



Building and Development Dispute Resolution Committees—Decision

Sustainable Planning Act 2009

Appeal Number:	07 – 16
Applicant:	Queensland Fire and Emergency Services (QFES)
Assessment Manager:	TT Building Surveyors – Shawn Brosnan A607667
Concurrence Agency: (if applicable)	N/A
Site Address:	Birtinya Boulevard, Kawana Waters and described as Lot 902 on SP271972 – the subject site

Appeal

Appeal by Queensland Fire and Emergency Services (QFES) as an Advice Agency under section 528 of the *Sustainable Planning Act 2009* (SPA) against the decision of an Assessment Manager to omit the installation of stair pressurisation to the required exit stairs under part E2.2 of the National Construction Code, Building Code of Australia, Volume 1, 2015 (BCA), and the determination that the stairs are deemed to satisfy as external stairs.

Date and time of hearing:	10:00 am – 3 May 2016
Place of hearing:	Meeting Rooms, Building Codes Queensland, Level 16, 41 George Street Brisbane
Committee:	James Dunstan – Chair Mark Anderson – Member Desmond Lang – Member
Present:	Applicant Peter Neilsen – QFES Chris White – QFES Assessment Manager Shawn Brosnan – TT Building Surveyors Ashley Trost – TT Building Surveyors Builder Mark Walton – McNab Constructions Craig Mapperson – McNab Constructions Owner Representative Lloyd Goves – TSA Management

Decision:

The Building and Development Dispute Resolution Committee (Committee), in accordance with section 564 of the SPA **sets aside** the decision of the Assessment Manager and directs the Assessment Manager to re-issue an amended decision notice reflecting the Deemed to Satisfy requirements of the BCA applicable to a fire isolated exit in a class 9c aged care facility.

The Committee has determined that the exit stairs for the purposes of Part E2 Smoke Hazard Management under the BCA are considered to be enclosed within the external wall of the building and is not an external stair by definition. The BCA provisions of table E2.2a for Class 2-9 buildings require a fire isolated stairway servicing more than 2 storeys in a class 9c building must be provided with an automatic air pressurisation system in accordance with Australian Standard AS 1668.1-1998 *The use of Ventilation and Air Conditioning in buildings, Part 1, Fire and Smoke Control in multi-compartment buildings*, (AS1668.1) designed and certified by an appropriately qualified and licensed competent person.

Background

The approval granted on the subject site by the Assessment Manager is for a class 9c, 5 storey aged care facility.

The building is of Type A construction, and requires a stairwell pressurisation system for any internal exits servicing more than 2 storeys under table E2.2a of the BCA.

During the assessment and approval process, a referral was lodged to QFES as an Advice Agency in accordance with the provisions of Schedule 7 and 8 of the Sustainable Planning Regulation (SPR).

The original Fire Engineering Brief dated 22 May 2016, submitted to QFES for assessment and comment contained six proposed alternative solutions, one of which being deletion of stairwell pressurisation to the required exit stairs.

QFES provided comments that they did not support the proposal to delete the stairwell pressurisation system during this consultation process.

The subsequent Fire Engineering Report dated 31 July 2015, submitted for Advice Agency approval, contained only four alternative solutions, and a broad statement detailing the stairs would be addressed through construction as external stairs.

QFES undertook a detailed assessment of the proposal, in accordance with Schedule 7, Table 1 of the SPR, and provided an Advice Agency response that stated:

The Fire Engineering Report (FER) deleted Alternative Solution 6 (Omission of stair pressurisation) as presented in the Fire Engineering Brief by way of identifying the stairs as external stairs rather than internal stairs. The drawings provided for assessment and marked 'not for construction' showed internal stairs as per the FEB with the addition of some ventilation at ground level and level 4. As such, smoke behaviour within the proposed stairs will still impact on tenability including vision and require effective smoke management. The ventilation shown is not acceptable in lieu of stair pressurisation.

Upon receipt of the above response, the Assessment Manager reviewed the advice and determined the stairs met the deemed to satisfy requirements of the BCA as external stairs, and subsequently granted a development permit for building works.

QFES reviewed the decision issued by the Assessment Manager and subsequently lodged an appeal against the Assessment Manager's decision to the Building and Development Dispute Resolution Committees on the 17 March 2016.

