

Southlands Remediation and Development Project

Environmental Assessment

Project Application (MP 06_0191)

Appendix E: BCA Report



Memo

To:	DBL Property	Sent by:	Email
Att:	Mr Jeff Lord	Date:	8 May 2007
From:	Dean Goldsmith	Fax/Email:	jlord@dblproperty.com
Project:	Stage 1 Orica Site, McPherson St, Botany (x 3 Buildings: Warehouse 1/2, Warehouse 3/4 & Warehouse 5/6).	File No:	7323
Re:	Preliminary BCA Assessment	Pages:	3

Jeff,

As requested we have reviewed the plans prepared by Macquarie Goodman for the subject project and in accordance with Clause 145 of the Environmental Planning and Assessment Regulation 2000 wish to provide the following comments in relation to our preliminary BCA Assessment.

We note that the proposed development is to incorporate the subdivision of the land, in addition to the proposed warehouse buildings, in the Part 3A Application to the Department of Planning and as such will preclude our engagement as the Principal Certifying Authority on the project. In this regard we note that it is the intent of the applicant to engage Dix Gardner as the Accredited Certifier for the issue of Construction Certificates for the project and that in addition we will also be engaged to provide consultancy services to the Department of Planning in fulfilling their role as the Principal Certifying Authority for each of the proposed warehouse buildings.

BCA Classification:	All buildings - Class 5 (Office), Class 7b (Warehouse);
Rise in Storeys:	All buildings – Two (2)
Type of Construction:	All buildings - Type C (Large Isolated Building)
Floor Area:	Warehouse 1/2 - 9,200m ² Approx, Warehouse 3/4 – 11,000m ² Approx, Warehouse 5/6 – 26,800 m ² Approx
Volume:	Warehouse 1/2 – 92,000m ³ Approx, Warehouse 3/4 – 110,000m ³ Approx, Warehouse 5/6 – 268,000m ³ Approx.

BCA Section C – Fire Resistance

1. BCA cl. C1.10: Early Fire Hazard Properties: Floor, wall and ceiling linings are required to comply with the requirements under specification C1.10 and C1.10a. Test certificates of the proposed linings will be required to be submitted prior to the occupation certificate.
2. BCA cl. C1.11 Performance of external Walls: Concrete external walls are required to be designed to minimize the likelihood of collapsing outwards in the event of a fire. Design certification will be required to be submitted by a Structural Engineer confirming compliance with Specification C1.1.
3. BCA cl. C2.2 General Floor Area and Volume Limitations: The proposed floor area and volume of each building exceeds the limitations for Type C Construction, and as such all three buildings are defined as "Large Isolated Building" - see comments under C2.3 and C2.4.
4. BCA cl. C2.3 Large Isolated Buildings: The floor area/volume limitations under C2.2 can be exceeded where a building is deemed to be a "Large Isolated Building" and is provided with Sprinklers and C2.4 compliant Perimeter Vehicular Access. In addition, if the floor area or volume exceeds 18,000m² or 108,000m³ respectively and the ceiling height is greater than 12 metres the

provision of both Sprinklers and a Smoke Exhaust System is required. Note: This requirement for both sprinklers and smoke exhaust potentially applies to all three buildings.

5. BCA cl. C2.4 Requirements for Open Spaces and Vehicular Access: The provisions for open space and vehicular access to all three buildings do not fully comply with the requirements of this clause. This specifically relates to the west side of Warehouse 1/2; to the east side of Warehouse 3/4; and the north and east sides of Warehouse 5/6. In this regard it is understood that you intend to engage a Fire Safety Engineer to address this issue, in order to demonstrate compliance with Performance Requirement CP9. Note: NSW Fire Brigades approval will also be required for the proposed alternative solution.
6. BCA Spec C1.1 Fire Resisting Construction: All three buildings are of Type C Construction and given the proposed setbacks and building configuration, the building elements do not require FRL's under the provisions of Specification C1.1.

