.1-1982
3.	Emergency lighting	AS/NZS 2293.1-1987
4.	Exit signs	AS/NZS 2293.1-1987
5.	Fire alarm monitoring & communication Link	BCA Clause 6 of Specification E2.2a & AS4428.6
6.	Fire doors	AS CA57.1-1972 & AS1905.1-1984
7.	Fire hose reel system	AS 2441-1988
8.	Portable Fire Extinguishers	AS2444-1995
9.	Paths of travel, stairways, passageways and exits.	Division 7, EP & A Regulations 2000

N.B. All items in the table above are those essential services that need to be certified annually within the subject building portion as currently exists on site. As previously confirmed the items above need to be included within the Annual Fire Safety Statement to be submitted to Council and the NSW Fire & Rescue.

Combined Fire Safety Schedule to entire Building with Upgrade Recommendations of this Report

Outlined in the Table below is a schedule of the proposed fire safety measures required by the recommendations of this report for the building to be upgraded.

Item	Proposed Essential Fire Safety Measure	Minimum standard of performance, i.e. BCA clause and/or Australian Standard to be achieved
1.	Automatic fire detection and alarm system (Including building occupant warning system)	BCA2015 Table E2.2a & AS 1670.1-2004
2.	Automatic fire suppression system (sprinkler system)	BCA2015 Clause E1.5 & AS 2118.1-1999 and Alternate Solution Report to be Prepared by Rawfire Pty Ltd
3.	Emergency lighting	BCA2015 Clauses E4.2, E4.4 & AS/NZS 2293.1-2005

4.	Exit Signs	BCA2015 Clauses E4.5, E4.6, E4.8 & AS/NZS 2293.1-2005
5.	Fire dampers	BCA 2015 C3.15 and AS/NZS 1668.1-1998, AS1682.1 & 2
6.	Fire doors	BCA2015 Specification C3.4 and AS1905.1-2005
7.	Fire hydrant system (Upgrade throughout entire building Including Hydrant Booster Assembly)	BCA2015 Clause E1.3 and AS2419.1-2005
8.	Fire seals protecting openings in fire resisting components of the building – Entire Building	BCA2015 Clause C3.15, Specification C3.15 & Manufacturer's Specification & AS1530.4-2005
9.	Fire hose reel system	BCA2015 Clause E1.4 and AS2441-2005
10.	Paths of travel, stairways, passageways and exits.	BCA2015 Parts D1 & D2, S183 - Division 7 of EP & A Regulations 2000 and Alternate Solution Report to be Prepared by Rawfire Pty Ltd
11.	Portable fire extinguishers – Entire Building	BCA2015 Clause E1.6, Table E1.6 & AS 2444-2001
12.	Recommendations of Fire Engineered Assessment Report to be Prepared to address the following issues: • Lack of FRL to existing and proposed structural elements and floors (C1.1) • Lack of FRL to proposed new Bay 12 structure (C1.1) • Lack of Smoke Exhaust System to retail portions (E2.2a) • Deletion of drenchers to façades of Bay 11 and 12 that are treated as separate fire compartments (C3.3) • Stair widths less than 1000mm – i.e. 800mm, 850mm and 850mm for Bays 3, 6 and 9 Respectively (D1.6 and D2.9) • Egress Doors swing inwards (D2.20) • Drencher protected glazed walls to fire isolated Stair to Bay 12 (C1.1 and C3.8) • Non fire isolated Stair to Bay 11 indirectly connects 4 storeys (D1.3)	Alternate Solution Report to be Prepared by Rawfire Pty Ltd

PART 4 CURRENT BCA NON COMPLIANCE ISSUES

4.1 General

The primary objective of any fire upgrading works is to achieve a means of fire and occupant safety within the context of the objectives of the Building Regulations (i.e.; Building Code of Australia 2015) namely:-

(a) the safety of persons in the event of a fire;

(b) the prevention of fire; and

(c) the suppression of fire.

The items referred to within the following pages clearly identify the existing deficiencies when the deemed-to-satisfy provisions of BCA2015 are applied prescriptively to the existing building. However, as outlined in Part 1.0 of this Report, BCA2015 is now a fully performance based document with the prescriptive deemed-to-satisfy provisions being only one of the two methods of satisfying these performance provisions.

