



15th June 2022
Ref No: 220403

Scott Warner
Senior Project Engineer
Infrastructure & Works | Maitland City Council

Email: Scott.Warner@maitland.nsw.gov.au

Ph: 0429496150

MAITLAND REGIONAL ART GALLERY – NEW COLLECTION STORE

Further to your request we have reviewed the fire safety associated components of the proposed new collection storage area at the Maitland Regional Art Gallery. The following comments and recommendations are made for your consideration to assist in the project.

SCOPE OF WORKS

The scope of works for this review includes:

1. Review and comment on requirements relating to fire rated construction under the relevant provisions of the Building Code of Australia for the new store room.
2. Review requirements relating to the travel distance from the Roof Access/Plant Room/Switch Room and provide comments on compliance in relation to the travel path under the relevant provisions of the Building Code of Australia.
3. Review the requirements for smoke detectors in the new storage area and the reduced area of the exhibition space. Provide recommendations for additional and relocated smoke detectors.
4. Make comment on any other aspects of the relevant fire safety provisions of the Building Code of Australia that may be affected by the proposed works.
5. Review drawings and details as modified to address initial recommendations and comments. Provide a letter to outline the design compliance for the relevant fire safety provisions.

Note: The review, recommendations and comments are made based on skills, experience and education in the field of fire safety engineering. My accreditation as an Accredited Practitioner (fire safety) Assessor does not directly relate to project reviews of this nature. I do not hold any relevant accreditation as a Principal Certifying Authority and make no representations as such. It is expected that all relevant approvals will be sought in relation to this project under the relevant NSW legislation.

1. Fire Rated Construction

There is no requirement to incorporate fire rated construction in the new store room works.

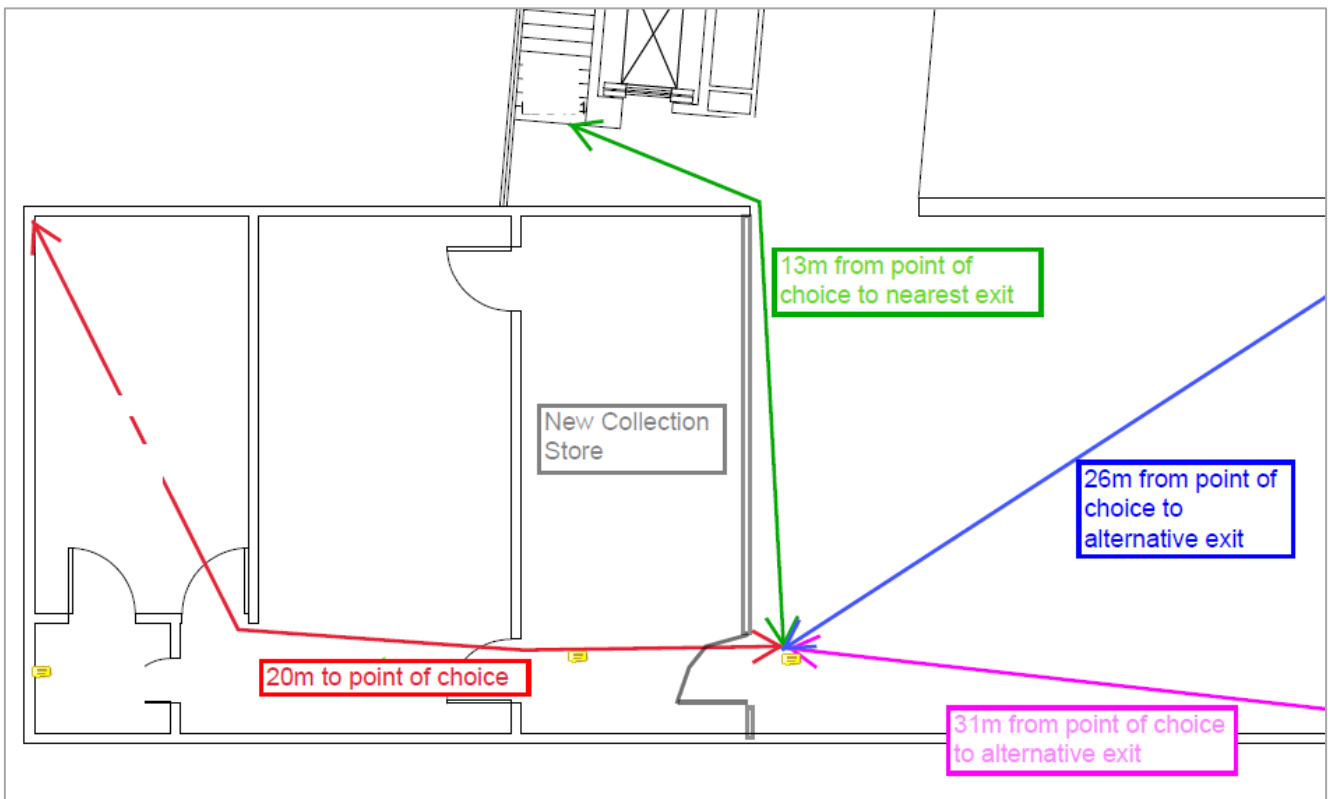


Fire rated construction requirements vary depending on the type of construction required under the Building Code of Australia. The part of the building in question was constructed in 2009 under the provisions of BCA2008 which generally aligns with the current BCA2019 Amendment 1. Type B construction is applicable with concessions applying to fire rating of walls in the storey immediately below the roof for class 9 buildings. Other provisions relating to fire rated construction for store rooms only applies where constructed below required stairs or where the store room is located in an entertainment venue. Neither of these circumstances apply for the walls in question.

