
Appendix L

Building compliance assessment

FORMIGA1

Design Development Report

Project: S200906 - Recycle Central Group Waste Facility

Location: 8 Styles Street, Kurri Kurri, NSW, 2327.

Completed For: EMM Consulting

On Behalf of: Recycle Central Group

Date: 29th August 2025

Revision Number: C

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Revision Schedule				
Revision	Date	Report Information		
A	25/07/2025	Reason for Revision	Initial report	
			Prepared by	Reviewed by
		Name	Max Hubbard	Luke Jesiotr
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B	04/08/2025	Reason for Revision	Update to include Yard Control room classification	
			Prepared by	Reviewed by
		Name	Luke Jesiotr	Scott Naylor
		Signature		
C	29/08/2025	Reason for Revision	Update to include amended plans	
			Prepared by	Reviewed by
		Name	Luke Jesiotr	Scott Naylor
		Signature		

This report has been prepared and checked by the experienced team at Formiga1. For any queries regarding this report, please contact our office.

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1. Introduction

Formiga1 has been engaged by EMM Consulting to undertake a Design Development (DD) review of the proposed expansion of the Central Recycling Facility in Kurri Kurri. The scope of works includes the construction of a new residual material processing shed, weighbridge and office building, an extension to the existing shed, fit-out of the existing shed for metal processing, and the installation of several awnings.

The proposal to construct these new buildings and extend the existing processing shed has a number of technical considerations to address as part of any proposed work. These have been developed by establishing a process for the assessment of the work outlined in the Environmental Planning and Assessment Act 1979. The Act gives a number of requirements and considerations for existing and new works and how the building assessment provisions are usually applied.

2. Purpose

The purpose of this report is to provide a high level design guide on an approach to building compliance assessment and establish scope for some of the aspects. The advice contained within this report provides guidance as to whether BCA compliance can be achieved in accordance with the Environmental Planning and Assessment Regulation 2021, Section 19. We understand that the proposed development will be subject to a Development Application and this Design Development Report will form part of the DA submission to Council for their determination.

Given the restrictions and technical limitations of the existing buildings, a mix of transitional provisions combined with performance and prescriptive measures will be used to establish the compliance of proposed works. This approach is subject to an approval by the Consent Authority.

This report provides a basis from which performance solutions can be developed for a number of aspects. An exhaustive list of variations to individual prescriptive measures will need to be completed as the design is further developed and performance solutions compiled. This scenario will likely require a fire engineered strategy for the building to achieve compliance with the current building assessment provisions.

3. Scope, Limitations and Exclusions

The scope of this assessment is limited to the current design documentation and will require further development of the building's design. The aspects noted for compliance are based on generic examples gleaned from similar buildings that comply using a combination of prescriptive and performance measures. It should be expected that individual aspects will vary in any detailed design though wider concepts and characteristics will make a similar contribution, particularly to overall fire safety.

This report is limited to the design documentation supplied and is only intended to outline the services that will be required.

This Design Development Report does not address safety provisions enforced under the Local Government Act, such as, Occupational Health and Safety Act, Water, drainage, gas, telecommunications and electricity supply authority requirements, etc. The application of the Disability (Access to Premises) Standard 2010 has been assessed as part of this report, however, no other provisions of the Disability Discrimination Act 1992 have been reviewed.

4. Approval Methodology

The Environmental Planning and Assessment Regulation 2021 outlines the approval processes for different types of buildings and the method by which they are assessed. These works have been assessed against the Building Code of Australia 2022 (amdt 2) that is currently enforced. However, as a requirement of the EP&A (DCFS) Regulation 2021, Section 19, the final design for approval is to be assessed against the BCA enforced at the date of the application for the Construction Certificate. Therefore, the advice provided in this report may become outdated if a revised BCA is released before the Application for a Construction Certificate is received.

The application of the Disability (Access to Premises) Standard and provision for access for people with disabilities will need to be addressed against the current BCA. As this is based in Commonwealth Legislation, State regulatory transitional provisions do not apply and compliance with the current code is required. Please note that the Deemed to Satisfy Provisions of the BCA are not the only method of compliance and a Performance Solution is expected as part of any work in any building. Generally, compliance with BCA Part D3 will be required throughout.

Development Consent from Council or other Consent Authority will be required prior to the start of any work on site. Other referrals such as Fire and Rescue NSW referral under EP&A Regulation, Section 25-29 will form part of the Application for a Construction Certificate process.

The FRNSW referral process is as follows:

- Once the Construction Certificate Application, plans and the FER are sent through, we can submit the documentation to FRNSW within **3 working days**.
- Formiga1 then carries out our CC BCA assessment of the proposed works and sends out a Request for Further Information Letter outlining any non-compliances or further information required in order to complete the assessment. *If the design is required to be considerably altered to achieve compliance then a new FRNSW referral is required to be submitted.*
- FRNSW will then send out a notification stating that they have received our submission within **2 working days** of Formiga1 making the submission.
- Within **10 working days** of receiving the submission, FRNSW must respond advising whether or not they will be assessing the works.
- If they do not choose to assess the works, we can issue the CC (provided all other CC items have been closed out).
- If they choose to assess the works, FRNSW has **25 working days** from receiving the submission to provide comments from their assessment.
- If the 25 day period lapses and no comments are received, we can issue the CC (provided all other CC items have been closed out).
- If FRNSW provides comments, they must be incorporated into the design OR be justified by a peer review from a third party fire engineer.

NOTE: The 25 working days begin from the day after the submission has been accepted by FRNSW.

5. Building Compliance

The assessment has been based on the following plans:

- Architectural Plans by Thomas and Associates Consulting, Project Number 230499, Date 21/08/2025.

This assessment has been tabulated and items identified in relation to Action, Consider and Note, meaning the following:

- Action** - Requires action on your behalf to either address a non-compliance and/or provide further information on how compliance is proposed to be met for the item;
- Consider** - Full details are not yet documented and the item should be considered as the design is developed to ensure compliance is met;
- Note** - A general note stating that compliance has been achieved for the item.

NOTE: Items in bold text in the sections below are of higher importance.

5.1. Principal Building Characteristics

Aspect	Building
Existing Classification	Existing Workshop - Class 8 Existing Material Processing Shed - Class 8 Existing Yard Control Room - Class 8
Proposed Classification	Residual Materials Shed - Class 8 Weighbridge and Office Shed - Class 5 Material Processing Shed/Awnings - Class 8 Existing Workshop - Class 8 Yard Awnings - Class 8 Boundary Walls - Class 10b NOTE: Existing Workshop is to be converted to metal processing shed but does not form part of this scope of work.
Rise in Storeys	Residual Materials Shed - 1 Storey Weighbridge and Office Shed - 3 Storeys Material Processing Shed - 3 Storeys Yard Awnings - 1 Storey
Effective Height	Residual Materials Shed - 0m Weighbridge and Office Shed - 8.94m Material Processing Shed - <12m Yard Awnings - 0m NOTE: Effective height is defined as vertical distance between the floor of the lowest storey included in the calculation of RIS and the floor of the topmost storey.
Construction Type	Residual Materials Shed - Type A Weighbridge and Office Shed - Type B Material Processing Shed - Type B Yard Awnings - B NOTE: Residual Materials Shed is identified as Type A construction as it is measured to be >3,500m ² one fire compartment. Similarly Yard Awnings structure is identified as Type B as it is measured to be 2,248.23m ² .
Compartment Limit	Residual Materials Shed - 5,000m ² or 30,000m ³ Weighbridge and Office Shed - 5,000m ² or 33,000m ³

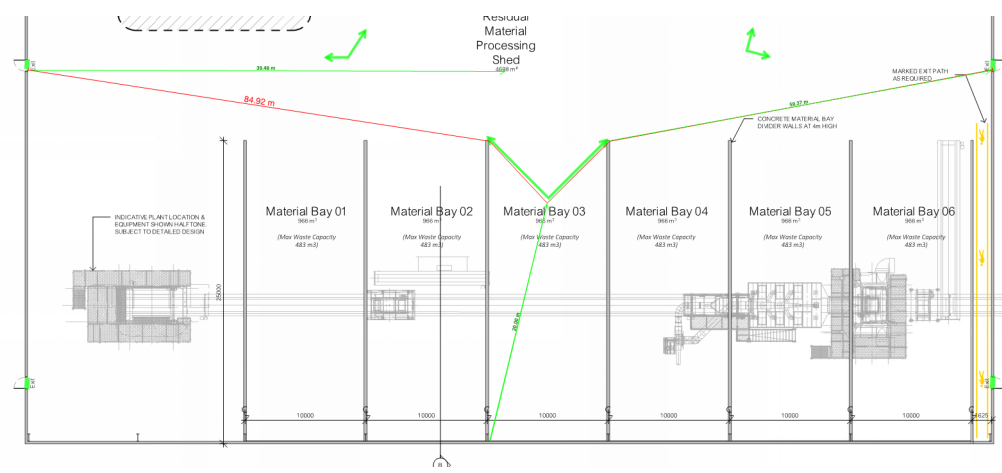
	Material Processing Shed - 3,500m ² or 21,000m ³ (previously extended to 25,000m ³ through fire engineering) Yard Control Room/Awnings - 3,500m ² or 21,000m ³
Maximum Compartment Sizes	Residual Materials Shed - 4,800m ² and 69,061m³ Weighbridge and Office Shed - 368m ² and 3,752m ³ Material Processing Shed - 4,983m² and 44,650m³ Yard Awnings - 2,247.23m ² and 28,087.5m³
Occupants	Occupant numbers will be determined based on the design intent of this building as this is more suitable than table outlined in D2D18.

5.2. Residual Materials Shed - Building Code of Australia Assessment

BCA Part	Comments	Consider/ Action/ Note
BCA Section B - Structure		
Part B	B1D3 - Further information will be required to confirm if the stored materials are identified as hazardous materials and if these hazardous materials are capable of causing hazardous conditions that extend beyond property boundaries. - The building is to be designed to an importance level of 3 if the hazardous materials stored have been confirmed as not capable of causing hazardous conditions that do not extend beyond property boundary. - The building is to be designed to an importance level of 4 if the hazardous materials stored have been confirmed as capable of causing hazardous conditions that extend beyond property boundary. B1D3 - Further information will be required at the Approval Stage on how the treatment of non-structural elements have been designed to the earthquake provisions of AS1170.4 as required under BCA B1D3 is being achieved (ie. walls that are not part of the seismic force resisting system, appendages including parapets, gables, verandahs, chimneys and the like, partitions, ceilings, mechanical and electrical components including smoke control systems, fire suppression systems, boilers, escalators, transformers and the like). B1D6 - The building has been identified as being located in a flood hazard area but as the proposed is not a Class 2, 3, 9a or 9c no additional requirements are applicable.	Consider Consider Note
BCA Section C - Fire Resistance		
Part C2	C2D2 - Building is Type A construction with a general FRL of 240 minutes throughout. Construction is required to be in accordance with clauses S5C11 - S5C20 of Specification 5 including non-combustibility for a number of aspects. S5C11 Generally the required minimum FRLs are as follow: - External Loadbearing Wall <1.5m from a fire source feature - 240/240/240 - not applicable - External Loadbearing Wall >1.5m but <3m from a fire source feature - 240/240/180 - not applicable - External Loadbearing Wall >3m from a fire source feature - 240/180/90 - not applicable	Consider

