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Dear Vanessa

DFS Galleria - Fire Engineering DA Statement

Introduction

Our understanding of this project is that the existing DFS Galleria located at 155 George Street will be upgraded and extensively refurbished to provide new retail space with improved connectivity and a new entrance atrium. The full works are as described in other parts of the Development Application submission.

Project Understanding

The existing building has been subject to changes over its history but currently consists of 4 stories of retail (Class 6) and one office (Class 5). The retail portion includes a number of escalators connecting floors. The building was the subject of a fire strategy assessment prepared by Bassett Consulting Engineers. The date of this report is not known.

Arup Fire has a good understanding of the fire safety standard achieved in the existing building. This has been gained by:

- detailed review of the previous fire safety strategy, which dealt with retail portion only;
- site inspection to review layout, usage and installed fire safety measures;
- review of supporting documentation including and not limited to the BCA report and architectural drawings.

Fire Strategy

The approach to the fire safety design for the completed, upgraded building will be consistent with the aims of the Building Code of Australia's (BCA) Objectives.

Specifically, Arup Fire will aim to develop a fire strategy that achieves the following:

- new works that meet the Performance Requirements of the current BCA (with one possible exception for fire hydrants – approach detailed below);
- no adverse impact on the existing and retained parts of the building as a result of the new building parts;

- maintaining or improving the standard of fire safety in the existing parts of the building;

The proposed works include the following items;

- Reconfigure the retail floor plate moving the escalator voids to improve connectivity
- Level 2 will be changed from an office use into retail. Level 5 will no longer be part of the DFS store and will be returned to the landlord.
- Enclosure of the entrance foyer (currently considered to be outside space) which creates an atrium connecting ground through to Level 4.

The details of the proposed changes are contained within the other DA documentation.

In addressing compliance with specific Performance Requirements of the BCA, the following approaches will be adopted.

CP1 – Design to comply with Performance Requirements

For Type A Construction, the fire rating requirement for a Class 6 building (retail) is a minimum of 180 minutes. The current rating of the building is to be verified by the Structural Engineer. A performance based solution may be required to verify any reductions to FRLs within the existing building.

The retail compartment is also above the limits specified in Table C2.2 of the BCA. This will be addressed though either complying with DtS measures of the BCA or through meeting the Performance Requirements.

DP4, DP5, DP6, EP2.2 and G3– Design to Comply

As possibly the single most important aspect of fire safety design in achieving an acceptable standard of life safety, the fire safety strategy will aim to maximise the separation of occupants and smoke. Therefore, it is intended that these Performance Requirements will be met with regard to the works being undertaken, although this is likely to involve the use of Alternative Solutions to resolve issues related to extended travel distances, protection of discharging exits and atrium smoke control.

EP1.4 (sprinklers) – Upgrade Strategy

The building is protected throughout with an automatic sprinkler system which will be maintained as part of these works. Where not already provided the sprinkler heads will be upgraded to fast response with an RTI of not more than $50 \text{ m}^{0.5}\text{s}^{0.5}$, as they provide great benefit for fire safety, being effective, reliable and relatively easy to maintain.

At this time it is not proposed to bring the building wide system up to current code compliance; rather the system will meet the standard to which it was installed.

EP1.3 (hydrants) – Maintain compliance.

The new works will not have any impact on the hydrant system, other than relocation of one of the hydrant outlets. As such, compliance of the system with the standard to which it was installed will be maintained. The design team will investigate the opportunity to move hydrant outlets into the fire stairs if required.

EP1.1 (fire hose reels) – Maintain

The new works may require relocation of some fire hose reels; this will be done to maintain compliance with the existing system.

Conclusion

Arup can confirm that the relevant requirements of Clause 94 of the EP&A can be met subject to the implementation of the proposed strategy noted above. We trust that the above information is sufficient for the Department of Planning and Environment's (DP&E) needs, with respect to fire safety design, in addressing the approval of the Development Application submission for this project, and request that DP&E provide a conditional approval on this basis.

If any further information is required for a determination to be made, we would be happy to assist in providing that information.

Yours sincerely



Neil McPhail
Senior Engineer