With existing buildings strict compliance with the prescriptive deemed-to-satisfy provisions of BCA2015 is often unlikely and impractical without carrying out massive reconfiguration of the existing building due to the age, use or existing architectural design of the building.

Accordingly, where a deficiency within an existing building has been identified it may not necessarily result in that deficiency being required to be upgraded to strictly meet the deemed-to-satisfy provisions of BCA2015. If, due to specific site circumstances, it can be shown that the deficiency still satisfies the performance provisions of BCA2015 as an alternative solution then this deficiency would not require upgrading.

Notwithstanding the above, under S93 and 94 of the Environmental Planning & Assessment Regulations 2000 the local consent authority (Minister for Planning) have a discretion on the level of upgrading deemed necessary, being either a total upgrade to satisfy the provisions of the BCA or partial upgrading depending on the design, construction extent of alterations and additions and circumstances of the particular building.

When determining the extent of BCA upgrading that may be necessary when undertaking alterations and additions to an existing building, the requirements of S93 and 94 of the Environmental Planning & Assessment Regulations 2000 should be considered.

The relevant requirement of Clause 93 and 94 of the EP & A Regulation 2000 does not require that an existing building be upgraded to comply with the BCA rather it gives the Consent Authority (Minister for Planning) during the Development Approval assessment process the power to require upgrading where it sees fit to do so.

Clause 93 and 94 of the EP & A Regulation 2000 states:

93 Fire safety considerations

(1) This clause applies to a development application for a change of building use for an existing building, where the applicant does not seek the rebuilding, alteration, enlargement or extension of a building.

(2) In determining the development application, the consent authority is to take into consideration whether the fire protection and structural capacity of the building will be appropriate to the building's proposed new use.

(3) Consent to the change of building use sought by a development application to which this clause applies must not be granted unless the consent authority is satisfied that the

building complies (or will, when completed, comply) with such of the Category 1 fire safety provisions as are applicable to the building's proposed new use.
Note. *The obligation to comply with the Category 1 fire safety provisions may require building work to be carried out even though none is proposed or required in relation to the relevant development consent.*

(4) Subclause (3) does not apply to the extent to which an exemption is in force under clause 187 or 188, subject to the terms of any condition or requirement referred to in clause 187 (6) or 188 (4).

(5) The matters prescribed by this clause are prescribed for the purposes of section 79C (1) (a) (iv) of the Act.

94 Consent authority may require buildings to be upgraded

(1) This clause applies to a development application for development comprising the rebuilding, alteration, enlargement or extension of an existing building where:
(a) the proposed building work, together with any other building work completed or authorised within the previous 3 years, represents more than half the total volume of the building, as it was before any such work was commenced, measured over its roof and external walls, or
(b) the measures contained in the building are inadequate:
(i) to protect persons using the building, and to facilitate their egress from the building, in the event of fire, or
(ii) to restrict the spread of fire from the building to other buildings nearby.

(2) In determining a development application to which this clause applies, a consent authority is to take into consideration whether it would be appropriate to require the existing building to be brought into total or partial conformity with the Building Code of Australia.

(3) The matters prescribed by this clause are prescribed for the purposes of section 79C (1) (a) (iv) of the Act.

As the proposed works are refurbishment of the entire development (exceeding 50%) upgrade works the subject of S93 and S94 as referred to above would be considered likely with the proposed refurbishment works program. As such the recommended fire safety upgrade works detailed in Part 4.4 below take this into consideration.

It should be noted that under Clauses 93 and 94 above, the primary concern with existing buildings is that of structural adequacy and fire safety.

There is also a further requirement under Clause 98 of the Regulations that states:

98 Compliance with Building Code of Australia and insurance requirements under the Home Building Act 1989

(1) For the purposes of section 80A (11) of the Act, the following conditions are prescribed in relation to a development consent for development that involves any building work:
(a) that the work must be carried out in accordance with the requirements of the Building Code of Australia,
(b) in the case of residential building work for which the Home Building Act 1989 requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance is in force before any building work authorised to be carried out by the consent commences.