	d. External Non-loadbearing Wall <1.5m from a fire source feature - --/240/240 - not applicable e. External Non-loadbearing Wall >1.5m but <3m from a fire source feature - --/240/180 - not applicable f. External Non-loadbearing Wall >3m from a fire source feature - No requirement g. External Loadbearing Columns - 240/--/-- No requirement under BCA S5C6(1)(a) for steel columns. h. External Non-loadbearing Columns - No requirement i. Fire Walls - 240/240/240 - not applicable j. Internal Loadbearing Fire-resisting Shaft Walls - 240/120/120 - not applicable k. Internal Non-loadbearing Fire-resisting Shaft Walls - --/120/120 - not applicable l. Internal Loadbearing Walls bounding public corridors, public lobbies, sole-occupancy units, etc - No requirement m. Internal Non-loadbearing Walls bounding public corridors, public lobbies, sole-occupancy units, etc - No requirement n. Other Internal Loadbearing Walls, Beams, Trusses & Columns - 240/--/-- No requirement under BCA S5C17(b)(ii). o. Floors - 240/240/240 - not applicable p. Roofs - No requirement (concessioned below) NOTE: Refer to BCA Spec 5 (S5C2) for guidance relating to the exposure of the building to fire source features. S5C15 - The roof has a concession under BCA Spec 5 to not achieve an FRL provided that its covering is of a non-combustible construction, as the building has a rise in storeys of 3 or less. Plans show that the roof is to be constructed from steel frame with colorbond cladding which appears to show that compliance will be met. S5C17 - As the roof does not require an FRL and the building does not have an effective height of >25m, all internal columns and walls (other than fire/shaft walls) in the floor immediately below the roof have no requirement to achieve an FRL. This concession is not applicable to columns as identified by S5C11(1)(d). S5C20 - All loadbearing internal walls and fire walls must be constructed from concrete, masonry or fire-protected timber. In addition to this all non-loadbearing internal walls required to be fire-resisting as mentioned above, the wall must be non-combustible. Plans show no provision of internal loadbearing walls and fire walls in this building. C3D11 - No lifts are proposed as part of this building. C2D10 - Non-combustibility of elements is outlined in BCA C2D10, being external walls and common walls (including facade, framing, insulation, etc.). Plans appear to show compliance. NOTE: BCA C2D10(4) outlines materials that are exempt from the requirements of non-combustibility as well as materials that are considered non-combustible. This does permit the installation of timber noggings/blocking for the bracing of fixtures. C2D14 - Attachments to the external walls must also be non-combustible unless they form part of the concessions within BCA C2D14. This includes elements such as awnings, signage, etc. unless they meet specific requirements. Plans show that east elevation is to have a large format signage installed to owners specification. North elevation is shown to be provided with an awning. Insufficient detail is provided to confirm if compliance is achieved.	Note Note Note Note Note Consider
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	NSW C2D11 - Fire hazard properties are required to comply with BCA C2D11 and BCA Spec 7. As the building is proposed to be sprinkler protected throughout, concessions will apply as outlined in BCA Spec 7 Table S7C3 and Table S7C4.	Consider
Part C3	C3D3 - Compartment limits for this building are outlined in BCA Table C3D3. The Class 8 portion has a floor area limit of 5,000m ² and 30,000m ³ . The maximum proposed fire compartment size is 4,800m ² and volume appears to be 69,061m ³ . Confirmation was provided by the design team that this item will be addressed by a Fire Engineered Performance Solution.	Note
	C3D4 and C3D5 - This building is not considered a large isolated building and as such there are no additional provisions applying to the building. This is due to the building not being provided with 18m wide open space compliant with D3D5.	Note
	C3D7 - The building is proposed to be provided with a sprinkler system throughout and contains single story and as such does not require vertical separation in accordance with BCA C3D7	Note
	C3D8 - Building and fire compartmentation must be constructed in accordance with BCA C3D8. This includes the provision that building materials must not pass through fire walls except for roof battens (max. 75mm x 50mm) and sarking type material. No such fire walls creating fire compartments have been proposed.	Note
	C3D9 and C3D10 - Proposed building is of a single classification and as such no additional fire separation requirements are being triggered.	Note
	C3D12 - No stairs or lifts are proposed as part of this scope of work.	Note
	C3D13 - Services are required to be separated in accordance with BCA C3D13. Provided plans include insufficient information to confirm compliance.	Consider
	C3D14 - Electricity supply systems are also required to be separated from the remainder of the building in accordance with BCA C3D14. Confirmation as to whether or not the main switch board will sustain emergency equipment operating in the emergency mode is needed to determine if the main switchboard requires this separation. Emergency equipment comprises of; hydrant and/or sprinkler system pumps, smoke control systems, emergency lifts, fire detection and alarm systems, sound/intercom systems for emergency purposes.	Consider
	C3D14 - Additionally, emergency and non-emergency equipment is required to be separated from one another by metal partitions.	Consider
Part C4	C4D3 - No external walls of the building are requiring an FRL thus protection of openings is not being triggered.	Note
	C4D4 - This building does not have external walls and associated openings in different fire compartments and will not require any protection.	Note
	C4D7 - Sliding fire doors are not shown as part of the design.	Note
	C4D8 - As there are no horizontal exits proposed, there are no provisions applying to doors in horizontal exits.	Note

	C4D15 - No penetrations will be required to comply with C4D13, C4D15, 3.12, C3.15 and Spec 13 as applicable as no building elements are identified as requiring to have FRL. C4D16 - Construction joints in walls required to achieve an FRL (ie. external cladding cavities between walls and floors) must be protected in a manner identical with the wall prototype tested in accordance with AS1530.4 to achieve the required FRL as required by C4D16. No building elements were identified as requiring to have FRL.	Note Note
BCA Section D - Access and Egress		
Part D2	D2D3 - This building has the required minimum of 2 exits. D2D4 - Exits in this building are <u>not required</u> to be fire isolated. D2D5 and D2D6 - Exit travel is generally 20m to single exit or 20m to a point of choice and 40m to the first exit. Distance between alternative exits is limited to 60m. Provided plans show provision of exits to the western, northern and eastern facade but no such provisions are identified in the southern part of the building. a. Plans show that a number of material bays are to be provided within the building surrounded by 4m high walls with a length of 25m. These areas form part of the building that must be provided with compliant egress to occupants. This is currently not shown with distance measured to first exit is measured to be up to 59.35m. It is unclear how egress compliance will be provided from these material bay areas. b. Distance between alternative exits must consider internal walls and must lead through a point of choice to exit. Provided plans show that distance between alternative exits is larger than 60m, measured to be 84.92m. The design will need to be amended to meet the DTS provisions of the BCA. However, the BCA is a performance based code and compliance can be achieved through means of Performance Solutions.  Please note that it is unclear if the 11.8x9.0m openings are proposed to be fitted with roller shutter doors or are they to remain as an opening in the external wall. BCA defines exit as an unobstructed doorway opening to a road or open space thus if 1m wide delineation for discharge was provided to such opening it then could be identified as exit. Such exit would then provide egress compliance for the northern part of the building. Confirmation was provided that roller shutters are to be provided and as such these openings are not considered as exits.	Note Note Action Note

	D2D7 to D2D9 - Minimum exit widths are generally 1m throughout for a height of 2m and 1980mm at doorways. These dimensions are required to be clear and free of obstructions (eg. handrails, fire extinguishers). As the proposed building can accommodate 96 persons in accordance with Table D2D18 as per Factory - areas used for processing other than machine shop, the minimum aggregate exit widths are to be 1m. Plans appear to show compliance.	Note
	D2D15 - Exit discharge is required to not have the potential to be blocked by vehicles or stockpiles. Provided plans appear to show compliance.	Note
	Plans show that the access to the facility from Mitchell Avenue and Styles Street are to have sliding gates. BCA requires that discharge to a road is provided thus no internal key-locking and internal operation by a single hand action must be provided. The design team provided information that this item has been taken into consideration and compliance will be shown on detailed design plans.	Consider
	D2D16 - Horizontal exits are not proposed for this building.	Note
	D2D18 - The number of persons accommodated is best established by the design team and client dependent upon staffing and visitor numbers. Please confirm and promulgate to all design team members. The current minimum egress widths provided caters for 350 persons per storey as measured by BCA D2D8(3).	Consider
	D2D21 - No plant rooms >100m ² are proposed to this building.	Note
Part D3	D3D2 - No fire isolated stairs are required for this building.	Note
	D3D8 - Installations in the path of travel are required to comply with D3D8, including the smoke sealing and non-combustible enclosure of distribution boards and central telecommunications boards. This can be achieved via applying the required construction to the individual DB enclosures <u>or</u> to the entire cupboard. Provided plans do not show sufficient detail to assess if compliance is achieved.	Consider
	D3D9 - No cupboards or similar enclosed spaces have been proposed underneath stairs, therefore, compliance with BCA D3D9 is not required.	Note
	D3D15 - Ramps throughout the property must not exceed a gradient of 1:8 or 1:14 if forming part of an accessible path of travel and must be slip-resistant in accordance with BCA D3D15. Plans show that all proposed buildings are to be located on RL 12.60 which indicates that the site will be flat and no ramps will be required.	Note
	D3D14 - Stairs are required to comply with BCA D3D14 for tread construction and BCA D4D4, which references AS1428.1, Clause 11. Please refer to further comments in D4D4. No stairs are shown to this building.	Note
	D3D16 - Door thresholds throughout the accessible paths of travel must not incorporate a step, except where a threshold ramp with a maximum gradient of 1:8 is provided to an external door for a maximum height of 35mm for a maximum length of 280mm and located within 20mm of the door that it serves. Plans show that no door thresholds are being proposed.	Note
	This building is required to comply with BCA D3D17 - D3D21 and D3D29 for fall protection. Details are still being developed but reasonable provision appears to be made for:	Note