2. Travel Distances

The proposed changes for the new collection store comply with the relevant provisions of the Building Code of Australia in relation to travel distance and paths of travel.

All points of the store room and the adjacent plant room, pump room and electrical switch room are within 20m of the point of choice for travel in two different directions to an exit with the nearest exit at the stair adjacent to the lift being less than 20m from the point of choice. Refer to the marked up floor plan below.



Concessions for egress are available for the roof top plant area which is not considered an occupiable outdoor area as access is only provided for maintenance via the access ladder. There are no required stairs providing access for purposes other than maintenance.



3. Smoke Detectors

The two smoke detectors and two occupant warning speakers currently located in the area of the collection store can remain as the locations are compliant for the modified area. Additional smoke detectors and warning speakers will be required for the remaining exhibition space as the maximum distance from a wall of 5m is exceeded for the smoke detectors.

The relocatable partition display walls in the exhibition space complicate locating the smoke detectors and speakers as the walls extend within 100mm of the ceiling. Following consultation with Gerard Bailey from council locations have been selected to provide maximum flexibility for positioning of the partition walls whilst maintaining compliant smoke detector and warning speaker locations.

The recommended locations for the smoke detectors and warning speakers are shown on the attached plan which includes all parts of the exhibition space that may be impacted by the relocatable partition display walls.

Note 1 : The compactus must be selected to provide a minimum of 600mm clear space below the level of the smoke detectors throughout the entire area.

Note 2 : The positioning of the relocatable partition display walls in the exhibition space will be subject to the following limitations to ensure they do not compromise smoke detector design compliance.

- *The walls must be positioned with not less than 300mm clear space to each smoke detector.*
- *Walls must be positioned to provide a smoke detector within each section.*
- *Walls must be positioned with 100mm clear space to the remote indicators for the concealed roof space smoke detectors to enable access for alarm investigation and or replacement of detectors.*

4. Fire Safety Measures / Provisions Generally

The remaining fire safety measures and provisions generally are unaffected by the changes except the new door in the path of travel, the emergency lights and exit sign as detailed below.

New collection store room door - The latch on the new door must be selected to comply with BCA part D2.21 being a lever style device operable via a single handed downward action with no lock snibs deadlocks or key actions incorporated. A push bar operated latch is not required as the floor area served and number of occupants is below the threshold nominated under BCA.

Emergency lighting is impacted by the modifications with the existing emergency light requiring relocation to avoid the spread of light being obstructed by the proposed compactus. Additional emergency lights will be required for the remaining exhibition space as the existing are located too far from the new wall.



The relocatable partition display walls in the exhibition space complicate locating the emergency lights as the walls extend within 100mm of the ceiling. Following consultation with Gerard Bailey from council locations have been selected to provide maximum flexibility for positioning of the partition walls whilst maintaining compliant emergency lighting locations.

The recommended locations for the emergency lights are shown on the attached plan which includes all parts of the exhibition space that may be impacted by the relocatable partition display walls.

Exit signs (illuminated) The new store room door connecting to the exhibition space requires an illuminated exit sign. The existing illuminated exit sign over the plant room door which is to be permanently closed off must be removed and could be relocated to the new door.

The recommended locations for the exit signs are shown on the attached plan which includes all parts of the exhibition space that may be impacted by the relocatable partition display walls.

5. Drawings and Details of Recommendations

We have prepared drawings with design details to reflect our review. The fire safety measures, exits and paths of travel will comply with BCA2019 Amendment 1 and the existing standards of performance for each of the measures listed on the existing fire safety schedule by incorporating the recommendations and comments.

Should you require any further details, please contact me on 0448866207.

Yours faithfully

**FIRE SAFETY
COMPLIANCE
MANAGEMENT**

Richard Wallis

Grad Dip Fire Safety Engineering – UWS

Accredited Practitioner (fire safety) Assessor - F009401A

Director

Maitland Regional Art Gallery – Smoke Detector, Warning Speaker, Emergency Light & Exit Sign Locations

Notes:

- Smoke detector, warning speaker and emergency light locations for the exhibition space have been selected to provide staff a degree of flexibility in the layout of the moveable partition walls. The spacings nominated are approximate only with the final location to be co-ordinated with Maitland Council Representative Gerard Bailey to take into account aesthetic alignment with existing services and ceiling features.
- The illuminated exit sign is to be installed immediately above the new collections store room door and no higher than 2700mm from the floor in accordance with AS2293.1.
- Components shown without an 'A' or 'R' designation are existing and shall remain in the current location.