(2) This clause does not apply:
(a) to the extent to which an exemption is in force under clause 187 or 188, subject to the terms of any condition or requirement referred to in clause 187 (6) or 188 (4), or
(b) to the erection of a temporary building.

(3) In this clause, a reference to the Building Code of Australia is a reference to that Code as in force on the date the application for the relevant construction certificate is made.

Thus any "new works" must be undertaken in accordance with the current BCA2015 provisions.

At the Construction Certificate stage, the relevant provisions of S143 of the EP & A Regulations 2000 also state:

Fire protection and structural capacity

(1) A certifying authority must not issue a construction certificate for building work under a development consent that authorises a change of building use unless:

(a) the fire protection and structural capacity of the building will be appropriate to its new use, and
(b) the building will comply with such of the Category 1 fire safety provisions as are applicable to the new use,
assuming that the building work is carried out in accordance with the plans and specifications to which the construction certificate relates and any conditions to which the construction certificate is subject.

(2) Subclause (1) (b) does not apply to the extent to which an exemption is in force under clause 187 or 188, subject to the terms of any condition or requirement referred to in clause 187 (6) or 188 (4).

(3) In the case of building work that involves the alteration, enlargement or extension of an existing building in circumstances in which no change of building use is proposed, a certifying authority must not issue a construction certificate for the work unless, on completion of the building work, the fire protection and structural capacity of the building will not be reduced, assuming that the building work is carried out in accordance with the plans and specifications to which the construction certificate relates and any conditions to which the construction certificate is subject.
(4) This clause does not apply to building work required by a consent authority as a condition of a development consent that authorises a change of building use.

The Category 1 Fire Safety provisions in this development are considered to include:

- Sprinklers – current standard AS2118.1-1999
- Fire Hydrants – current standard AS2419.1-2005
- Smoke Hazard Management – Table E2.2a of BCA2015.

The issue is that the sprinklers and for that matter the Street hydrant system that serve the building should comply with the current BCA provisions which is AS2118.1-1999 for the sprinklers and AS2419.1-2005 for the Hydrant system.

Based on the proposed refurbishment works, the following upgrade works will need to be carried out on site to ensure that the completed and reconfigured Hydrant and Sprinkler System satisfies the current provisions of AS2419.1-2005 and AS2118.1-1999 respectively. Further detailed input from the Services Consultants will be required to ensure these existing systems can achieve full current compliance.

4.2 Performance Based Fire Engineering Issues

There are specific areas throughout the development where strict Deemed-to-Satisfy BCA Compliance will not be achieved by the design and existing site constraints. These matters will need to be addressed in a detailed Fire Safety Engineering Report to be prepared by Rawfire Pty Ltd for the development as part of the Construction Certificate Stage of the development. The issues to be addressed in such report will need to include (but not be limited to - as there may be others that arise with ongoing design development):

Item	Description of Alternate Solution	DTS Provision	Performance Requirement met
1.	The base building structure including the Timber floors and columns do not possess the required 180/-/- and 180/180/180 FRL for a Building of Type A Construction	Table 3 of Specification C1.1 of BCA2015	CP1
2.	The proposed Bay 12 building structure will not possess the required 180/-/- and 180/180/180 FRL for a Building of Type A Construction	Table 3 of Specification C1.1 of BCA2015	CP1
3.	Currently the storage areas at ground level exceed 10% of the total floor area thus should strictly be separately classified – this would mean these areas need to be enclosed in 240/240/240 FRL – It would be proposed to not fire separate these areas off from the remaining floor area.	C2.8 of BCA2015	CP1 and CP2

