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Assistant Director-General, Building Policy  
Department of Energy & Public Works

**By Email**

**Provision for Electrical Vehicle (EV) charging in NCC 2022 – ‘Special Hazard’**

Ahead of the upcoming discussion on fire safety with respect to EV charging and building fire protection systems, referred to in the Ministerial Construction Council communique of the 28 February 2023 meeting, the following sets out views of Master Builders on this important matter.

Queensland Fire and Emergency Services (QFES) identified EVs in buildings as a ‘special hazard’ back in January 2022. From 1 October 2023 the National Construction Code 2022 (NCC) will require the installation of electrical distribution boards to facilitate the later installation of EV charging in buildings.

In light of the ‘special hazard’ designation Master Builders requests Government provide clear guidance and clarification on compliance with the NCC requirement. Further, the new requirement should only commence at least 6 months after the publication of the guidance.

**NCC requirements and the ‘Special Hazard’**

As you would be aware, Part J of the NCC, scheduled to commence 1 October 2023 in Queensland, includes a requirement to provide electrical distribution boards dedicated to electric vehicle charging for Class 2, 3, 5, 6 7b, 8 and 9 buildings with at least 9 carparking spaces.

Queensland Fire and Emergency Services (QFES) has published a position statement (current version 07/2022) covering EV charging stations and electric vehicle carparks with the following statement:

*“QFES consider the electrical distribution installations for EV and the allocation of dedicated EV carpark spaces within a building represent a special hazard for Firefighters under National Construction Code Part E1.10 Provision for special hazards.”*

NCC Part E1.10 (part E1D17 under NCC 2022) Provision for Special Hazards requires:

Suitable additional provision must be made if special problems of fighting fire could arise because of—

- (a) the nature or quantity of materials stored, displayed or used in a building or on the allotment; or
- (b) the location of the building in relation to a water supply for fire-fighting purposes.

In its position statement, QFES requests:

*“the building certifier consider the suitability of existing Deemed to Satisfy provisions, in regard to the inclusion of EV spaces within a carpark, to provide suitable levels of protection for occupants and Fire Brigade intervention actions, such as:*

- *Fire detection and early warning intercommunication systems*
- *Smoke management and air handling systems*
- *Fire hydrants and sprinklers*
- *Fire resistance of bounding construction”.*

It is noted that the NCC requirements are only to make provision for EV charging (electrical distribution board), allowing for the charging equipment to be more readily installed by the building owners at a later date should they wish. It is only once dedicated EV parking spaces or charging stations are installed that the ‘special hazard’ applies.

However, there is no requirement for a certifier or fire engineer to sign off the subsequent installation of EV charging equipment in a building if that is the only work undertaken. There is therefore no obligation for an assessment of safety of the building’s occupants or safety for firefighters when EV charging equipment is installed in a building post-completion. This will mean at no point in the process will the ‘special hazard’ be given consideration.

Should there be a subsequent fire as a result of EVs or EV charging, past experience with combustible cladding has shown that building to the requirements of the NCC does not remove the risk or liability for the building owners or the industry.

## Safety for building occupants

We acknowledge there is currently insufficient understanding of the nature of the risks with EVs in buildings. It is understood the Australian Building Codes Board (ABCB) is undertaking further work to better understand the risks.

We are pleased the ACCC is also investigating the risks and regulations associated with lithium-ion batteries. It is appropriate that the obligations be placed on battery and charger manufacturers, importers and retailers to ensure only safe, certified batteries and chargers are available for use, and that only safe batteries may be charged with safe chargers within a building.

However, the requirement for electrical distribution board installation for EVs in buildings has already been mandated from 1 October 2023. Existing buildings are also installing EV charging and EV dedicated car parking.

Elimination of a hazard is always the most effective control. It is unclear why the Queensland Government is facilitating the provision for a 'special hazard' to be introduced into Queensland buildings before the risks have been fully considered and addressed.

Government must take the lead on this to ensure the safety of building occupants.

### Request for urgent clarification and guidance

We are concerned the NCC does not adequately, or with any clarity, address the requirements for a building with current, or future provision for, EV spaces within a carpark to provide suitable levels of protection for occupants and fire brigade intervention actions.

In order to address the 'special hazard' it is important that those involved in constructing impacted buildings understand EV charging facilities may involve substantial redesign of components of the building as well as substantial additional construction costs. For existing buildings, it is important to understand whether owners have any obligations when installing provision for EV charging and if so, what these are.

We have previously sought confirmation from the Department that the Queensland Government position is that provision of the distribution board to enable future installation of charging equipment as required by the NCC does not require additional fire protection requirements.

We have also previously asked whether any additional provision will be made under the *Building Fire Safety Regulation* prescribing obligations for owners should EV charging equipment later be installed in a building.

We understand the Department is awaiting the ABCB's further consideration of the risks and/or advice from QFES.

We also understand there are views within the Department that EV fires are not a common occurrence. However, whether or not electric car battery fires are common is not the issue to address. For as long as there is a QFES Position Statement identifying the 'special hazard', this must be taken into account during design and construction of the building.

### NCC commencement reliant on provision of guidance

Master Builders strongly urges Government to ensure clarity is provided as a priority, for those procuring, designing and pricing building projects that contain EV charging readiness.

We request the Queensland Government publish clear guidance for building industry participants to explain the obligation to comply with part E1D17 of the NCC given the QFES Position Statement on a 'special hazard'. Guidance is also needed for building owners as to their obligations when installing EV charging equipment.

The guidance must be available at least 6 months before the NCC 2022 Part J provisions commence (currently scheduled for 1 October 2023). Buildings going through design and approvals now are already needing to address this issue.

We look forward to further discussion on this critical issue.

Regards,

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