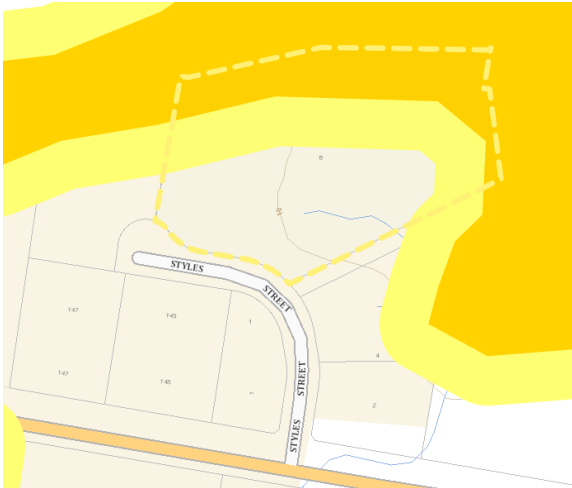
	a. Balustrades are to be a minimum height of 1m as well as having no climbable elements between the heights of 150mm and 760mm where the floor level is >4m from the falling surface below. The proposed building is a single storey with no areas where balustrades are required. D3D23 - Ladder access to the roof plant shall be constructed in accordance with AS1657-2013. No roof plant is shown on the provided plans. D3D24 & D3D25 - No sliding doors are being proposed as part of this scope of work. D3D26 - Operation of latches are to comply with BCA D3D26 for both doors in path of travel and exit doors (excluding doors to spaces that are inaccessible to persons when the door is locked (eg. cleaners room)). Alternatively, doors may be fitted with an automatic fail-safe device which unlocks the door on activation of any sprinkler or smoke detection system. D3D26 - Consideration should be given to the operation of latch provisions of BCA D3D26 for sliding doors to provide a single hand downward action on a single device. Please note that these requirements will be applicable to facility entrances as plans show provision of fencing and gates that may be lockable.	Note Note Consider Consider
Part D4	D4D2 - This building is required to be accessible to and within all areas normally used by the occupants. Paths connecting this building with other buildings, disabled car spaces and main pedestrian entry points along the boundary shall also comply with AS1428.1. All proposed new buildings and existing processing sheds are required to be accessible thus accessible pathways are to be provided between all buildings. BCA D4D5 allows for exemption from the access requirements where access would be inappropriate due to the particular purpose of which the building is used. Further detail will be required to identify if the proposed shed will be exempt from access requirements or if it will contain areas required to be accessible. The design team provided information that this item has been taken into consideration and compliance will be shown on detailed design plans. D4D4 - Accessways are required to be in accordance with D4D4 and AS1428.1 including circulation, provisions, turning and passing spaces. Reasonable provision is apparent on the current plans. D4D6 - Provision of car parks for people with disabilities is required in accordance with D4D6. This requirement is to be assessed for the entire site, as all proposed buildings share common parking facilities. For both Class 5 and Class 8 buildings, the BCA mandates provision of one accessible space for every 100 car spaces. Provided plans show one accessible parking space located adjacent to the Weightbridge/Office Building. D4D7 - Braille signage is required in accordance with BCA D4D7 and BCA Spec D4D7 including directional and exit signage. Please refer to the BCA for further details. D4D8 - Hearing augmentation is only required where inbuilt amplification exists. The proposed building is not expected to be provided with inbuilt amplification. D4D9 - TGSIs are required in accordance with D4D9. Where pedestrian paths and vehicular paths meet without delineation of kerb or kerb ramp, TGSIs are still required. Provided plans do not include sufficient detail to assess compliance at this stage. The design team provided information that this item has been taken into consideration and compliance will be shown on detailed design plans.	Consider Consider Note Note Consider Note Consider

BCA Section E - Services and Equipment

Part E1	<u>E1D2 - FIRE HYDRANTS</u> Fire hydrant coverage is required to all areas in accordance with BCA E1D2 and AS2419.1. Provided plans do not include sufficient detail to assess if fire hydrant coverage will be provided. Please note that the hydrant located adjacent to the existing Yard Control Room is noted as to be re-located but the new location is not shown on the provided plans. It is our understanding that a compliant fire hydrant system is to be provided as identified in our Fire Safety Guidelines Report. Please note fire compartment size and the impacts this may have on the hydrant supply of water and that the hydraulic design has compartmentation consistent with other plans. Other aspects of compliance (flows and pressures) are assumed at this time. <u>E1D3 - FIRE HOSE REELS</u> As the proposed building is a Class 8 construction, Fire Hose Reels are to be provided. Installation of Fire Hose Reels shall be in accordance with AS2441 (eg. mounting heights, signage, pressures, etc.) and locations to be within 4m of an exit. <u>E1D4 - SPRINKLERS</u> The building is required to be sprinkler protected throughout in accordance with AS2118.1. Activation of the Building Occupant Warning System is required for the system. This shall be detailed in the design for approval. It is our understanding that a compliant sprinkler system is to be provided to this building and is to be designed as per High Hazard Class System. This was identified in our Fire Safety Guidelines Report. The sprinkler control valves must be located in a secure room or enclosure which has direct egress to a road or open space. Provided plans do not include sufficient detail to confirm if compliance is achieved. <u>E1D14 - FIRE EXTINGUISHERS</u> Fire extinguishers are required in accordance with Table E1D14 and AS2444 as applicable. Further details of fire extinguishers will be needed at the approval stage. BCA E1D14 requires the following: A. Cover Class AE or E fire risks for any switchboards that sustain emergency equipment operating in emergency mode. B. Cover Class A fire risks in accordance with AS2444. <u>E1D15 - FIRE CONTROL CENTRES</u> A Fire Control Centre is <u>not</u> required in the building as it is <25m in height and is <18,000m² in floor area. <u>E1D17 - PROVISION FOR SPECIAL HAZARDS</u> Given that the proposed use of the Residual Materials Shed involves the storage and processing of materials that may present elevated fire hazards—such as increased fuel loads, unpredictable combustion characteristics, or restricted firefighter access—the building is subject to additional fire safety provisions under BCA E1D17.	Consider Consider Consider Consider Consider Consider Note Consider
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	Clause E1D17 requires that buildings involving special fire hazards must incorporate supplementary fire-fighting facilities beyond the standard Deemed-to-Satisfy provisions. These hazards may include, but are not limited to, combustible waste, hazardous goods, lithium battery storage, or other materials that complicate fire suppression efforts. In such cases, the certifying authority must ensure that the fire safety measures are commensurate with the nature and scale of the hazard. For a detailed breakdown of the identified hazards and proposed mitigation strategies, please refer to the accompanying Fire Safety Guidelines Report, which outlines the rationale and compliance pathway adopted in accordance with Clause E1D17 and related provisions.	
Part E2	E2D3 - As identified in our Fire Safety Guidelines Report, function and use of this building as well as type or quantity of materials stored will trigger smoke hazard management measures to be implemented. It is our understanding that a compliant smoke detection system is to be provided to this building. Spec 20 - A smoke detection and alarm system is required for this building in accordance with BCA Specification 20, Clause S20C4 and AS1670.1. Requirements of completed design for approval include: a. Smoke detection throughout; b. Thermal detection can be used in lieu of smoke detection in areas where spurious alarms could occur. However, where sprinklers are installed in these areas, thermal detection is not required; c. FDCIE (FIP) including emergency lighting etc; d. Smoke exhaust system automatically activated upon detection of fire; e. Building Occupant Warning System is to achieve 75dBa at every bedhead and 65dBa throughout other areas; f. Provision of Manual Call Points so that no point on the floor is more than 30m from a Manual Call Point; Note - This building has not been considered a theatre or public hall, nor an “other assembly building” in accordance with Clause E2D14 - E2D20. As such, there are no additional requirements for smoke hazard management. <u>E2D21 - PROVISION FOR SPECIAL HAZARDS</u> Due to the nature of the proposed use of the Residual Materials Shed—which involves the storage and processing of residual materials that may produce elevated smoke generation, toxic combustion products, or obstructed egress pathways—the building is subject to additional smoke hazard management provisions under BCA E2D21. For a comprehensive analysis of the identified smoke hazards and the proposed mitigation measures, please refer to the accompanying Fire Safety Guidelines Report, which outlines the compliance strategy adopted under Clause E2D21 and related provisions. This will generally trigger either a smoke-and-heat vent system or a smoke exhaust system.	Consider Action
Part E3	E3D1 - No lifts are proposed for this building.	Note
Part E4	E4D2 - Emergency lighting and illuminated exit signage is required throughout. Layout will be reliant upon the egress paths and viewing distances of the signage (typically 24m). Completed design for approval shall be consistent with the travel paths outlined in D2. Electrical plans will include an engineered design for this aspect.	Consider

	D4D7 - Please note the requirements for braille exit signage outlined in the DTS provisions of D4D7.	Consider
	E4D9 - Emergency Warning and Intercom System is not required for this building.	Note
BCA Section F - Health and Amenity		
Part F1	F1D3 - Stormwater drainage must comply with AS3500.3. F1D4 - Exposed joints in the drainage surface must not be located beneath or run through a planter box, water feature or similar object of the building. The joints are to be provided with protection in accordance with Section 2.9 of AS4654.2. F1D5 - Waterproofing membranes for external above ground use requirements are not being triggered for the proposed scope of work. F1D8 - No subfloor ventilation is proposed for this scope of work.	Consider Consider Note Note
Part F2	F2D2 - Waterproofing to wet areas requirements are not triggered for this building. F2D4 - Floor waists are not proposed for this building.	Note Note
Part F3	BCA Performance Requirements F3P1 for weatherproofing are not applicable to Class 8 buildings where there is no necessity for compliance. The proposed use of this building would not trigger the requirement for provision of weatherproofing and as such compliance with Part F3 is not required. If use of this building is amended to necessitate waterproofing then compliance with Part F3 will be triggered requiring provision of Performance Solution for the use of precast concrete cladding.	Note Consider
Part F4	F4D3 - Provision of sanitary compartment is to be assessed on a whole facility basis due to the proposed use of the processing sheds. Occupant numbers (including genders) are required to be established prior to facility calculations. It is currently unclear if staff working in the material processing shed will be provided with staff change room and separate sanitary compartments or if the facilities provided in the office building are designed to facilitate the entire site. The numbers provided will be assessed further, but are assumed to be compliant at this time. The design team provided confirmation that the facilities are to be provided in the office building. F4D4 - Appropriate allowances have been shown for accessible sanitary facilities complying with BCA F4D4 and AS1428.1, but no ambulant facilities are shown at this stage. These facilities are shown within the proposed Office Building.	Consider Consider
Part F5	F5D2 - Room heights have been assumed compliant. Ceiling heights are not confirmed at this time. Minimum heights are generally: a. 2.0m for stairways and ramps; b. 2.1m for corridors, passageways, car parking areas, store rooms and sanitary compartments; c. 2.4m for other areas. Provided plans show that compliance will be achieved.	Note
Part F6	F6D2 - Provision of natural light is not required as the building is Class 8 construction. Artificial lighting is required to all rooms that are frequently occupied and to all spaces required to be accessible. Further assessment will be needed at the approval stage but it can be assumed that artificial lighting will be provided throughout.	Consider

	F6D6 - Ventilation may be achieved by natural or mechanical means. BCA requires provision of ventilation to any habitable room, workroom or factory. Compliance is assumed at this time. Mechanical ventilation shall be compatible with the requirements of E2D3.	Consider
	F6D9 - No sanitary compartments are proposed for this building.	Note
Part F7	F7D2 - Sound transmission requirements are not applicable to a Class 8 building.	Note
Part F8	F8D2 - Condensation Management requirements are not applicable to a Class 8 building.	Note
BCA Section G - Ancillary Provisions		
Part G1	Limited minor structures and coldrooms are not proposed as part of this scope of work.	Note
	NSW G1D5 - Provision for cleaning windows will not be triggered as the building is <3 storeys above ground.	Note
Part G2	Boilers, pressure vessels, heating appliances/incinerators are not shown to form part of this scope of work.	Note
Part G3	Atriums are not proposed as part of this scope of work.	Note
Part G4	The site is not located in the Alpine Area.	Note
Part G5	This building is shown to be located within bushfire prone land. 	Note
	NSW G5D2 - As this proposed is a Class 8 building and it is not identified as a special fire protection purpose building, no bushfire protection requirements are being triggered under Part G5 of the BCA.	Note
Part G6	Proposed scope of work includes no Occupiable Outdoor Areas.	Note
BCA Section J - Energy Efficiency		
Parts J2- J9	Confirmation was provided that an external consultant will be carrying out the Section J assessment of the proposed works.	Note