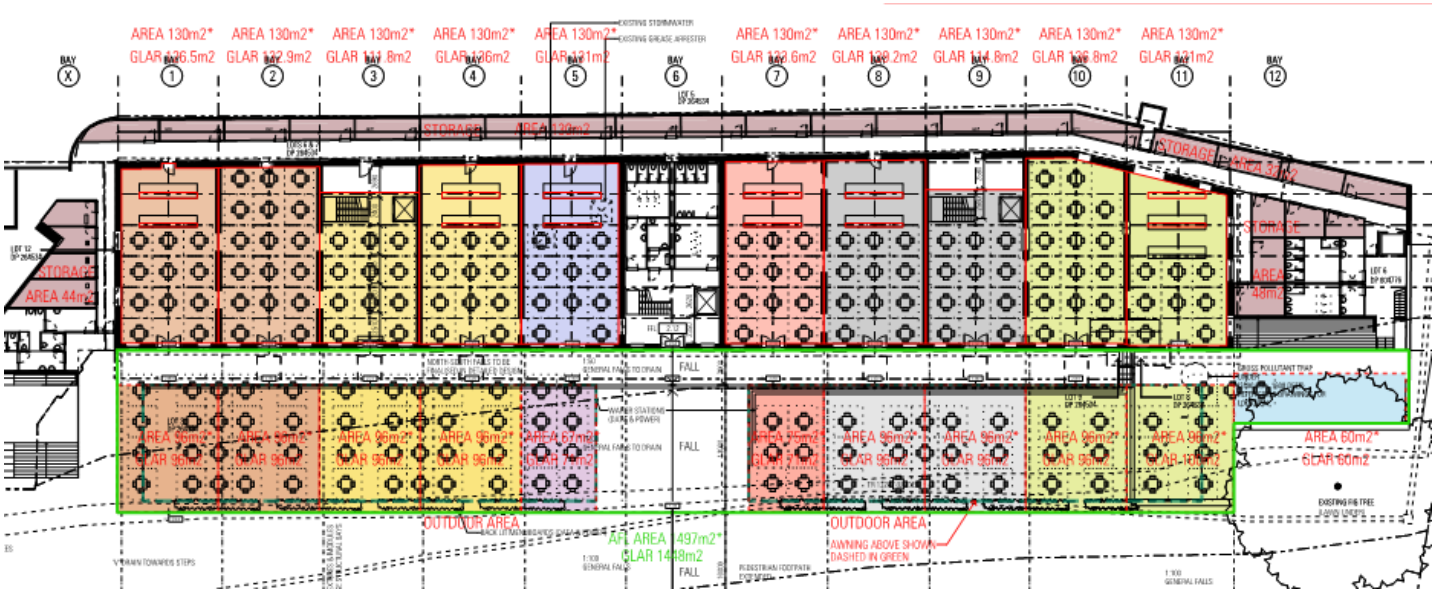
4.	Even though the retail portions exceed 2,000m^2, no Smoke Exhaust System is proposed to be installed.	Clause / Table E2.2a and E2.2b of BCA2015	EP2.2
5.	As proposed, Bay 11 and 12 are treated as separate fire compartments with both building portions being sprinkler protected – as such no wall wetting drencher protection is proposed where the glazed facades of each building portion are within 6.0m of each other.	Clause C3.3 and C3.4 of BCA20125	CP2
6.	As existing and proposed, there are stair widths less than 1000mm – i.e. 800mm, 850mm and 850mm for Bays 3, 6 and 9 Respectively	Clause D1.6 and D2.9 of BCA2015	DP2, DP4, DP6 and EP2.2
7.	As proposed there are a number of required exit doors that will remain as inward swinging doors	Clause D2.20 of BCA2015	DP 2 and DP4
8.	The new glazed fire isolated stairs to Bay 12 will not possess the required -/120/120 FRL under Table 3 of Specification C1.1 of BCA2015 nor will there be self-closing -/60/30 fire doors at each level.	Clause / Spec C1.1 and C3.8 of BCA2015	CP2 and DP5
9.	Currently to Bay 11 – an internal stairway indirectly connects four consecutive storeys in a sprinkler protected building which strictly requires such stairway to be constructed as a fire isolated stairway – the stairway is proposed to be retained as a non fire isolated stairway with the top floor being a plant area only.	Clause D1.3 of BCA2015	DP5

