

Construction of exits

Access and egress



TOOLBOX

GREENHOUSE CONSTRUCTION AND SAFE OPERATION

Construction of exits should be completed in accordance with the National Construction Code (NCC). To ensure people can move safely to and within a greenhouse it must have walking surfaces with safe gradients, doors installed that avoid risk of occupants being blocked or trapped, as well as any stairways and ramps allowing safe passage.

Under the current NCC Part H3, the Deemed-to-Satisfy Provisions of Part D2 do not apply to a farm shed, except for D2.13, D2.14, D2.16, D2.17 and D2.24. This is further explained in the table below.

Table 1: Deemed-to-Satisfy Provisions for construction of exits

NCC SECTION	AREA	DEEMED-TO-SATISFY PROVISIONS FOR GREENHOUSES
D2.13	Goings and risers	<p>A stairway must have:</p> <ul style="list-style-type: none">- Not more than 18 and not less than 2 risers in each flight- Going (G), riser (R) and quantity (2R + G) in accordance with NCC- Constant goings and risers throughout each flight- Risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads- Treads which have a surface with a slip-resistance classification, or a nosing strip with a slip-resistance classification not less than specified in the NCC <p>In the case of a non-required stairway the:</p> <ul style="list-style-type: none">- Stairway must have not more than 3 winders in lieu of a quarter landing, and not more than 6 winders in lieu of a half landing- Going of all straight treads must be constant throughout the same flight- Going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight.
D2.14	Landings	<p>In a stairway:</p> <ul style="list-style-type: none">- 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:- Be not less than 750 mm long- Have a surface with a slip-resistance classification compliant with the NCC- Have a strip at the edge of the landing with a slip-resistance classification not less than that listed in the NCC.

KEY MESSAGES

- Greenhouses or grow structures can be classified under the sometimes onerous and inappropriate classification of Class 7 or Class 8 within the National Construction Code (NCC)
- It's important to understand the construction of exit requirements of your greenhouse under the NCC
- There are several Deemed-to-Satisfy Provisions for greenhouses under the NCC that you need to be aware of, which cover stairs, platform handrails, landings and swing doors



www.greenhousetoolbox.com

Table 1 continued

NCC SECTION	AREA	DEEMED-TO-SATISFY PROVISIONS FOR GREENHOUSES
D2.16	Barriers to prevent falls	<ul style="list-style-type: none"> - A continuous barrier must be provided along the side of any of the following if the trafficable surface is 1 m or more above the surface beneath: <ul style="list-style-type: none"> - Roof - Stairway or ramp - Floor, corridor or hallway - Any delineated path of access to a building - The above requirements do not apply to: <ul style="list-style-type: none"> - Loading dock - Fixed platforms, walkways, stairways and ladders - Retaining wall - A required barrier must be constructed in accordance with the NCC (considering barrier heights, openings and climbability), which includes those constructed of wire (horizontal, non-continuous vertical and continuous vertical systems).
D2.17	Handrails	<p>Handrails must be:</p> <ul style="list-style-type: none"> - Located along at least one side of the ramp or flight - Located along each side if the total width of the stairway or ramp is 2 m or more - Fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface - Continuous between stair flight landings - In a required exit serving an area required to be accessible.
D2.24	Protection of openable windows	<p>A barrier:</p> <ul style="list-style-type: none"> - With a height not less than 865 mm above the floor is required to an openable window - Must not permit a 300mm sphere to pass through it in fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps.
H3.7	Swinging doors	A swinging door in a required exit or forming part of a required exit need not swing in the direction of egress if it serves a greenhouse.



An innovative approach to constructions of exits in low technology membrane structures is to hang an appropriate cutting implement at designated locations. This tool can be used to cut through the plastic membrane and create an exit for escape in emergency situations. For further information on the technology levels please refer to the *Getting the basics right* toolbox fact sheet in this series.

Read the toolbox fact sheets *Access and egress* and *Fire* in this series for further information on access and egress requirements.

REFERENCES AND FURTHER READING

Australian Building Codes Board (2016) National Construction Code 2016; Volume 1; Building Code of Australia; Class 2 to Class 9 Buildings, Commonwealth of Australia and States and Territories of Australia:

Part H3 Farm Building and Farm Sheds, pp. 377-380

Section D, Section D2.13, D2.14, D2.16, D2.17 and D2.24 Access and Egress, pp. 155-218

IMPORTANT QUESTIONS TO ASK

- Have I considered and appropriately addressed the Deemed-to-Satisfy Provisions that cover stairs, platform handrails, landings and swing doors under the NCC?
- Who is my local accredited building certifier and/or professional fire engineer with experience in the protected cropping industry?