A hearing was conducted at Building Codes Queensland, Level 16 Mineral House, 41 George Street Brisbane at 10am on 3 May 2016. During the hearing the following representations were made:

Applicant Representations:

- During the initial assessment, QFES assessed that the stairs were internal to the building, not external as provided by the Assessment Manager;
- Reference was made to the Guide to the BCA for what is considered to be an acceptable external stair design;
- Predominant issue for QFES is smoke logging which can hinder egress and intervention by QFES;
- Advice was sought from The Queensland Building and Construction Commission (QBCC) and other QFES assessment officers for interpretation. Advice provided confirmed the interpretation and the advice was given as such;

Assessment Manager Representations:

- The original Fire Engineering Brief (FEB) contained a proposal to provide internal stairs with an alternative solution to delete required pressurisation;
- QFES through consultation advised they would not support the proposal and subsequently the design was modified to incorporate deemed to satisfy external stairs;
- Upon receipt of the QFES advice, adopted all recommendations for general fire safety however did not adopt the comments as the Assessment Manager determined the stairs to be deemed to satisfy external stairs;
- Performance outcomes of a design is not a basis of a non-compliance, and the guide to the BCA is not a legally adopted document and cannot be used for statutory interpretation;
- QFES have previously permitted this design through without comment or issue. The design has been supported in many jurisdictions (QLD, NSW, WA);
- The exit stair is not weatherproof due to the openings at the top and the bottom, meaning it is not internal to the building;
- An external stair under clause D1.8 of the BCA does not require any special fire services;
- As no special fire services are required for an external stair, QFES do not have jurisdiction to provide comment as it is a deemed to satisfy interpretation;
- The building has been designed to allow the provision of horizontal evacuation through compartmentation due to predominant occupant characteristics;

During the hearing, it was discussed that a determination on jurisdiction for QFES would need to be reviewed, as would the determination of the type of stair provided to the building by the committee, and that post this determination, an opportunity was to be provided for the Applicant to propose an alternative solution to the Deemed to Satisfy provisions of the BCA should the stair be determined as internal.

Following the determination by the Committee that the stairs were considered to be internal, contained in the finding of facts below, the Applicant, at the end of the period allocated for further submissions, provided a written response advising they accepted the determination.

It is noted that at the time of the hearing, the building was well under construction.

Material Considered

The material considered in arriving at this decision comprises:

1. 'Form 10 – Appeal Notice', grounds for appeal and correspondence accompanying the appeal lodged with the Committees Registrar on 17 March 2016 including the following:

- a. Decision Notice issued by Shawn Brosnan dated 16 February 2016;
 - b. QFES Advice agency response dated 21 December 2015;
 - c. Fire Engineering Brief reference BR140100 by Defire dated 22 May 2015;
2. Fire Engineering Report reference BR by Defire dated 31 July 2015;
 3. Fire services drawings reference BNE15025 Sheets F01, F000, F100-F109, F200-F209 by Erbas & Associates Pty. Ltd. Dated April 2015;
 4. Mechanical services drawings reference BNE15025 Sheets M000, M100-M111, M500-M503 by Erbas & Associates Pty. Ltd. Dated April 2015;
 5. Architectural Drawings reference 2014032 Sheets 0000, 0001, 0003, 0100, 0201, 0901, 1201-1212, 2201-2210, 3201-3203, 4201, 4202, 5101, 5201-5203, 6302, 6303, 6401-6407, 7000-7005, 8001-8006, 8301-8306;
 6. 'Tribunal' Notes SB V QFES 160428 By Shawn Brosnan;
 7. Submission by TT Building surveyors detailing known examples of external stairs submitted 3 May 2016;
 8. Submission by Shawn Brosnan regarding QFES Jurisdiction;
 9. QFES Jurisdiction Response by QFES;
 10. QFES response to TT building Surveyors known examples of external stairs submitted 12 May 2016;
 11. Email Correspondence from Shawn Brosnan dated 26 May 2016 regarding stairwell pressurization;
 12. *Sustainable Planning Act 2009 (SPA)*;
 13. Sustainable Planning Regulation 2009 (SPR);
 14. *Building Act 1975 (BA)*;
 15. National Construction Code Series, Building Code of Australia, Volume 1, 2015 (BCA);
 16. The Oxford Dictionary – Definition of External;
 17. Verbal submissions from all parties at the hearing;
 18. Email submissions provided by Shawn Brosnan dated 26/05/16;
 19. Email submissions provided by QFES dated 26/05/16;

Findings of Fact

The Committee makes the following findings of fact:

QFES Jurisdiction

1. QFES is given jurisdiction as an Assessment Agency under SPR schedule 7, table 1 as an Advice Agency for the special fire services documented in schedule 8;
2. *Stairwell pressurisation systems* are considered to be a special fire service under Schedule 8, part 1, item 14;

3. Schedule 8, part 2, documents the jurisdiction of the QFES is limited to assessment of the suitability of automatic detector operation of stairwell pressurisation systems, smoke and heat vents and smoke exhaust systems;
4. Therefore, QFES are determined to have jurisdiction to assess a building and associated exit stairs, to determine if a stairwell pressurisation system is required, and provide advice in accordance with schedule 7 of the SPR.

