



KUDOS
BUILDING CERTIFICATION

REPORT NO.: RE5159.1
ADDRESS: UNIT 35, 1-5 THEW PARADE
CROMER
CLIENT: NEXUS PROJECT



EXECUTIVE SUMMARY

An assessment of the proposed development located at Unit 35, 1-5 Thew Parade, Cromer against the Deemed-to-Satisfy (DTS) provisions of the National Construction Code (NCC) 2019 revealed the change of use is capable of complying with the following consideration:

NCC CLAUSES

CLAUSE	DESCRIPTION
-	



TABLE OF CONTENTS

1.0 INTRODUCTION4

2.0 PURPOSE.....4

3.0 SCOPE4

 TABLE 1 - REFERENCED DESIGN DOCUMENTATION4

4.0 NCC BUILDING PARAMETERS4

 TABLE 2 - BUILDING PARAMETERS (UNIT 35 ONLY)4

5.0 CONCLUSION4

APPENDIX I – CLAUSE-BY-CLAUSE NCC ASSESSMENT5

 TABLE 3 – KEY.....5

 TABLE 4 – BUILDING PARAMETERS5

APPENDIX II – TYPE OF CONSTRUCTION 12

 TABLE 5 – TYPE C CONSTRUCTION 12

APPENDIX III - FIRE SAFETY SCHEDULE 13

 TABLE 6 – PROPOSED FIRE SAFETY SCHEDULE 13

REVISION HISTORY

REVISION	DATE	STATUS	AUTHOR	REVIEWER
R01	2 August 2019	NCC Report for DA Submission	Tony Truong	Elton Truong

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1.0 INTRODUCTION

KUDOS BUILDING CERTIFICATION have been commissioned by NEXUS Projects to undertake a Deemed-to-Satisfy reviewed against the National Construction Code (NCC) 2019 for the proposed change of use to a food manufacturing factory.

2.0 PURPOSE

The purpose of this report is to provide NCC assessment of the design documentation for Development Consent submission to the Consenting Authority for the proposed development.

3.0 SCOPE

The assessment of the proposed development is based on design documentation prepared by BD Architecture Interiors.

TABLE 1 - REFERENCED DESIGN DOCUMENTATION

DRAWING No.:	REVISION	DRAWING TITLE	DATE
A03	H	PROPOSED FOOD PLANT	23.07.19
!05	B	EAST ELEVATION	

4.0 NCC BUILDING PARAMETERS

The following building characteristics have been derived from the NCC:

TABLE 2 - BUILDING PARAMETERS (UNIT 35 ONLY)

BUILDING CLASSIFICATION	
◆ Ground Floor	Food Manufacturing (Class 8)
◆ First Floor	7b (factory)
RISE IN STOREYS	TYPE OF CONSTRUCTION
◆ Four (4)	◆ Type C

5.0 CONCLUSION

This report comprises a summary of the key compliance issues identified under the relevant and applicable clause assessment in Appendix 1.


APPENDIX I – CLAUSE-BY-CLAUSE NCC ASSESSMENT
TABLE 3 – KEY

◆ PERFORMANCE SOLUTION	Performance Solution is required to achieved compliance with subject Clause by addressing the respective Performance Requirement
◆ CAPABLE OF COMPLYING	The Design Documents does not show sufficient details for compliance with the subject Clause. Further details required
◆ COMPLIES	The Design Documents has achieved compliance with the subject Clause
◆ DOES NOT COMPLY	The Design Documents has not achieved compliance with the subject Clause
◆ EXISTING	The subject Clause is Not Applicable to the proposal / development as it existing.
◆ NOTED	The subject Clause is an informative and for guidance only
◆ NOT ASSESSED	The subject Clause has not been assessed
◆ NOT APPLICABLE	The subject Clause is Not Applicable to the proposal / development
◆ NOT SPECIFIED	The Design Documents does not specify the requirements to address compliance with the subject Clause. Further details required
◆ UPGRADE	The existing building is required to be upgraded for the subject clause