4.3 Population Analysis / Egress Width / Sanitary Facilities

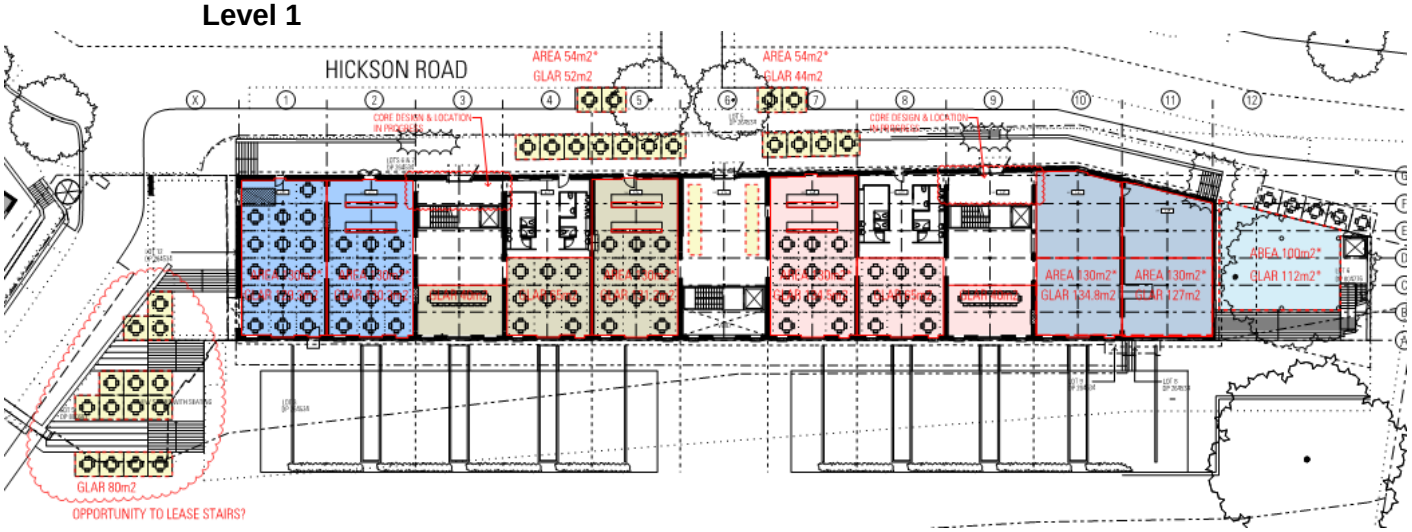
Outlined below is a detailed assessment of the population for the overall development – initially the client is seeking a building that can accommodate circa 2000 patrons + Staff. Detailed below is an assessment of each retail tenancy area based on the following:

- 75% of the floor area dedicated to patron seating – thus calculated at 1m^2 per person, and
- 25% of the area treated as back of house (kitchen etc.) – thus calculated at 30m^2 per person.
- The external seating areas at Ground Level have been based on counting the current seating in the design documentation.