	Generally, new buildings are required to comply with Part J4 for the building fabric and glazing. The extent of the conditioned space and the walls, floors and roof that bound it will need to be established so that these can be specified for compliance. It is currently assumed that this building will not contain any conditioned space.	Consider
	If a DTS approach to building fabric Section J requirements is proposed, the following items will need to be addressed: a. Roof and/or ceiling will require a minimum downward R-Value of R3.7. b. The upper surface of the roof having a solar absorptance not more than 0.45. c. Roof lights cannot take up more than 5% of the floor area of the room that it serves. Additionally, transparent or translucent elements on the roof will require a SHGC in accordance with BCA J4D5 and a U-Value not more than U3.9. d. Wall-glazing construction must achieve a minimum U-Value of U2.0. e. Wall construction must achieve a minimum R-Value of R1.4 where it is more than 80% of the wall-glazing construction or R1.0 where it is less than 80% of the wall-glazing construction. f. Solar admittance of wall-glazing construction must not be greater than values listed in BCA Table J4D6b. g. Floor construction will require a minimum R-Value of R2.0 downwards.	Consider
	NSW J5D2 - Deemed-to-Satisfy requirements of Part J5 are not applicable to buildings that cannot be fully enclosed, thus compliance for this building is not being triggered.	Note
	If provided air-conditioning and mechanical ventilation is required under BCA Part J6 to comply with the following: a. Air-conditioning will need to be capable of being deactivated when the space it's serving is not occupied. b. Time switches for switching electric power on and off at variable pre-programmed times and days where the system is more than 2kW_r. c. Ductwork achieving an R-Value in accordance with BCA Table J6D6.	Consider
	J9D3 - As the building is >2500m², it is required to contain facilities for energy monitoring.	Consider
	J9D4 - An electrical distribution board for the provision of charging an electrical vehicle must be provided to the carpark associated with the building. Assessment of this requirement must be provided on a whole facility basis. Provided plans show that three EV Charging spots will be provided.	Note
	J9D5 - The main electrical switchboard is to contain no less than two empty three-phase circuit breaker slots and four DIN rail spaces to hold a solar photovoltaic system and a battery system.	Consider
	No less than 20% of the roof area is to remain clear for the future installation of solar photovoltaic panels (SPP) unless the following is to be applied to the building: A. SPP's of a floor area of 20% are to be installed or an equivalent generation capacity is located elsewhere on-site, or B. The entire roof is not exposed to sunlight for over 70% of the daylight hours, or C. The roof area exceeds 55m², or D. Over 50% of the roof is used as a terrace, carpark, roofgarden, roof-light etc.	Consider

5.3. Weighbridge and Office Building - Building Code of Australia Assessment

BCA Part	Comments	Consider/ Action/ Note
BCA Section B - Structure		
Part B	B1D3 - The building is to be designed to an importance level of 2 as the building does not fall under the category of an importance level of 3.	Consider
	B1D3 - Further information will be required at the Approval Stage on how the treatment of non-structural elements have been designed to the earthquake provisions of AS1170.4 as required under BCA B1D3 is being achieved (ie. walls that are not part of the seismic force resisting system, appendages including parapets, gables, verandahs, chimneys and the like, partitions, ceilings, mechanical and electrical components including smoke control systems, fire suppression systems, boilers, escalators, transformers and the like).	Consider
	B1D6 - The building has <u>been</u> identified as being located in a flood hazard area but as the proposed is <u>not</u> a Class 2, 3, 9a or 9c no additional requirements are applicable.	Note
	The Structural Engineer is to provide a Design Certificate prior to the approval stage certifying that the building has been designed to the above requirements.	Consider
BCA Section C - Fire Resistance		
Part C2	C2D2 - Building is Type B construction with a general FRL of 120 minutes throughout. Construction is required to be in accordance with clauses S5C21 - S5D23 of Specification 5 including non-combustibility for a number of aspects.	Note
	S5C21 Generally the required minimum FRLs are as follow: A. External Loadbearing Wall <1.5m from a fire source feature - 120/120/120 - Not applicable B. External Loadbearing Wall >1.5m but <3m from a fire source feature - 120/90/60 - Not applicable C. External Loadbearing Wall >3m but <9m from a fire source feature - 120/30/30 - Not applicable D. External Loadbearing Wall >9m but <18m from a fire source feature - 120/30/-- E. External Loadbearing Wall >18m from a fire source feature - No requirement F. External Non-loadbearing Wall <1.5m from a fire source feature - --/120/120 - Not applicable G. External Non-loadbearing Wall >1.5m but <3m from a fire source feature - --/90/60 - Not applicable H. External Non-loadbearing Wall >3m from a fire source feature - No requirement I. External Loadbearing Columns <18m from a fire source feature - 120/--/-- - Not applicable J. External Loadbearing Columns >18m from a fire source feature - No requirement K. External Non-loadbearing Columns - No requirement L. Fire Walls - 120/120/120 - Not applicable M. Internal Loadbearing Fire-resisting Shaft Walls - 120/120/120 N. Internal Non-loadbearing Fire-resisting Shaft Walls - --/120/120 O. Internal Loadbearing Walls bounding public corridors, public lobbies, sole-occupancy units, etc - 120/--/-- - Not applicable	Consider

	P. Internal Non-loadbearing Walls bounding public corridors, public lobbies, sole-occupancy units, etc - No requirement Q. Other Internal Loadbearing Walls, Beams, Trusses & Columns - 120/--/-- R. Floors - 30/30/30, 60 minute resistance to the incipient spread of fire or fire-protective covering. S. Roofs - No requirement NOTE: Refer to BCA Spec 5 (S5C2) for guidance relating to the exposure of the building to fire source features. S5C21 - All loadbearing internal walls and loadbearing shaft walls must be constructed from concrete, masonry or fire-protected timber. In addition to this all non-loadbearing internal walls required to be fire-resisting as mentioned above, the wall must be non-combustible. Provided plans show compliance. S5C21 - Internal columns and walls (other than fire/shaft walls) in the floor immediately below the roof are not required to achieve an FRL. C3D11 - As the building is of a Type B construction, loadbearing lift shafts walls are required to be fire separated with an FRL of 120/120/120 in accordance with BCA C3D11 and a fire rated enclosure to the top of the shaft. Non-loadbearing shaft walls are only required to be of a non-combustible construction. Lift doors shall achieve a minimum FRL of --/60/-- in accordance with BCA C4D11. C2D10 - Non-combustibility of elements is outlined in BCA C2D10, being: - External walls and common walls (including facade, framing, insulation, etc.). - Flooring and floor framing of lift pits. - Fire-rated non-loadbearing internal walls. - Non-loadbearing shafts. NOTE: BCA C2D10(4) outlines materials that are exempt from the requirements of non-combustibility as well as materials that are considered non-combustible. This does permit the installation of timber noggings/blocking for the bracing of fixtures. C2D12 - Precast concrete panels are proposed for external walls but as building has rise in storeys of 3 Specification 8 requirements are not applicable. This is due to the building having fire rated floors and other building elements to restrain wall panels during a fire. C2D14 - Attachments to the external walls must also be non-combustible unless they form part of the concessions within BCA C2D14. This includes elements such as awnings, signage, etc. unless they meet specific requirements C2D11 - Fire hazard properties are required to comply with BCA C2D11 and BCA Spec 7.	Note Consider Consider Consider Note Consider Consider
Part C3	C3D3 - Compartment limits for this building are outlined in BCA Table C3D3. The Class 5 portion has a floor area limit of 5,500m² and 33,000m³. The maximum proposed fire compartment size is 368m² (Levels 1 & 2 each). C3D4 and C3D5 - This building is not considered a large isolated building and as such there are no additional provisions applying to the building. C3D6 - As the building is a Class 5 Office building the provisions of C3D6 in relation to Class 9 buildings do not apply.	Note Note Note

	C3D7 - The building is required to be of Type B construction and as such there are no requirements in relation to the vertical separation of openings within the external wall.	Note
	C3D8 - Building and fire compartmentation must be constructed in accordance with BCA C3D8. This includes the provision that building materials must not pass through fire walls except for roof battens (max. 75mm x 50mm) and sarking type material. No such fire walls creating fire compartments have been proposed, however, consideration will need to be given to fire walls if risers are constructed in lieu of shafts (see Part C4 below).	Consider
	C3D9 and C3D10 - Not applicable the building is Class 5 throughout.	Note
	C3D12 - Compliance is achieved as the lifts and stairs are not proposed to be within the same shafts.	Note
	C3D13 - Services are required to be separated in accordance with BCA C3D13. No such details have currently been provided in relation to services within this building.	Consider
	C3D14 - Electricity supply systems are also required to be separated from the remainder of the building in accordance with BCA C3D14. Confirmation as to whether or not the main switch board will sustain emergency equipment operating in the emergency mode is needed to determine if the main switchboard requires this separation. Emergency equipment comprises of; hydrant and/or sprinkler system pumps, smoke control systems, emergency lifts, fire detection and alarm systems, sound/intercom systems for emergency purposes. No such details have currently been provided in relation to the electrical supply system within the building.	Consider
	C3D14 - Additionally, emergency and non-emergency equipment is required to be separated from one another by metal partitions.	Consider
Part C4	C4D3 - It is currently proposed for the external walls of the building to be loadbearing. However the provision of C4D3 will not apply as all distances between openings and fire-source features are greater than 6m, thus not triggering protection.	Note
	C4D4 & C4D5 - This building does not have external walls and associated openings in different fire compartments and will not require any protection.	Note
	C4D6 & C4D7 - No fire doors or sliding fire doors are proposed or required within the building, as such these provisions are not applicable.	Note
	C4D8 - As there are no horizontal exits proposed, there are no provisions applying to doors in horizontal exits.	Note
	C4D9 - All doorways opening to the fire-isolated shaft are required to be protected by -/60/30 fire doors which are self closing or automatically closing in accordance with C4D9 (2) and (3).	Consider
	C4D10 - Services and penetrations in fire-isolated exits are limited to those outlined in BCA C4D10.	Consider
	C4D11 - As the lift shaft is required to be fire-isolated the entrance doorway is required to be protected by -/60/0 fire doors that comply with AS 1735.11; and remain closed except when discharging or receiving passengers, goods or vehicles.	Consider

	C4D15 - Penetrations are required to comply with C4D13, C4D15 and Spec 13 as applicable. Particular attention should be given to plumbing supply with combined copper and poly pipe. C4D16 - Construction joints in walls required to achieve an FRL (ie. external cladding cavities between walls and floors) must be protected in a manner identical with the wall prototype tested in accordance with AS1530.4 to achieve the required FRL as required by C4D16.	Consider Consider
BCA Section D - Access and Egress		
Part D2	D2D3 - This building achieves the required minimum of 1 exit from each storey. D2D4 - All exits in this building are required to be fire isolated or external stairways in lieu of fire-isolated stairways. Currently it appears that the stair shaft will be fire isolated and constructed of pre-cast concrete panels to achieve compliance. D2D5 and D2D6 - Exit travel is generally 20m to single exit or 20m to a point of choice and 40m to the first exit, as well as 30m to a single exit serving a storey at the level of access to a road or open space. Distance between alternative exits is limited to 60m. Updated plans appear to show compliance. D2D7 to D2D9 - Minimum exit widths are generally 1m throughout for a height of 2m and 1980mm at doorways. These dimensions are required to be clear and free of obstructions (eg. handrails, fire extinguishers). Widths of doorways in a required exit or path of travel to an exit must be 750mm. D2D10 - Plans do not show the width of exits diminishing in the direction of travel, compliance is achieved. D2D12 - As the path of travel from the point of discharge from the fire-isolated stairway is required to pass within 6m of the external wall, this part of the wall is required to have an FRL of 60/60/60 minimum and any openings are to be protected internally in accordance with C4D5. D2D13 - No external stairways or ramps proposed in lieu of fire-isolated exits. D2D14 - Travel via a non-fire-isolated stairway or ramp is required to comply with D2D14, this will be applicable for external non-fire-isolated stair and ramp as they provide means of travel to a road or open space. D2D15 - Exit discharge is required to not have the potential to be blocked by vehicles. Appropriate allowances have been shown. All other aspects of exit discharge have been considered to maintain minimum egress widths and appropriate ramps/other inclines or compliant stairway to the street if there is a change in level. D2D16 - Horizontal exits are not proposed for this building. D2D17 - No non-required stairs, ramps or escalator proposed within the scope. D2D18 - The number of persons accommodated is best established by the design team and client dependent upon staffing. Please confirm and promulgate to all design team members. The current minimum egress widths provided caters for 100 persons per storey.	Note Note Note Consider Note Consider Note Consider Note Note Consider