TABLE 4 – BUILDING PARAMETERS

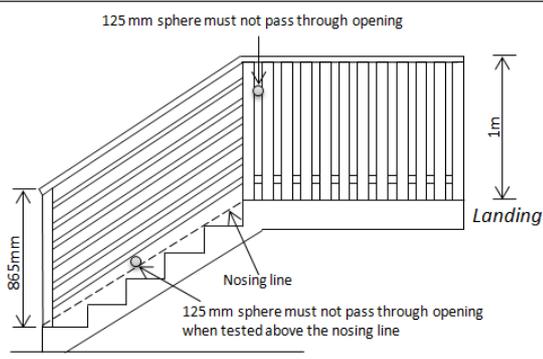
CLAUSE	DESCRIPTION	STATUS – COMMENTS
SECTION B – STRUCTURE		
PART B1 – STRUCTURE PROVISIONS		
B1.2	Determination of individual actions	Capable of Complying A structural adequacy statement prepared by a suitably qualified Structural Engineer stating the existing building elements can support the proposed use.
SECTION C – FIRE RESISTANCE		
PART C1 – FIRE RESISTANCE AND STABILITY		
C1.1	Type of construction required	Type C Construction is required for the proposal (Refer to Appendix II).
C1.2	Calculation of rise in storeys	The existing Unit has a rise in storey of two (2).
PART C2 – COMPARTMENTATION AND SEPARATION		
C2.3	Large isolated buildings	Not Applicable The building is not a large isolated building.
C2.8	Separation of classifications in the same storey	Capable of Complying Different classifications located alongside one another in the same storey must have: (a) each building element in that storey with the higher FRL prescribed in Spec. C1.1; or (b) the parts separated in that storey by a fire wall having the higher FRL prescribed in Spec. C1.1 as applicable; or

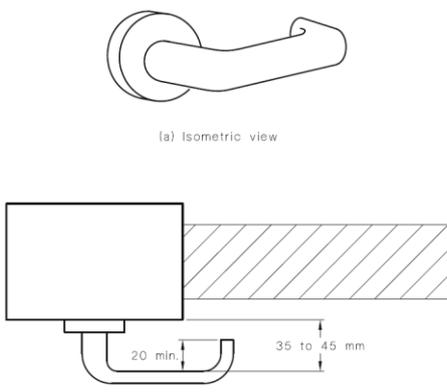


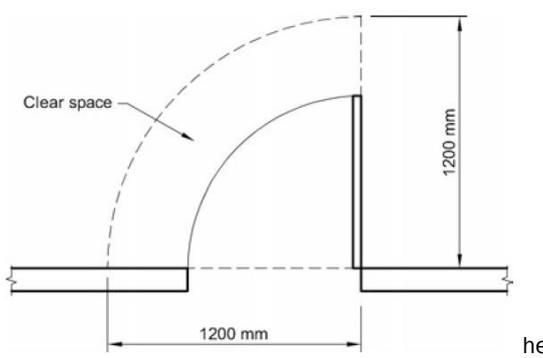
CLAUSE	DESCRIPTION	STATUS – COMMENTS
		(c) where one part is a carpark complying with Table 3.9, 4.2 or 5.2 of Spec.C1.1, the parts may be separated by a fire wall complying with the appropriate Table. A structural adequacy statement prepared by a suitably qualified Structural Engineer stating the fire separation wall between the units can achieve 90/i90/90 FRL.
C2.9	Separation of classifications in different storeys	Not Applicable
PART C2 – COMPARTMENTATION AND SEPARATION		
C3.2	Protection of openings in external wall	Complies
C3.3	Separation of external walls and associated openings in different fire compartments	Complies
SECTION D – ACCESS AND EGRESS		
PART D1 – PROVISION FOR ESCAPE		
D1.1	Application of part	Noted The Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 2 or 3 building or a Class 4 part of a building.
NSW D1.2	Number of exits required	Complies
D1.3	When fire isolated exits are required	Not Applicable
D1.4	Exit travel distances	Complies
D1.5	Distance between alternative exits	Complies
NSW D1.6	Dimensions of exits and paths of travel to exits	Capable of Complying In a required exit or path of travel to an exit— (a) the unobstructed height throughout must be not less than 2m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and (b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than 1m Where stairways are required to have handrails on both sides they must be 1000mm wide when measured. Dimensional architectural drawings for shall be provided with the Construction Certificate submission. Fully dimensional architectural plans demonstrating compliance with this provision shall be provided with the Construction Certificate submission.
NSW D1.10	Discharge from exits	Capable of Complying An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. Appropriate bollards are to be incorporate for path of travel from to prevent vehicles blocking the exit with the Construction Certificate submission.
PART D2 – CONSTRUCTION OF EXITS		
NSW D2.13	Goings & risers	Capable of Complying A stairway must have not more than 18 nor less than 2 risers in each flight. The going, riser and steepness dimension of new stairs must be within the following range: (a) Riser (R) – 115 - 190mm