BCA Section D – Access and Egress

7. BCA cl. D1.4 Exit Travel Distance: The warehouse areas of each building are not likely to comply with the 40m exit travel distance requirement under this clause due to the size configuration and use, of each building.

Further assessment of this compliance issue will be required at CC Application Stage, however it is understood that you intend to engage a Fire Safety Engineer to address this issue. The relevant Performance Requirements are DP4 and EP2.2.
8. BCA cl. D1.5 Distances Between Alternative Exits: The warehouse area of each building is also unlikely to be able to comply with the maximum 60 metre distance between alternative exits requirement of this clause. Similarly to D1.4, further assessment of this issue will be required at the CC Application Stage.
9. BCA cl. D1.10 Discharge from Exits: Suitable barriers must be installed to prevent exits from being blocked by vehicles.
10. BCA Part D2 Construction of Exits: The stair treads and risers, stair landings, door thresholds, balustrades and handrails are required to comply with this part. Details will be required at CC stage for assessment.
11. BCA cl. D2.21 Operation of latch: All exits doors or doors in the path of travel to an exit must be readily openable from the inside by a single downward action between 900mm and 1100mm from finished floor level.
12. BCA cl. D2.20 Swinging Doors: All exit doors from the building are required to swing in the direction of egress – details of which are to be included on the CC Application plans.
13. BCA Part D3: Access is required from the allotment boundary and from the car parking areas to the principal office entry of each building in accordance with AS1428.1. Internal access is also required to comply within the ground floor office floor, including disabled toilet and within the warehouse. Tactile indicators are required between the car park and principal office entrance if there is no kerb or kerb ramp at that point. The main entry stairway to the first floor office level of each building is required to comply with AS 1428.1. Furthermore, car parking spaces are required to be provided per Table D3.5.

Note: Given the provisions of the DDA it is recommended that an access consultant be engaged and details demonstrating compliance with the above requirements be submitted with the CC Application plans.

BCA Section E – Services and Equipment

14. Part E Services and Equipment: The following fire safety measures are required for this building:

- Fire Hydrants: BCA E1.3 and AS 2419.1 – 2005
- Fire Hose reels: BCA E1.4 and AS 2444 – 2005
- Portable Fire Extinguishers: BCA E1.6 and AS 2444 - 2001
- Smoke Exhaust: BCA Spec E2.2b and AS 1668.1 – 1998 (See Note 3 below)
- Sprinkler System: BCA Spec E1.5 and AS 2118.1 - 1999
- Emergency Lighting: BCA E4.2, E4.4 and AS/NZS 2293.1 - 2005
- Exit Signs: BCA E4.5, E4.6, E4.8 and AS 2293.1 – 2005

Note: Hose reel and hydrant coverage is unlikely to comply given the size of the building. An Alternative Solution may be required to address this issue. We suggest consultation with the NSW Fire Brigades and your Fire Safety Engineer in this regard however; we note that the relevant performance requirements are EP1.1 and EP1.3.

15. BCA Part F3 Sanitary and other Facilities: The population of each building will be required from the proposed tenants in order to confirm if the number of proposed sanitary facilities complies with the requirements of this part.

Note: In accordance with F2.5 the construction of sanitary compartments must have doors and partitions 1.8 metres above floor level and doors to fully enclosed sanitary compartments must be removable from the outside.

16. BCA Part F4 Light and Ventilation: All artificial lighting must comply with AS 1680. Mechanical ventilation must comply with AS 1668.2.

17. Section J – Energy Efficiency: The energy efficiency provisions of Section J are applicable to the air-conditioned space within the proposed building, and as such, a report will be required to be submitted with the CC Application, which details how compliance is being achieved.

Details demonstrating compliance with the above BCA provisions will be required to be provided with the CC Application documentation. In the meantime, please do not hesitate to contact me should you have any queries regarding the above.

Regards,



Dean Goldsmith
Associate Director