	D2D21 - No plant rooms are proposed.	Note
	D2D22 - Access to the lift pit is to be provided through the lowest lading door.	Note
Part D3	D3D2 - Fire-isolated stairs and ramps are required to be constructed of non-combustible materials and so that local failure will not impair the function of the shaft.	Consider
	D3D4 - Non-fire-isolated stairways or ramps must be constructed of reinforced or pre-stressed concrete, steel not less than 6mm thick or timber that complies with D3D4(c). Compliance is assumed to be achieved within the current design.	Consider
	D3D5 - No applicable as there are no flights of stairs rising from a storey below the lowest level of access to a road or open space.	Note
	D3D6 - Not applicable as no open access ramps and balconies proposed within the scope.	Note
	D3D7- No smoke lobbies required for this building.	Note
	D3D8 - Installations in the path of travel are required to comply with D3D8, including the smoke sealing and non-combustible enclosure of distribution boards and central telecommunications boards. This can be achieved via applying the required construction to the individual DB enclosures <u>or</u> to the entire cupboard. No such details have been provided regarding the location of electrical distribution boards or the like at this stage. Please consider this requirement as the design develops, to ensure that compliance is achieved.	Consider
	D3D9 - No cupboards or similar enclosed spaces have been proposed underneath stairs, therefore, compliance with BCA D3D9 is not required.	Note
	D3D11 - Ramps throughout the property must not exceed a gradient of 1:8 or 1:14 if forming part of an accessible path of travel. Compliance has been shown as the proposed entry ramp is identified as having a gradient of 1:14. All ramps must be slip-resistant in accordance with BCA D3D15.	Note
	D3D14 - Stairs are required to comply with BCA D3D14 for tread construction and BCA D4D4, which references AS1428.1, Clause 11. Please refer to further comments in D4D4.	Consider
	D3D15 - Stairs and landings shall comply with BCA D3D15 including slip resistance.	Consider
	D3D16 - Door thresholds throughout the building are shown to not incorporate a step, compliance is achieved.	Note
	D3D17 - No trafficable surface is more than 1m or more above the surface beneath and as such no such requirement for barriers is triggered.	Note
	D3D22 - Handrails are shown to the main stair to both sides. Full compliance with AS1428.1 is required as the stair is assumed to serve as general movement for occupants.	Consider
	D2D25 - A swinging door in a required exit or forming part of a required exit must swing in the direction of egress. Updated plans appear to show compliance.	Note

	D3D26 - Operation of latches are to comply with BCA D3D26 for both doors in path of travel and exit doors (excluding doors to spaces that are inaccessible to persons when the door is locked (eg. cleaners room)). Alternatively, doors may be fitted with an automatic fail-safe device which unlocks the door on activation of any sprinkler or smoke detection system.	Consider
	D3D28 - Signage for fire safety doors shall comply with D3D28.	Consider
Part D4	D4D2 - This building is required to be accessible to and within all areas normally used by the occupants. Paths connecting this building with other buildings, disabled car spaces and main pedestrian entry points along the boundary shall also comply with AS1428.1.	Consider
	D4D4 - Accessways are required to be in accordance with D4D4 and AS1428.1 including circulation, provisions, turning and passing spaces. Reasonable provision is apparent on the current plans. However, the following non-compliance have been identified: A. Door circulation space is not achieved through any door when exiting the airlock to either the ambulant's toilet or the office spaces, in accordance with Clause 13.3 of AS1428.1. B. Door clear opening from office space into the air lock serving ambulant toilets only achieves 750mm where 850mm is required as per Clause 13.2. C. Door clear opening from outgoing control room to external space only achieves 830mm where 850mm is required as per Clause 13.2. The design team provided confirmation that these items will be addressed during the detailed design stage.	Consider
	D4D4 - Please note that the access ramp at the entry of the building is required to comply with Clause 10 of AS14.28.1. (Including a maximum gradient of 1 in 14, handrails in accordance with Clause 12 of AS1428.1, kerb and kerb rail requirements etc.).	Consider
	D4D4 - Please note that stairs (including fire isolated stairs if used for circulation) will be required to comply with Clause 11 and Clause 10 respectively of AS1428.1. The current plans show sufficient allowances for compliance, however please consider this as the design is developed.	Consider
	D4D6 - Provision of carparks for people with disabilities is required in accordance with D4D6. This requirement is to be assessed for the entire site, as all proposed buildings share common parking facilities. For both Class 5 and Class 8 buildings, the BCA mandates provision of one accessible space for every 100 car spaces. Provided plans show one accessible parking space located adjacent to the Weightbridge/Office Building.	Note
	D4D7 - Braille signage is required in accordance with BCA D4D7 and BCA Spec D4D7 including directional and exit signage. Please refer to the BCA for further details.	Consider
	D4D8 - Hearing augmentation is only required where inbuilt amplification exists and is most likely in the control rooms of the ground floor. Please provide confirmation if it is proposed to have an inbuilt amplification system installed as this will trigger the requirements under D4D8 for Hearing Augmentation.	Consider
	D4D9 - TGSIs are required in accordance with D4D9. This has not currently been shown to the rear stairs and both the front entry ramp and stairs. The design team provided confirmation that these items will be addressed during the detailed design stage.	Consider

BCA Section E - Services and Equipment

Part E1	<u>E1D2 - FIRE HYDRANTS</u> Fire hydrant coverage is required to all areas in accordance with BCA E1D2 and AS2419.1. No details of proposed hydrant locations have been provided on the plans for assessment and to confirm compliance at this stage. It is assumed that a compliant hydrant system will be provided to serve this building. Please note fire compartment size and the impacts this may have on the hydrant supply of water and that the hydraulic design has compartmentation consistent with other plans. Other aspects of compliance (flows and pressures) are assumed at this time. <u>E1D3 - FIRE HOSE REELS</u> Fire Hose Reels are not required within a Class 5 building and as such are not triggered for this building. <u>E1D4 - SPRINKLERS</u> As the proposed building is Class 5 and has an effective height of 8.94m, sprinklers are not required for this building. <u>E1D14 - FIRE EXTINGUISHERS</u> Fire extinguishers are required in accordance with Table E1D14 and AS2444 as applicable. Further details of fire extinguishers will be needed at the approval stage. BCA E1D14 requires the following: A. Cover Class AE or E fire risks for any switchboards that sustain emergency equipment operating in emergency mode. B. Cover Class A fire risks in accordance with AS2444. <u>E1D15 - FIRE CONTROL CENTRES</u> A Fire Control Centre is not required in the building as it is <25m in height and is <18,000m² in floor area.	Consider Note Note Consider Note
Part E2	E2D9 - This part is not applicable as the building is Class 5 throughout and is not greater than 3 storeys.	Note
Part E3	E3D1 - Lift installations shall be in accordance with E3 and AS1735. Emergency lifts are not required for this building as it has an effective height of <25m. E3D6 - Access and egress to and from lift well landings must comply with Parts D2, D3 and D4. E3D7 - Lift features, type and size shall comply with E3D7. E3D8 - As the building is required to be accessible the lift is required to comply with the requirements of E3D8. E3D9 - Fire service controls are not required for the lifts in this building as the building has an effective height of <12m.	Note Consider Consider Note Note
Part E4	E4D2 - Emergency lighting and illuminated exit signage is required throughout. Layout will be reliant upon the egress paths and viewing distances of the signage (typically 24m). Completed design for approval shall be consistent with the travel paths outlined in D2. Electrical plans will include an engineered design for this aspect. E4D4 - All required emergency lighting is to comply with AS2293.1.	Consider Note

	D4D7 - Please note the requirements for braille exit signage outlined in the DTS provisions of D4D7.	Note
	E4D9 - An EWIS is not required for this building.	Note
BCA Section F - Health and Amenity		
Part F1	F1D3 - Stormwater drainage must comply with AS3500.3. F1D4 - Exposed joints in the drainage surface must not be located beneath or run through a planter box, water feature or similar object of the building. The joints are to be provided with protection in accordance with Section 2.9 of AS4654.2. F1D7 - As the floor is laid directly on the ground, moisture must be prevented from reaching the upper surface of the floor where weatherproofing is required and adjacent walls. This is to be done via the insertion of a vapour barrier in accordance with AS 2870. F1D8 - Subfloor ventilation requirements do not apply as the slab is laid directly on ground.	Consider Consider Consider Note
Part F2	F2D2 - Waterproofing to wet areas shall be provided in accordance with BCA F2D2 and AS3740. F2D4 - Where a floor waste is <u>required</u> to be installed, the floor must be provided with a continuous sloping surface to the floor waste between 1:50 & 1:80 in accordance with BCA F2D4. This does not apply to floor gullies as they are not “intended to drain the floor surface”. It is not possible for a Floor Waste within an accessible sanitary compartment to comply with the DTS provisions of AS1428.1 and BCA F2D4. The only required floor waste is within the accessible WC as a shower is proposed. The design team provided confirmation that this item will be addressed during the detailed design stage. F2D4 - Where a floor waste is installed, the floor must be provided with a continuous sloping surface to the floor waste between 1:50 & 1:80 in accordance with BCA F2D4. This creates difficulty for accessible shower areas as AS1428.1 requires falls to the floor to be no steeper than 1:80, where the BCA requires 1:50-1:80 for water shedding. Compliance can be documented with 1:80 falls exactly, however, construction tolerances would likely result in creating a non-compliance if 1:79 or 1:81 is constructed. The design will need to be amended to meet the DTS provisions of the BCA. However, the BCA is a performance based code and compliance can be achieved through means of Performance Solutions.	Consider Consider Consider
Part F3	BCA Performance Requirement F3P1 for weatherproofing of external walls will need to be addressed by a Performance Solution as there are no DTS provisions relating to F3P1 for the concrete panels under BCA F3D5. F3D2 - Roofing materials as listed in BCA F3D2 or another material provided with an external waterproofing membrane as per AS4654 Parts 1 & 2 are deemed acceptable. General concrete slab construction without this membrane is not deemed compliant. F3D3 - Sarking-type materials used for weatherproofing of roofs and walls must comply with AS4200 Parts 1 & 2. F3D4 - All glazing assemblies in external walls shall comply with AS2047 and are limited to those specific assemblies noted in BCA F3D4.	Action Consider Consider Consider