CLAUSE	DESCRIPTION	STATUS - COMMENTS																	
		(b) Going (G) – 250 - 355mm (c) steepness (2R + G) 550- 700mm (d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (e) treads which have: (i) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or (ii) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and (f) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and (g) in a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least 30°; and (h) in the case of a <i>required</i> stairway, no winders in lieu of a landing. Typical details of riser & goings demonstration compliance shall be provided with the Construction Certificate submission.																	
D2.14	Landings	Capable of Complying In a stairway— (a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must— (i) be not less than 750mm long, and where this involves a change in direction, the length is measured 500mm from the inside edge of the landing; and (ii) have a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or (iii) a strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586, where the edge leads to a flight below <table border="1"> <thead> <tr> <th rowspan="2">Table D2.14 SLIP-RESISTANCE CLASSIFICATION Application</th> <th colspan="2">Surface conditions</th> </tr> <tr> <th>Dry</th> <th>Wet</th> </tr> </thead> <tbody> <tr> <td>Ramp steeper than 1:14</td> <td>P4 or R11</td> <td>P5 or R12</td> </tr> <tr> <td>Ramp steeper than 1:20 but not steeper than 1:14</td> <td>P3 or R10</td> <td>P4 or R11</td> </tr> <tr> <td>Tread or landing surface</td> <td>P3 or R10</td> <td>P4 or R11</td> </tr> <tr> <td>Nosing or landing edge strip</td> <td>P3</td> <td>P4</td> </tr> </tbody> </table> Typical details of landings demonstration compliance shall be provided with the Construction Certificate submission.	Table D2.14 SLIP-RESISTANCE CLASSIFICATION Application	Surface conditions		Dry	Wet	Ramp steeper than 1:14	P4 or R11	P5 or R12	Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11	Tread or landing surface	P3 or R10	P4 or R11	Nosing or landing edge strip	P3	P4
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Nosing or landing edge strip	P3	P4																	
NSW D2.15	Thresholds	Capable of Complying The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless: (a) in patient care areas in a Class 9a health-care building, the door sill is not more than 25mm above the finished floor level to which the doorway opens; or (b) in a building required to be accessible by Part D3, the doorway opens to a road or open space and is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (c) in other case the doorway opens to a road or open space, external stair landing or external balcony and the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens. Details demonstration compliance is required at Construction Certificate submission.																	

CLAUSE	DESCRIPTION	STATUS – COMMENTS
NSW D2.16	Balustrades and other barriers	<p>Capable of Complying</p> <p>A continuous balustrade must be provided along the side of any roof to which public access is provided, any stairway or ramp, any floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like and along the side of any delineated path of access to a building, if it is not bounded by a wall and its level above the surface beneath, is more than 1 m, in accordance with the following:</p> <ol style="list-style-type: none"> 865mm above the nosings of the stair treads or the floor of a ramp; and 1m above the floor of any access path, balcony, landing or the like; and any opening do not permit a 125mm sphere to pass through it and for stairs, the opening is measured above the nosing line of the stair treads; and for floors more than 4 m above the surface beneath, any horizontal or near horizontal elements between 150 mm and 760 mm above the floor must not facilitate climbing. <p>Details demonstration compliance is required at Construction Certificate submission.</p> <div data-bbox="651 761 1404 1265" style="border: 1px solid black; padding: 5px;"> <p>Figure 3.9.2.1 BALUSTRADE OR OTHER BARRIER CONSTRUCTION</p> <p>Note: For the purpose of this figure, a 125 mm sphere must not pass between rails or through the gap when tested above the nosing line</p>  <p>The diagram illustrates a balustrade on a landing and a staircase. A vertical dimension line indicates a height of 1m above the landing surface. A horizontal dimension line indicates a height of 865mm above the nosing line of the stairs. A 125mm sphere is shown being tested above the nosing line, with a note stating it must not pass through the opening. Another note states that the sphere must not pass through the opening when tested above the nosing line.</p> </div>
D2.17	Handrails	<p>Capable of Complying</p> <p>Handrails must be—</p> <ol style="list-style-type: none"> located along at least one side of the ramp or flight; and located along each side if the total width of the stairway or in any other case, fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and between stair flight landings and have no obstruction on or above them that will tend to break a hand-hold; and in a required exit serving an area required to be accessible, designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail required by (a)(iii)(B). <p>Details demonstration compliance is required at Construction Certificate submission.</p>
D2.20	Swinging doors	Complies
NSW D2.21	Operation of latch	<p>Capable of Complying</p> <p>All doors in a required exit, forming part of or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by:</p> <ul style="list-style-type: none"> a single hand downward action on a single device located between 900mm and 1.1m from the floor and if serving an area required to be accessible by Part D3 <ol style="list-style-type: none"> be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and have clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35mm and not more than 45mm; or a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor.