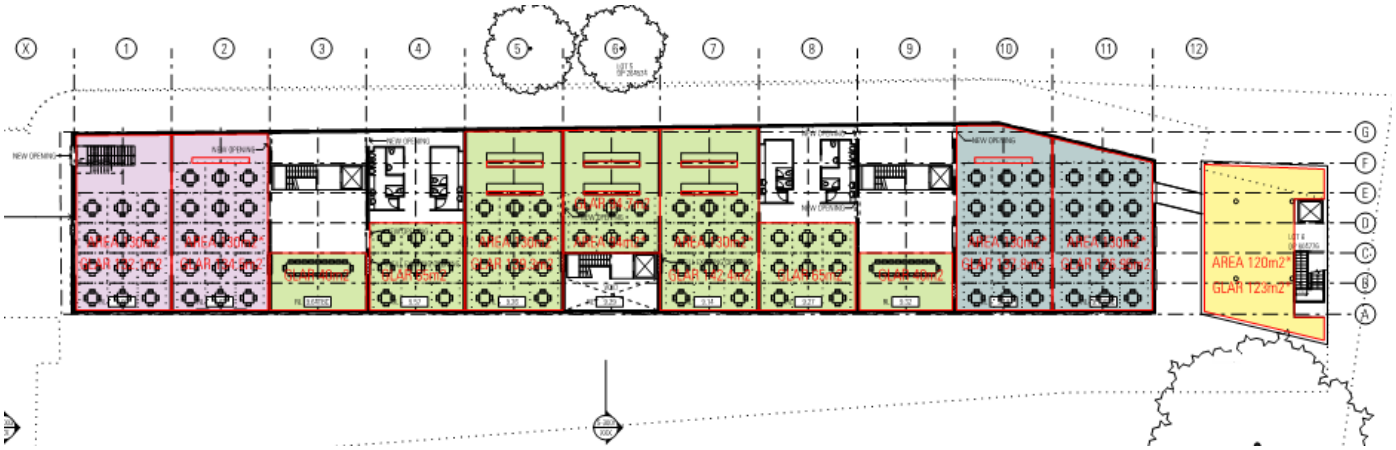
Ground Level



Level 1



Level 2



Using the marked up plans above, the following population assessment is made:

				75% Seating / 25% BOH (D1.13 of BCA2015)	Client Population Based on 2.5m^2/person
Bay	**Style**	**No.**	**Total (m^2)**		
1/2	Restaurant	T1	478	362	191
3/4	Restaurant	T2	476	361	190
5	Restaurant	T3	242	184	97
7	Restaurant	T4	245	184	98
8/9	Restaurant	T5	485	367	194
10/11	Restaurant	T6	478	362	191
12	Restaurant	T7	629	477	252
X/1/2	Restaurant	T8	251	190	100
3/4	Restaurant	T9	254	190	102
7/8	Restaurant	T10	262	191	105
10/11	Restaurant	T11	255	190	102
6	Restaurant	T12	90	69	36
1/2	Restaurant	T13	262	191	105
4/5	Restaurant	T14	264	191	106
7/8	Restaurant	T15	273	192	109
9/12	Restaurant	T16	302	229	121
TOTAL		T17	5246	3930	2,101

Based on the above population numbers and the centralised sanitary facilities, the following sanitary facility numbers will be required to accommodate such population.

The tables below include the current designed toilet numbers and required numbers to accommodate a total building population of 2100 patrons + 240 staff. We have conservatively assumed a staff population of 15 persons per tenancy, thus for 16 tenancies this affords a staff estimate number of 240 – this staff figure is conservative as some of the smaller tenancies would likely have less than 15 staff.

Overall Population: 2100 + staff (240) – Total 2340

Level 1 (Ground): 1213 + staff (138) – Total 1351

Level 2 (Hickson Road): 445 + staff (51) – Total 496

Level 3 (Upper Storey): 441 + staff (51) – Total 492

Ground Level - To cater for the estimated 1351 population of 676 males and 676 females the following is required:

N.B. The figures below allow and have counted the additional accessible WC that will be required to Bay 12 which results in three accessible WC's in total at ground floor level. It is also noted that as proposed – all sanitary facilities will be provided as fully enclosed unisex facilities at levels 1 and 2 whilst the facilities at ground level will be separate dedicated male and female facilities.

Ground Level

Facility	Minimum Required	Population sustained
Male WC	1 + 3 Accessible = 4	700
Urinal	10	750
Male Hand basin	2 + 3 Accessible = 5	800
Female WC	8 + 3 Accessible = 11	750
Female Hand basin	2 + 3 Accessible = 5	750
Accessible WC	3	NA
	Maximum Population sustainable	700 males 750 females

The current ground level sanitary facilities are adequate to cater for the estimated 1351 population of 676 males and 676 females.

Level 1

Facility	Required	Unisex Facility Allocation (14 available – includes 2 Accessible)
Male WC	2	2
Urinal	5	5
Male Hand basin	3	3
Female WC	6	6
Female Hand basin	3	3
Accessible WC	2	NA

The current level 1 sanitary facilities are adequate to cater for the estimated 496 population of 248 males and 248 females using each facility as a Unisex Facility – noting a full facility is counted for each of the above urinals.

Level 2

Facility	Required	Unisex Facility Allocation (14 available – includes 2 Accessible)
Male WC	2	2
Urinal	5	5
Male Hand basin	3	3
Female WC	6	6
Female Hand basin	3	3
Accessible WC	2	NA

The current level 2 sanitary facilities are adequate to cater for the estimated 492 population of 246 males and 246 females using each facility as a Unisex Facility – noting a full facility is counted for each of the above urinals.