	F3D5 - Masonry, autoclaved aerated concrete or metal wall cladding used as the external cladding must comply with AS3700, AS5146.3 or 1562.1 in order to be deemed to satisfy with no Performance Solution. Currently the plans show allowances for concrete external walls which are not DtS. However, the BCA is a performance based code and compliance can be achieved through means of Performance Solutions.	Action
Part F4	F4D3 - Occupant numbers (including genders) are required to be established prior to facility calculations. A whole facility calculation is required. This is because it is currently unclear if staff facilities are to be provided for employees working with process sheds in addition to those proposed within the office building. Please provide further details regarding the proposed facilities for the whole site.	Action
	F4D4 - The provided facilities within this building currently allow for 25 male and 25 female staff, as calculated in accordance with Table F4D4(a). The accessible WC has been counted once for each gender and one male WC has been allocated as a urinal. Please note that the above calculation only includes office staff and does not account for Class 8 processing shed staff. Further calculation of sanitary compartments will be required once occupant numbers and characteristics are provided.	Consider
	F4D5 - Appropriate allowances have been shown for accessible sanitary facilities complying with BCA F4D4 and AS1428.1. Please ensure as the design is developed compliance with AS1428.1 is maintained.	Consider
	F4D7 - Although an accessible shower has been shown in the accessible WC, it is not required for this building. Please note if the provided shower room contains a sign identifying it as an accessible shower then compliance with accessible showers must be achieved. Alternatively accessible sanitary compartments can be provided with non-accessible showers.	Note
	F4D8 - WC's will not require lift off hinges under BCA F4D8.	Note
Part F5	F5D2 - Room heights have been assumed compliant. Ceiling heights are not confirmed at this time. Minimum heights are generally: A. 2.0m for stairways and ramps; B. 2.1m for corridors, passageways, car parking areas, store rooms and sanitary compartments; C. 2.4m for other areas. Reflected ceiling plans have not been provided to determine whether each room achieves compliance. However the sections show sufficient allowances to achieve compliance for the building.	Note
Part F6	F6D2 - As this is a Class 5 part of the building natural light need not be provided under F6D2.	Note
	F6D5 - Artificial lighting is to be provided throughout the building and comply with AS1680.0.	Consider
	F6D6 - Ventilation may be achieved by natural or mechanical means. Compliance is assumed at this time. Mechanical ventilation shall be compatible with the requirements of E2D3. Consideration should be given to the separation between effluent exhaust from toilets, carpark and kitchen and outside air intakes in accordance with AS1668.2.	Consider

	F6D9 - Sanitary compartments have restrictions on where they can open directly to, particularly in public and shared areas. The current locations of sanitary compartments are deemed acceptable.	Note
Part F7	Not Applicable	Note
Part F8	Not Applicable	Note
BCA Section G - Ancillary Provisions		
Part G1	Not Applicable	Note
Part G2	NSW G1D5 - The building must be provided with a safe manner for cleaning of any windows located on the third storey.	Consider
Part G3	Not Applicable, no atrium proposed.	Note
Part G4	Not Applicable, not in alpine area.	Note
Part G5	Not applicable. The lot containing the proposed weighbridge and office building is not deemed a bushfire prone area. However if council requests that the adjacent lots forming part of the site to be consolidated this will trigger the lot to be bushfire prone. With this in mind under NSW Clause G5D2 there are no requirements for Class 5 buildings within a designated bushfire-prone area and as such this part is not applicable.	Note
Part G6	Not Applicable	Note
BCA Section J - Energy Efficiency		
Parts J2-J9	Confirmation was provided that an external consultant will be carrying out the Section J assessment of the proposed works. Generally, new buildings and new parts to existing buildings are required to comply with Part J4 for the building fabric and glazing. The extent of the conditioned space and the walls, floors and roof that bound it will need to be established so that these can be specified for compliance. If a DTS approach to building fabric Section J requirements is proposed, the following items will need to be addressed: A. Roof and/or ceiling will require a minimum downward R-Value of R3.7. B. The upper surface of the roof having a solar absorptance not more than 0.45. C. Roof lights cannot take up more than 5% of the floor area of the room that it serves. Additionally, transparent or translucent elements on the roof will require a SHGC in accordance with BCA J4D5 and a U-Value not more than U3.9. D. Wall-glazing construction must achieve a minimum U-Value of U2.0. E. Wall construction must achieve a minimum R-Value of R1.4 where it is more than 80% of the wall-glazing construction OR R1.0 where it is less than 80% of the wall-glazing construction. F. Solar admittance of wall-glazing construction must not be greater than values listed in BCA Table J4D6b. G. Floor construction will require a minimum R-Value of R2.0 downwards.	Note Consider Consider

Where mechanical ventilation within the building does not provide sufficient pressurisation to prevent infiltration of outside air, the provisions of BCA Part J5 will need to be complied with as follows: A. Chimneys and flues provided with a damper or flap that can be closed to seal the opening. B. Seals to restrict air infiltration must be fitted to each edge of all doors separating conditioned spaces from non-conditioned spaces in accordance with BCA J5D5. C. All entrance doorways to the building must be fitted with a self-closing device. D. Exhaust fans separating conditioned spaces from non-conditioned spaces must be fitted with a sealing device, such as a self-closing damper or the like when serving a conditioned space as per BCA J5D6. E. Openings in ceilings, external walls and roofs (ie. window frame, door frame, roof light, etc.) must be constructed to minimise air leakage in accordance with J5D7.	Consider
Air-conditioning and mechanical ventilation is required under BCA Part J6 to comply with the following: A. Air-conditioning will need to be capable of being deactivated when the space it's serving is not occupied. B. Time switches for switching electric power on and off at variable pre-programmed times and days where the system is more than 2kW_r. C. Ductwork achieving an R-Value in accordance with BCA Table J6D6.	Consider
NSWJ7D3 - 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 maximum illumination power density in Table J7D3a.	Consider
Artificial lighting within a fire-isolated stair, ramp or passageway must be controlled by a motion detector in accordance with BCA Specification 40 as required under BCA J7D4.	Consider
All hot water systems if proposed must be installed in accordance with Section 8 of AS3500.4 and BCA J8D2.	Consider
J9D3 - As the floor area of the building is >500m², it is required to contain energy meters configured to record the time-of-use consumption of gas and electricity.	Consider
J9D4 - An electrical distribution board for the provision of charging an electrical vehicle must be provided to the carpark associated with the building. It must have the capacity for each circuit to support an electric vehicle charger able to deliver a minimum of 12 kWh from 9:00am to 5:00pm daily. Additionally, be sized to support the future installation of a 7 kW (32 A) type 2 electric vehicle charger if it is to be sized to support the future installation of a 7 kW (32 A) type 2 electric vehicle charger in 10% of car parking spaces. Plans show provision of 3 EV Charging Spaces.	Consider
J9D5 - The main electrical switchboard is to contain no less than two empty three-phase circuit breaker slots and four DIN rail spaces to hold a solar photovoltaic system and a battery system.	Consider
No less than 20% of the roof area is to remain clear for the future installation of solar photovoltaic panels (SPP) unless the following is to be applied to the building: A. SPP's of a floor area of 20% are to be installed or an equivalent generation capacity is located elsewhere on-site, or B. The entire roof is not exposed to sunlight for over 70% of the daylight hours, or C. The roof area exceeds 55m², or D. Over 50% of the roof is used as a terrace, carpark, roofgarden, roof-light etc.	Consider

5.4. Processing Shed Extension & Yard Awnings - Building Code of Australia Assessment

BCA Part	Comments	Consider/ Action/ Note
BCA Section B - Structure		
Part B	B1D3 - Further information will be required to confirm if the stored materials are identified as hazardous materials and if these hazardous materials are capable of causing hazardous conditions that extend beyond property boundaries. c. The building is to be designed to an importance level of 3 if the hazardous materials stored have been confirmed as not capable of causing hazardous conditions that do not extend beyond property boundary. d. The building is to be designed to an importance level of 4 if the hazardous materials stored have been confirmed as capable of causing hazardous conditions that extend beyond property boundary.	Consider
	B1D3 - Further information will be required at the Approval Stage on how the treatment of non-structural elements have been designed to the earthquake provisions of AS1170.4 as required under BCA B1D3 is being achieved (ie. walls that are not part of the seismic force resisting system, appendages including parapets, gables, verandahs, chimneys and the like, partitions, ceilings, mechanical and electrical components including smoke control systems, fire suppression systems, boilers, escalators, transformers and the like).	Consider
	B1D6 - The building has been identified as being located in a flood hazard area but as the proposed is not a Class 2, 3, 9a or 9c no additional requirements are applicable.	Note
	The Structural Engineer is to provide a Design Certificate prior to the approval stage certifying that the building has been designed to the above requirements.	Consider
BCA Section C - Fire Resistance		
Part C2	C2D2 - Building is Type B construction with a general FRL of 240 minutes throughout. Construction is required to be in accordance with clauses S5C21 - S5D23 of Specification 5 including non-combustibility for a number of aspects.	Consider
	<u>S5C21</u> Generally the required minimum FRLs are as follow: a. External Loadbearing Wall <1.5m from a fire source feature - 240/240/240 - not applicable b. External Loadbearing Wall >1.5m but <3m from a fire source feature - 240/180/120 - not applicable c. External Loadbearing Wall >3m but <9m from a fire source feature - 240/90/60 - not applicable d. External Loadbearing Wall >9m but <18m from a fire source feature - 240/60/- - not applicable e. External Loadbearing Wall >18m from a fire source feature - No requirement f. External Non-loadbearing Wall <1.5m from a fire source feature - --/120/120 g. External Non-loadbearing Wall >1.5m but <3m from a fire source feature - --/90/60 h. External Non-loadbearing Wall >3m from a fire source feature - No requirement i. External Loadbearing Columns <18m from a fire source feature - 120/--/- - not applicable	Consider

A number of areas within the Yard Awning Structure and Existing Material Processing Shed will require provision of FRL as they are located within 3m from a site boundary or other building on site.

Action



S5C21 - All loadbearing internal walls and fire walls must be constructed from concrete, masonry or fire-protected timber. In addition to this all non-loadbearing internal walls required to be fire-resisting as mentioned above, the wall must be non-combustible. **It is our understanding that Fire Engineering will be utilised to address provision of loadbearing walls which include steel columns within the concrete walls.**

Note

S5C21 - Internal columns and walls (other than fire/shaft walls) in the floor immediately below the roof are not required to achieve an FRL.

Note

C2D10 - Non-combustibility of elements is outlined in BCA C2D10, being:

- e. External walls and common walls (including facade, framing, insulation, etc.).
- f. Flooring and floor framing of lift pits.
- g. Fire-rated non-loadbearing internal walls.
- h. Non-loadbearing shafts.

Consider

NOTE: BCA C2D10(4) outlines materials that are exempt from the requirements of non-combustibility as well as materials that are considered non-combustible. This does permit the installation of timber noggings/blocking for the bracing of fixtures.