CLAUSE	DESCRIPTION	STATUS - COMMENTS
		 <p>(a) Isometric view</p> <p>Door schedule demonstration compliance is required at Construction Certificate submission.</p>
PART D3 – ACCESS FOR PEOPLE WITH DISABILITY		
D3.4	Exemptions	Noted This exemption applies to a food manufacturing plant, which is deemed inappropriate because of the particular purpose for which the area is used.
D3.7	Hearing augmentation	Noted A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed: (b) in a room in a Class 9b building; or (c) in an auditorium, conference room, meeting room or room for judicatory purposes; or (d) at any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider.
SECTION E – SERVICES AND EQUIPMENT		
PART E1 – FIRE FIGHTING EQUIPMENT		
E1.3	Fire hydrants	Capable of Complying A suitably qualified Fire service engineer to provide design statement that the existing hydrant system can provide coverage to AS 2419.1-2005 with the Construction Certificate submission.
E1.4	Fire hose reels	Capable of Complying A suitably qualified Fire service engineer to provide service plans, specification and Design Statement demonstrating compliance with this provision and to AS 2441-2005 with the Construction Certificate submission.
E1.5	Sprinklers	Not Applicable
E1.6	Portable fire extinguishers	Capable of Complying Architect to provide location plans and Design Statement demonstrating compliance with this provision and to AS 2444-2001 with the lodgement of the construction certificate.
PART E2 – SMOKE HAZARD MANAGEMENT		
E2.2	General Requirements	Not Applicable

CLAUSE	DESCRIPTION	STATUS - COMMENTS
PART E4 – EMERGENCY LIGHTING, EXIT SIGNS AND WARNING SYSTEMS		
E4.2	Emergency lighting requirements	Capable of Complying A suitably qualified fire service engineer to provide specification, plans and Design Statement demonstrating compliance with this provision and AS2293.1-200-5 with the submission of the Construction Certificate.
E4.5	Exit signs	Capable of Complying A suitably qualified fire service engineer to provide specification, plans and Design Statement demonstrating compliance with this provision and AS2293.1-200-5 with the submission of the Construction Certificate.
NSW E4.6	NSW E4.6 Direction Signs	Capable of Complying A suitably qualified fire service engineer to provide specification, plans and Design Statement demonstrating compliance with this provision and AS2293.1-200-5 with the submission of the Construction Certificate.
SECTION F – HEALTH AND AMENITY		
PART F2 – SANITARY AND OTHER FACILITIES		
F2.2	Calculation of the number of occupants and facilities	Complies
F2.3	Facilities in Class 3-9 Buildings	Capable of Complying Dimensional detail plans of the sanitary facility demonstrating compliance with this provision should be lodged with the construction certificate.
F2.5	Construction of sanitary compartments	<p>Capable of Complying</p> <p>Sanitary compartments must have doors and partitions that separate adjacent compartments and extend—</p> <ul style="list-style-type: none"> • from floor level to the ceiling in the case of a unisex facility; or • to a height of not less than 1.5 m above the floor if primary school children are the principal users; or • 1.8 m above the floor in all other cases. <p>The door to a fully enclosed sanitary compartment must—</p> <ul style="list-style-type: none"> • open outwards; or • slide; or • be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2 m, measured in accordance with the figure below between the closet pan within the sanitary compartment and the doorway. <div style="text-align: center;">  </div> <p>Dimensional architectural drawings for the clear space between door swing and closet pan shall or alternatively a door schedule utilising lift off hinges to be submitted with the Construction Certificate submission.</p> <p>Dimensional architectural drawings for partitions and doors to sanitary facility stalls to be submitted with the Construction Certificate submission.</p>



CLAUSE	DESCRIPTION	STATUS - COMMENTS
PART F3 - ROOM SIZES		
F3.1	Height of rooms and other spaces	Noted Dimensional architectural drawings for ceiling heights to be submitted with the Construction Certificate submission.


APPENDIX II – TYPE OF CONSTRUCTION
TABLE 5 – TYPE C CONSTRUCTION

BUILDING ELEMENT	CLASS 7B OR 8
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any <i>fire-source feature</i> to which it is exposed is— <ul style="list-style-type: none"> ◆ Less than 1.5 m ◆ 1.5 to less than 3 m ◆ 3 m or more 	90/90/90 60/60/60 -/-/-
EXTERNAL COLUMN not incorporated in an <i>external wall</i> , where the distance from any <i>fire-source feature</i> to which it is exposed is— <ul style="list-style-type: none"> ◆ Less than 1.5 m ◆ 1.5 to less than 3 m ◆ 3 m or more 	90/-/- 60/-/- -/-/-
COMMON WALLS and FIRE WALLS—	90/90/90
INTERNAL WALLS— <ul style="list-style-type: none"> ◆ Bounding <i>public corridors</i>, public lobbies and the like ◆ Between or bounding <i>sole-occupancy units—</i> ◆ Bounding a stair if <i>required</i> to be rated— 	-/-/- -/-/- 60/60/60
ROOFS	-/-/-



APPENDIX III - FIRE SAFETY SCHEDULE

TABLE 6 – PROPOSED FIRE SAFETY SCHEDULE

Fire Safety Measures	Standard of Performance
Emergency lighting	NCC E4.2, E4.4 & AS 2293.1-2005
Exit signs	NCC E4.5, E4.6, E4.8 & AS 2293.1-2005
Hose reel system	NCC E1.4 & AS 2441-2005
Portable fire extinguishers	NCC E1.6 & AS 2444-2001