Aggregate Egress Width – Outlined below is a table of the required aggregate egress width to each level based on the calculated population of:

- Level 1 (Ground): 1213 + staff (138) – Total 1351
- Level 2 (Hickson Road): 445 + staff (51) – Total 496
- Level 3 (Upper Storey): 441 + staff (51) – Total 492

The assumption is that at ground floor level the tenancies can egress via a 1.5m wide egress door from each Bay, and at level 1 the Tenancies can also egress via a 1.0m exit door from each Bay to the Hickson Road footpath.

Level	Population	Required Egress Width	Proposed Egress Width	Complies – Yes / No
Level 1	1213	9.0m	13.5m	Yes
Level 2	496	4.5m	8.0m	Yes
Level 3	492	4.5m	5.0m	Yes

Currently the aggregate egress width to all levels of the building based on the above populations achieve compliance with D1.6 of BCA12015.

4.4 BCA Deficiencies / Upgrade Requirements

The following items are considered necessary within the subject refurbishment works to the existing development to achieve an adequate level of occupant fire and life safety – Note that this schedule does not include the Accessibility issues that would be the result of the Affected Part Upgrade Works under the Disability (Access to Premises – Buildings) Standards 2010.

They following comments take into consideration the proposed Development Application building refurbishment works. Where an existing on site non-compliant item is being resolved with the proposed works – no further comments have been included below:

Item	BCA Deficiency	Comment / Upgrade Works
1.	Currently the building appears to rely on the nearby Street Hydrant system to afford coverage as per AS2419.1-2005.	Detailed investigations into the suitability or otherwise of the street hydrant is to be undertaken to assess if this street hydrant affords complete coverage to the subject development in accordance with E1.3 of BCA2015 and AS2419.1-2005.
2.	Currently the fire hose reels that are located throughout the building in some instances do not possess the required 100mm clearance around the Hose Reel Drum or the hose cock located up to 1100mm above floor level or the hose reels are located greater than 4.0m from a required exit as per the current provisions of E1.4 of BCA2015 and AS2441.1-2005.	Upgrade the existing fire hose reels throughout building so that the hose reel drums possess the required 100mm clearance, the hose cock is no higher than 1100mm above floor level and the Fire Hose reels are located within 4.0m of a required exit in accordance with E1.4 of BCA2015 and AS2441-2005.
3.	The location of the current Main Fire Indicator Panel is not within or visible from the main entrance to the building as per AS1670.1-2004	The Main FIP is to be relocated to be within the main entrance of the building – being either Bay 6 at Level 1 adjoining Hickson Road or Bay 6 at Ground Level adjoining the Promenade
4.	Currently the building is protected with a smoke detection and alarm system and no smoke exhaust system.	This smoke detection and alarm system is to be suitably upgraded throughout the entire new refurbished building in accordance with AS1670.1-2004 and the Fire Engineers Recommendations – no smoke exhaust is proposed to the development – to be addressed as part of the Fire Engineering process.
5.	Currently the Loading dock store area at the eastern end of the building and the bathroom area at the western end is not fire separated from the remaining ground floor portion as required by C2.8 of BCA2015.	The eastern loading dock / store area and western end bathroom area at ground level is to be fire separated from the rest of the ground floor area with a fire wall possessing a 240/240/240 FRL and self-closing or auto closing -/240/30 fire doors.
7.	To the ground floor level rear service corridor, current egress travel distances exceed those permitted under D1.4 and D1.5 of BCA2015.	Access from the rear services corridor will be required into the stairs located in Bay 3 and 9 as well as possess required exit doors at either ends of the service corridor leading direct to open space. A clear 1.0m width x 2.0m height is to be maintained as an egress pathway along this rear service corridor area.
8.	The electrical system throughout the development is to be inspected, tested and certified to AS3000	Such audit of the electrical system is also to include the provision of RCD's on all circuits.
9.	The proposed new stairs to the development will need to be constructed to possess a clear 1.0m width between handrails with such stairs being treated as non-fire isolated stairs connecting three storeys in a fully sprinkler protected building.	Where such stair do not achieve this clear width – such as stairs to Bays 3, 6 and 9 the reduced width issue needs to be addressed as part of the Fire Engineering process.
10.	Currently the standard of sprinkler protection throughout the building is an older AS2118.1-1982 version and not the current AS2118.1-1999 version called up by the current BCA2015.	The sprinkler system including all supporting infrastructure and pump sets and booster is to be upgraded as per E1.5 of BCA2015 and AS2118.1-1999. This upgrade includes the Building Occupant Warning System as per Clause 6 of Specification E2.2a of BCA2015 and the relocation of the sprinkler valve room / booster to be accessed direct from open space and not the current sprinkler valve room enclosure.
11.	The proposed required exit doors currently do not swing in the direction of egress and in some instances are not openable as required by D2.21 of BCA2015.	All required exit doors at all levels are to swing outwards in the direction of egress and be openable by a single handed lever action device without a key from the inside face in accordance with D2.19 and D2.21 of BCA2015 – noting this may warrant Heritage input regarding existing heritage style doors. If such existing doors are to be retained as inward swinging doors – the issue of the door swing will need to be addressed as part of the Fire Engineering Assessment process.