	C2D14 - Attachments to the external walls must also be non-combustible unless they form part of the concessions within BCA C2D14. This includes elements such as awnings, signage, etc. unless they meet specific requirements. Please note that the proposed awnings over the existing material bays are included as part of the building.	Consider
	C2D11 - Fire hazard properties are required to comply with BCA C2D11 and BCA Spec 7. It is our understanding that the building is proposed to be sprinkler protected throughout, concessions will apply as outlined in BCA Spec 7 Table S7C3 and Table S7C4.	Consider
Part C3	C3D3 - Compartment limits for this building are outlined in BCA Table C3D3. The Class 8 portion has a floor area limit of 3,500m ² and 21,000m ³ . The maximum proposed fire compartment size appears to be: a. Material Processing Shed - 4,983m² and 44,650m³ b. Awnings Structure - 2,247m² or 28,087m³ It is our understanding that the non-compliant volume will be addressed by a Fire Engineered Performance Solution. Please note that the previously provided FER indicates that building volume measurement is approximately 25,000m³ but it is our belief that this measurement is approximately 44,650m³ as the awnings over existing material bays are functionally part of the Class 8 building. The design team provided confirmation that this issue will be captured in the amended Fire Engineered Performance Solution.	Consider
	C3D4 and C3D5 - This building is not considered a large isolated building and as such there are no additional provisions applying to the building. This is due to the building not being provided with 18m wide open space compliant with D3D5.	Action
	C3D7 - The building is proposed to be provided with a sprinkler system throughout and contains single story and as such does not require vertical separation in accordance with BCA C3D7	Note
	C3D8 - Building and fire compartmentation must be constructed in accordance with BCA C3D8. This includes the provision that building materials must not pass through fire walls except for roof battens (max. 75mm x 50mm) and sarking type material. No such fire walls creating fire compartments have been proposed, however, consideration will need to be given to fire walls if risers are constructed in lieu of shafts (see Part C4 below). No such fire walls creating fire compartments have been proposed.	Note
	C3D9 and C3D10 - Proposed building is of a single classification and as such no additional fire separation requirements are being triggered.	Note
	C3D12 - No stairs or lifts are proposed as part of this scope of work.	Note
	C3D13 - Services are required to be separated in accordance with BCA C3D13. Noting that lift control panels are excluded as they are not proposed within a machine room.	Consider
	C3D14 - Electricity supply systems are also required to be separated from the remainder of the building in accordance with BCA C3D14. Confirmation as to whether or not the main switch board will sustain emergency equipment operating in the emergency mode is needed to determine if the main switchboard requires this separation. Emergency equipment comprises of; hydrant and/or sprinkler system pumps, smoke control systems, emergency lifts, fire detection and alarm systems, sound/intercom systems for emergency purposes.	Consider

	C3D14 - Additionally, emergency and non-emergency equipment is required to be separated from one another by metal partitions.	Consider
Part C4	C4D3 - No external walls of the building are requiring an FRL thus protection of openings is not being triggered.	Note
	C4D4 - This building does not have external walls and associated openings in different fire compartments and will not require any protection.	Note
	C4D7 - Sliding fire doors are not shown as part of the design.	Note
	C4D8 - As there are no horizontal exits proposed, there are no provisions applying to doors in horizontal exits.	Note
	C4D15 - No penetrations will be required to comply with C4D13, C4D15, 3.12, C3.15 and Spec 13 as applicable as no building elements are identified as requiring to have FRL.	Note
	C4D16 - Construction joints in walls required to achieve an FRL (ie. external cladding cavities between walls and floors) must be protected in a manner identical with the wall prototype tested in accordance with AS1530.4 to achieve the required FRL as required by C4D16. No building elements were identified as requiring to have FRL.	Note
BCA Section D - Access and Egress		
Part D2	D2D3 - This building contains large wall openings but no specific doorways are shown on the plans. It is assumed at this stage that these openings were utilised in the existing building as Exits. Under this assumption this shed has the required minimum of 2 exits. Exit signage is to be installed and the wall opening must be provided with minimum 1m width that cannot be blocked by vehicles to achieve compliance. Provided plans include insufficient detail to confirm if compliance is achieved. The design team provided confirmation that this issue will be captured in the amended Fire Engineered Performance Solution and detailed design.	Consider
	D2D5 and D2D6 - Exit travel is generally 20m to single exit or 20m to a point of choice and 40m to the first exit. Distance between alternative exits is limited to 60m. Provided plans do not include clear indication of the proposed layout of the Material Processing Shed. It can be noted that a number of existing openings are proposed to be closed out and new openings created adjacent to the western awning. It is unclear if any exits are proposed to the northern wall of the building as the processing plant overlay appears to indicate provision of access pathways through the machinery. The design team provided confirmation that this issue will be captured in the amended Fire Engineered Performance Solution and detailed design	Consider
	The existing Material Bays now form part of the building and as such must have compliant exit travel provided. Current plans indicate that this is not achieved as distance between alternative exits is >60m. Additionally the proposed extension works appear to amend existing exits from the building creating new non-compliances for distance between alternative exits. The design will need to be amended to meet the DTS provisions of the BCA. However, the BCA is a performance based code and compliance can be achieved through means of Performance Solutions. The design team provided confirmation that this issue will be captured in the amended Fire Engineered Performance Solution and detailed design	Consider

	Please note that if any of the openings are proposed to be fitted with roller shutter doors or are they to remain as an opening in the external wall. BCA defines exit as an unobstructed doorway opening to a road or open space thus if 1m wide delineation for discharge was provided to such opening it then could be identified as exit. Such exit would then provide egress compliance for the northern part of the building.	Consider
	D2D7 to D2D9 - Minimum exit widths are generally 1m throughout for a height of 2m and 1980mm at doorways. These dimensions are required to be clear and free of obstructions (eg. handrails, fire extinguishers).	Consider
	As the plans show provision of fixed plant or equipment, further information will be required to assess the number of people accommodated. Assumed exits through external wall openings can accommodate 200, the minimum aggregate exit widths are to be 2m.	Consider
	D2D15 - Exit discharge is required to not have the potential to be blocked by vehicles. Appropriate allowances have not been shown and exits can be blocked by vehicles or stock piling of materials. The design team provided confirmation that this issue will be captured in the detailed design.	Consider
	D2D16 - Horizontal exits are not proposed for this building.	Note
	D2D18 - The number of persons accommodated is best established by the design team and client dependent upon bed licenses, staffing and visitor numbers. Please confirm and promulgate to all design team members.	Consider
	D2D21 - No plant rooms >100m² are proposed on the roof and as such, ladders are permitted to the space.	Note
Part D3	D3D2 - No fire isolated stairs are required for this building.	Note
	D3D8 - Installations in the path of travel are required to comply with D3D8, including the smoke sealing and non-combustible enclosure of distribution boards and central telecommunications boards. This can be achieved via applying the required construction to the individual DB enclosures <u>or</u> to the entire cupboard.	Consider
	D3D9 - No cupboards or similar enclosed spaces have been proposed underneath stairs, therefore, compliance with BCA D3D9 is not required. It is unclear if the proposed processing plant that is shown to include stairs is proposed to contain any enclosed spaces below the stairs. It is assumed at this stage that no such enclosures are proposed.	Note
	D3D15 - Ramps throughout the property must not exceed a gradient of 1:14 and must be slip-resistant in accordance with BCA D3D15. No ramps are proposed as part of this building.	Note
	D3D14 - Stairs are required to comply with BCA D3D14 for tread construction and BCA D4D4, which references AS1428.1, Clause 11. Please refer to further comments in D4D4.	Consider
	D3D15 - Stairs and landings shall comply with BCA D3D15 including slip resistance.	Consider

	D3D16 - Door thresholds throughout the accessible paths of travel must not incorporate a step, except where a threshold ramp with a maximum gradient of 1:8 is provided to an external door for a maximum height of 35mm for a maximum length of 280mm and located within 20mm of the door that it serves. No such thresholds are indicated on the provided plans.	Note
	This building is required to comply with BCA D3D17 - D3D21 and D3D29 for fall protection. Details are still being developed but reasonable provision appears to be made for: b. Balustrades are to be a minimum height of 1m as well as having no climbable elements between the heights of 150mm and 760mm where the floor level is >4m from the falling surface below.	Consider
	D3D22 - Handrails to the external stairs are required to one side of the stairway and must comply with Clause 12 of AS1428.1 as required by BCA D3D22 (1)(f) (eg. height 865-1000mm, handrail dimensions, etc.). Full compliance with AS1428.1 is required if the stairs serve as general movement for occupants.	Consider
	D3D23 - If provided ladder access to the roof plant shall be constructed in accordance with AS1657-2013.	Consider
	D3D24 & D3D25 - No sliding doors are being proposed as part of this scope of work.	Note
	D3D26 - Operation of latches are to comply with BCA D3D26 for both doors in path of travel and exit doors (excluding doors to spaces that are inaccessible to persons when the door is locked (eg. cleaners room)). Alternatively, doors may be fitted with an automatic fail-safe device which unlocks the door on activation of any sprinkler or smoke detection system.	Consider
	D3D26 - Consideration should be given to the operation of latch provisions of BCA D3D26 for sliding doors to provide a single hand downward action on a single device. Please note that these requirements will be applicable to facility entrances as plans show provision of fencing and gates that may be lockable.	Consider
Part D4	D4D2 - This building is required to be accessible to and within all areas normally used by the occupants. Paths connecting this building with other buildings, disabled car spaces and main pedestrian entry points along the boundary shall also comply with AS1428.1.	Consider
	D4D4 - Accessways are required to be in accordance with D4D4 and AS1428.1 including circulation, provisions, turning and passing spaces. Reasonable provision is apparent on the current plans.	Consider
	D4D4 - Please note that stairs will be required to comply with Clause 11 and Clause 10 respectively of AS1428.1. This means minimum widths are generally 1200mm between walls.	Consider
	BCA D4D5 allows for exemption from the access requirements where access would be inappropriate due to the particular purpose of which the building is used.	Consider
	D4D6 - Provision of carparks for people with disabilities is required in accordance with D4D6. This requirement is to be assessed for the entire site, as all proposed buildings share common parking facilities. For both Class 5 and Class 8 buildings, the BCA mandates provision of one accessible space for every 100 car spaces. Provided plans show one accessible parking space located adjacent to the Weightbridge/Office Building.	Consider

	D4D7 - Braille signage is required in accordance with BCA D4D7 and BCA Spec D4D7 including directional and exit signage. Please refer to the BCA for further details. D4D8 - Hearing augmentation is only required where inbuilt amplification exists. No such installation is assumed to be proposed for this building. D4D9 - TGSIs are required in accordance with D4D9. Where pedestrian paths and vehicular paths meet without delineation of kerb or kerb ramp, TGSIs are still required. Provided plans do not include sufficient detail to assess compliance at this stage. The design team provided confirmation that this issue will be captured in the detailed design.	Consider Note Consider
BCA Section E - Services and Equipment		
Part E1	<u>E1D2 - FIRE HYDRANTS</u> Fire hydrant coverage is required to all areas in accordance with BCA E1D2 and AS2419.1. Provided plans do not include sufficient detail to assess if fire hydrant coverage will be provided. Please note that the hydrant located adjacent to the existing Yard Control Room is noted as to be re-located but the new location is not shown on the provided plans. It is our understanding that a compliant fire hydrant system is to be provided as identified in our Fire Safety Guidelines Report. Please note fire compartment size and the impacts this may have on the hydrant supply of water and that the hydraulic design has compartmentation consistent to other plans. Other aspects of compliance (flows and pressures) are assumed at this time. <u>E1D3 - FIRE HOSE REELS</u> As the proposed building is a Class 8 construction, Fire Hose Reels are to be provided. Installation of Fire Hose Reels shall be in accordance with AS2441 (eg. mounting heights, signage, pressures, etc.) and locations to be within 4m of an exit. <u>E1D4 - SPRINKLERS</u> The Material Processing Shed is required to be sprinkler protected throughout in accordance with AS2118.1. Activation of the Building Occupant Warning System is required for the system. This shall be detailed in the design for approval. The Yard Awning Building does not require this as there is no storage of combustible materials, however, sprinkler may be required through fire engineering for increased fire compartment sizes. It is our understanding that a compliant sprinkler system is to be provided to this building and is to be designed as per High Hazard Class System. This was identified in our Fire Safety Guidelines Report. The sprinkler control valves must be located in a secure room or enclosure which has direct egress to a road or open space.	Consider Consider Consider Consider Consider Consider Consider