The interpretation of an *external stair*

5. D1.8 of the BCA permits the use of an *external stair* in lieu of a fire isolated exit;
6. The exit is required to be protected outside the *external wall* of the building it is exposed to;
7. The BCA definition of **External Wall** means an outer wall of a building which is not a common wall;
8. The BCA does not provide a definition of external stair;
9. The oxford dictionary defines **External** as: *belonging to or forming the outer surface or structure of something: the external walls;*
10. The construction of the stairs extends for 5 storeys, with openings provided as follows:
 - at the ground floor – weatherproof vents and a personnel access door;
 - Level 5 – weatherproof vents;
11. The mid three levels of the stairwell are enclosed by a concrete wall that is matching to the remainder of the *external wall*;
12. The stairs, being bounded on all four sides, is determined to be within the outer wall of the building, being the *external wall*;
13. As the stairs are within the *external wall*, they are considered to be internal to the building;
14. The provision of ventilation openings provided at top and bottom of the stair shaft does not change that the stairs are enclosed by a wall on all sides. The stairs are within the *external wall*. The ventilation openings are simply considered to be openings in an *external wall*;
15. Weatherproofing of this area is not of concern, as an exit stair is not considered a habitable or conditioned space;
16. Clause D1.3 of the BCA requires the stairs to be fire isolated as they connects a total of 5 storeys;
17. Table E2.2a of the BCA requires that an fire isolated exit stair in a Class 9c aged care facility with a rise of more than 2 storeys must be provided with a stairwell pressurisation system complying with AS/NZS 1668.1 where not provided with open access ramps/lobbies under D2.5;
18. The alternative solution report does not provide a performance based solution in accordance with part A0 of the BCA and therefore the Deemed to Satisfy provisions apply;
19. The subject stairs therefore do not meet the interpretation of an external stair and therefore are determined to be internal, and subject to all the requirements of a Fire Isolated Stair as per BCA Deemed to Satisfy requirements;

Reasons for the Decision

1. The Committee has reviewed the above materials and finds that the subject building is a 5 storey class 9c aged care facility provided with two stairs for emergency egress;
2. The two stairs are bounded on 4 sides by walls, and the Committee has determined that these stairs are within the bounds of the external wall;
3. Providing ventilation to the top and bottom of the stairs may satisfy the requirements and intent of the BCA performance criteria, however no alternative solution has been proposed to address this, and therefore a Deemed to Satisfy interpretation must be applied for determination of applicable requirements;
4. The Committee reviewed the appeal documentation and through research determined that QFES were correct in their assessment and interpretation, and were within their jurisdiction under the SPR to provide advice on the subject stairs as non-compliant with the applicable BCA provisions.;
5. The stairs are determined as being fully enclosed on all four sides, regardless of the top and bottom being ventilated, and therefore are considered to be within the bounds of the external walls;
6. The intent of the BCA for an external stair, is that it is freely venting, with no obstructions being present to cause smoke logging or obstructions. The construction of the stairs however is not consistent with the intent, and are not freely venting to the external atmosphere. As they are bounded on four sides by walls, even though there is some fixed vented panels at the top and bottom of the riser shaft, smoke logging may occur;
7. Though not meeting the Deemed to Satisfy requirements of the BCA for internal fire isolated stairs, no performance based modelling has been done to verify if the ventilation solution would be satisfactory under the performance criteria as an alternative solution;
8. The opportunity to undertake a performance based assessment to address the Deemed to Satisfy non-compliance issues for stairwell pressurisation was provided during the hearing process, with additional time granted to undertake these assessments, however no submissions were provided to the Committee.
9. Therefore it is the determination of the Committee that the stairs subject to the appeal, are internal, fire isolated stairs and must meet the Deemed to Satisfy requirements of the BCA applicable for the rise and classification of the building;
10. The Deemed to Satisfy requirements of the BCA for a fire isolated stair, connecting 5 storeys under table E2.2a, requires a stairwell pressurisation system complying with AS/NZS 1668.1 where not provided with open access ramps/lobbies under D2.5. The system must be designed and certified by an appropriately qualified and licensed competent person;
11. Therefore the Committee in accordance with section 564 of the SPA **sets aside** the decision of the Assessment Manager and directs the Assessment Manager to re-issue an amended decision notice reflecting the Deemed to Satisfy requirements of the BCA applicable to a fire isolated exit in a 5 storey, class 9c aged care facility.
- 12.

James Dunstan - Chairperson
Building and Development Committee Chair
Date: 8 June 2016

Appeal Rights

Section 479 of the *Sustainable Planning Act 2009* provides that a party to a proceeding decided by a Committee may appeal to the Planning and Environment Court against the Committee's decision, but only on the ground:

- (a) of error or mistake in law on the part of the Committee or
- (b) that the Committee had no jurisdiction to make the decision or exceeded its jurisdiction in making the decision.

The appeal must be started within 20 business days after the day notice of the Committee's decision is given to the party.

Enquiries

All correspondence should be addressed to:

The Registrar of Building and Development Dispute Resolution Committees
Building Codes Queensland
Department of Housing and Public Works
GPO Box 2457
Brisbane QLD 4001
Telephone (07) 1800 804 833 Facsimile (07) 3237 1248