12.	The existing exit and emergency would not satisfy the current provisions of Part E4 of BCA2015 and AS2293.1-2005.	Upgraded exit and emergency lighting is to be installed in accordance with Part E4 of BCA2015 and AS2293.1-2005.
13.	The main switch room currently has gaps around the services that penetrate the bounding walls that would not achieve the 120/120/120 FRL required by C2.13 of BCA2015.	With the new relocated main switch room, all services that penetrate the bounding walls of the main switch room are to be suitably sealed in accordance with C3.15 and C2.13 of BCA2015.
14.	The entire building is constructed to form the one single fire compartment extending over three levels form Bays 1 to 11.	A detailed architectural CAD calculation is to be made to accurately calculate the floor area of each floor (excluding the voids) including the rear service corridor and all back of house areas to ensure the total floor area is less than 5,000m^2 and 30,000m^3. The building is to be fire separated into three separate compartments being: • Loading Dock area • Bays 1 to 11 – all levels, and • Bay 12 – all levels including the ground level bathroom area
15.	All **new works** proposed as part of any building refurbishment works are to be undertaken in accordance with the relevant provisions of BCA2015 along with the above upgrade works to the existing building.	Noted – After each floor is stripped out a further detailed inspection needs to be undertaken to assess any other BCA Compliance implications that may arise once the complete floor plate can be viewed and assessed.
16.	The proposed kitchen exhaust system is to be designed in accordance with AS1668.2-2012.	Care needs to be taken with the kitchen exhaust design including the proposed discharge location to ensure compliance with AS1668.2-2012 is achieved.
17.	The base building structure would not currently achieve compliance with the relevant Section J provisions.	Upgrade of the base building walls, floors and roof are not required as part of the refurbishment works under any statutory criteria (unless conditioned in a Development Consent Approval by the Consent Authority – which is unlikely). However all new services including electrical, hydraulic and mechanical must be installed in accordance with the current BCA2015 Section J criteria.
18.	Currently there are differences in floor levels between bays where compliant handrails have not been provided as per D2.17 and AS1428.1-2009.	As the design progresses it will be necessary to ensure that all different floor levels are suitably connected with stair flights / ramps if required with compliant handrails as per AS1428.1-2009 and D2.17 of BCA2015.
19.	Currently a number of the EDB enclosures to the building have not been enclosed as per D2.7 of BCA2015.	With the proposed refurbishment works all EDB enclosures are to be enclosed in non-combustible or fire protective linings with smoke seals to the doors as per D2.7 of BCA2015.
20.	Areas of the proposed design that do not achieve deemed to satisfy BCA2015 compliance are to be addressed as part of a Fire Engineering Assessment Report to satisfy the relevant Performance criteria of BCA2015	Refer Part 4.2 of Report that contains a summary of the current fire engineering issues to be addressed.