	<u>E1D14 - FIRE EXTINGUISHERS</u> Fire extinguishers are required in accordance with Table E1D14 and AS2444 as applicable. Further details of fire extinguishers will be needed at the approval stage. BCA E1D14 requires the following: C. Cover Class AE or E fire risks for any switchboards that sustain emergency equipment operating in emergency mode. D. Cover Class A fire risks in accordance with AS2444. <u>E1D15 - FIRE CONTROL CENTRES</u> A Fire Control Centre is <u>not</u> required in the building as it is <25m in height and is <18,000m2 in floor area. <u>E1D17 - PROVISION FOR SPECIAL HAZARDS</u> Given that the proposed use of the Processing Shed involves the storage and processing of materials that may present elevated fire hazards—such as increased fuel loads, unpredictable combustion characteristics, or restricted firefighter access—the building is subject to additional fire safety provisions under BCA E1D17. Clause E1D17 requires that buildings involving special fire hazards must incorporate supplementary fire-fighting facilities beyond the standard Deemed-to-Satisfy provisions. These hazards may include, but are not limited to, combustible waste, hazardous goods, lithium battery storage, or other materials that complicate fire suppression efforts. In such cases, the certifying authority must ensure that the fire safety measures are commensurate with the nature and scale of the hazard. For a comprehensive analysis of the identified smoke hazards and the proposed mitigation measures, please refer to the accompanying Fire Safety Guidelines Report, which outlines the compliance strategy adopted under Clause E2D21 and related provisions. This will generally trigger either a smoke-and-heat vent system or a smoke exhaust system.	Consider Note Action
Part E2	E2D3 - As identified in our Fire Safety Guidelines Report, function and use of this building as well as type or quantity of materials stored will trigger smoke hazard management measures to be implemented. It is our understanding that a compliant smoke detection system is to be provided to this building. Spec 20 - A smoke detection and alarm system is required for this building in accordance with BCA Specification 20, Clause S20C4 and AS1670.1. Requirements of completed design for approval include: g. Smoke detection throughout; h. Thermal detection can be used in lieu of smoke detection in areas where spurious alarms could occur. However, where sprinklers are installed in these areas, thermal detection is not required; i. FDCIE (FIP) including emergency lighting, carpark mechanical controls, etc; j. Smoke exhaust system automatically activated upon detection of fire; k. Building Occupant Warning System is to achieve 75dBa at every bedhead and 65dBa throughout other areas; l. Provision of Manual Call Points so that no point on the floor is more than 30m from a Manual Call Point in all areas of the building;	Consider Consider

	Note - This building has not been considered a theatre or public hall, nor an “other assembly building” in accordance with Clause E2D14 - E2D20. As such, there are no additional requirements for smoke hazard management. <u>E2D21 - PROVISION FOR SPECIAL HAZARDS</u> Due to the nature of the proposed use of the Processing Shed which involves the storage and processing of residual materials that may produce elevated smoke generation, toxic combustion products, or obstructed egress pathways—the building is subject to additional smoke hazard management provisions under BCA E2D21. For a comprehensive analysis of the identified smoke hazards and the proposed mitigation measures, please refer to the accompanying Fire Safety Guidelines Report, which outlines the compliance strategy adopted under Clause E2D21 and related provisions.	Note Action
Part E3	E3D1 - No lifts are proposed for this building.	Note
Part E4	E4D2 - Emergency lighting and illuminated exit signage is required throughout. Layout will be reliant upon the egress paths and viewing distances of the signage (typically 24m). Completed design for approval shall be consistent with the travel paths outlined in D2. Electrical plans will include an engineered design for this aspect. D4D7 - Please note the requirements for braille exit signage outlined in the DTS provisions of D4D7. E4D9 - Emergency Warning and Intercom System is not required for this building.	Consider Consider Note
BCA Section F - Health and Amenity		
Part F1	F1D3 - Stormwater drainage must comply with AS3500.3. F1D4 - Exposed joints in the drainage surface must not be located beneath or run through a planter box, water feature or similar object of the building. The joints are to be provided with protection in accordance with Section 2.9 of AS4654.2. F1D5 - Waterproofing membranes for external above ground use requirements are not being triggered for the proposed scope of work. F1D8 - No subfloor ventilation is proposed for this scope of work.	Consider Consider Note Note
Part F2	F2D2 - Waterproofing to wet areas requirements are not triggered for this building. F2D4 - Floor waists are not proposed for this building.	Note Note
Part F3	BCA Performance Requirements F3P1 for weatherproofing are not applicable to Class 8 buildings where there is no necessity for compliance. The proposed use of this building would not trigger the requirement for provision of weatherproofing and as such compliance with Part F3 is not required. If use of this building is amended to necessitate waterproofing then compliance with Part F3 will be triggered requiring provision of Performance Solution for the use of precast concrete cladding.	Note Note
Part F4	F4D3 - Provision of sanitary compartment is to be assessed on a whole facility basis due to the proposed use of the processing sheds. Occupant numbers (including genders) are required to be established prior to facility calculations.	Consider

	It is currently unclear if staff working in the material processing shed will be provided with staff change room and separate sanitary compartments or if the facilities provided in the office building are designed to facilitate the entire site. The numbers provided will be assessed further, but are assumed to be compliant at this time. F4D4 - Appropriate allowances have been shown for accessible sanitary facilities complying with BCA F4D4 and AS1428.1, but no ambulant facilities are shown at this stage. These facilities are shown within the proposed Office Building.	Consider
Part F5	F5D2 - Room heights have been assumed compliant. Ceiling heights are not confirmed at this time. Minimum heights are generally: d. 2.0m for stairways and ramps; e. 2.1m for corridors, passageways, car parking areas, store rooms and sanitary compartments; f. 2.4m for other areas. Provided plans show that compliance will be achieved.	Note
Part F6	F6D2 - Provision of natural light is not required as the building is Class 8 construction. Artificial lighting is required to all rooms that are frequently occupied and to all spaces required to be accessible. Further assessment will be needed at the approval stage but it can be assumed that artificial lighting will be provided throughout. F6D6 - Ventilation may be achieved by natural or mechanical means. BCA requires provision of ventilation to any habitable room, workroom or factory. Compliance is assumed at this time. Mechanical ventilation shall be compatible with the requirements of E2D3.	Consider Consider
Part F7	F7D4 - Sound transmission requirements are not applicable to a Class 8 building.	Note
Part F8	F8D5 - Condensation Management requirements are not applicable to a Class 8 building.	Note
BCA Section G - Ancillary Provisions		
Part G1	Limited minor structures and coldrooms are not proposed as part of this scope of work. NSW G1D5 - Provision for cleaning windows will not be triggered as the building is <3 storeys above ground.	Note Note
Part G2	Boilers, pressure vessels, heating appliances/incinerators are not shown to form part of this scope of work.	Note
Part G3	Atriums are not proposed as part of this scope of work.	Note
Part G4	The site is not located in the Alpine Area.	Note
Part G5	This building is shown to be located within bushfire prone land. NSW G5D2 - As this proposed is a Class 8 building and it is not identified as a special fire protection purpose building, no bushfire protection requirements are being triggered under Part G5 of the BCA.	Note Note
Part G6	Proposed scope of work includes no Occupiable Outdoor Areas.	Note

BCA Section J - Energy Efficiency		
Parts J2- J9	Confirmation was provided that an external consultant will be carrying out the Section J assessment of the proposed works.	Note
	Generally, new buildings are required to comply with Part J4 for the building fabric and glazing. The extent of the conditioned space and the walls, floors and roof that bound it will need to be established so that these can be specified for compliance. It is currently assumed that this building will not contain any conditioned space.	Consider
	If a DTS approach to building fabric Section J requirements is proposed, the following items will need to be addressed: a. Roof and/or ceiling will require a minimum downward R-Value of R3.7. b. The upper surface of the roof having a solar absorptance not more than 0.45. c. Roof lights cannot take up more than 5% of the floor area of the room that it serves. Additionally, transparent or translucent elements on the roof will require a SHGC in accordance with BCA J4D5 and a U-Value not more than U3.9. d. Wall-glazing construction must achieve a minimum U-Value of U2.0. e. Wall construction must achieve a minimum R-Value of R1.4 where it is more than 80% of the wall-glazing construction or R1.0 where it is less than 80% of the wall-glazing construction. f. Solar admittance of wall-glazing construction must not be greater than values listed in BCA Table J4D6b. g. Floor construction will require a minimum R-Value of R2.0 downwards.	Consider
	NSW J5D2 - Deemed-to-Satisfy requirements of Part J5 are not applicable to buildings that cannot be fully enclosed, thus compliance for this building is not being triggered.	Note
	If provided air-conditioning and mechanical ventilation is required under BCA Part J6 to comply with the following: a. Air-conditioning will need to be capable of being deactivated when the space it's serving is not occupied. b. Time switches for switching electric power on and off at variable pre-programmed times and days where the system is more than 2kW_r. c. Ductwork achieving an R-Value in accordance with BCA Table J6D6.	Consider
	J9D3 - The building is >2500m ² and is required to contain facilities for energy monitoring.	Consider
	J9D4 - An electrical distribution board for the provision of charging an electrical vehicle must be provided to the carpark associated with the building. Assessment of this requirement must be provided on a whole facility basis. Provided plans show that three EV Charging spots will be provided.	Note
	J9D5 - The main electrical switchboard is to contain no less than two empty three-phase circuit breaker slots and four DIN rail spaces to hold a solar photovoltaic system and a battery system.	Consider
	No less than 20% of the roof area is to remain clear for the future installation of solar photovoltaic panels (SPP) unless the following is to be applied to the building: A. SPP's of a floor area of 20% are to be installed or an equivalent generation capacity is located elsewhere on-site, or B. The entire roof is not exposed to sunlight for over 70% of the daylight hours, or C. The roof area exceeds 55m², or D. Over 50% of the roof is used as a terrace, carpark, roofgarden, roof-light etc.	Consider

6. Conclusion

This report provides an assessment of the referenced architectural documentation against the Environmental Planning and Assessment Act, referenced Australian Standards, as well as, the Performance Requirements and the Deemed to Satisfy provisions of the National Construction Code Series, Building Code of Australia (Volume 1) for the proposed development.

Key compliance issues have been identified through this assessment. These issues are to be resolved prior to the approval stage by means of; Performance Solutions, altered design documentation or clarification of information on building plans.

Notwithstanding the above, it is considered that compliance with the provisions of the BCA is readily achievable, provided the above matters are appropriately addressed by the project team. Additionally, it is considered that the matters raised can be adequately addressed in the preparation of the Building Approval documentation without resulting in any foreseeable inconsistencies with the Development Approval.