

Fire Stopping of Substation penetrations

ISSUE IDENTIFIED:

It has been noticed in a number of substation buildings that cable **penetrations** through walls (between what are referred to as fire cells) have **not** been **fire stopped** or **damaged** fire stopping has **not** been **repaired**.

In some instances, the high cost and reliance on specialist sub-contractors to install or repair certified fire stopping in compliance with Section 8.7 of TP.DS 61.06 has been a deterrent to applying fire stopping.

Certified fire stopping is a **requirement** where:

- The building is subject to a Building Warrant of Fitness (e.g. Haywards)
- Certified fire stopping is part of the **Contract Scope** as the asset is high value and it is economically justified.



Figure 1. example missing fire stopping

Certified fire stopping is a **requirement** for **some** Transpower **substations**. To provide specific guidance, Transpower has issued TP.DS 61.06 SA2 (10/18). Fire stopping is needed to limit the spread of fire and smoke throughout the building. Fire is a clear hazard to life and assets. Smoke reduces visibility and can contain toxins which are both hazards during emergency egress by personnel. Smoke contains corrosive contaminants that are deposited on all surfaces, such as printed circuit boards. This reduces the reliability and working life of critical equipment.

For these reasons fire stopping, **certified** or **non-certified** is **required** within <u>ALL</u> Transpower **substation** buildings.

Fire stopping is only applicable to penetrations through substation internal building walls, floors and ceilings but NOT to cables or building services entering the building via sub-surface penetrations as these must have an effective water barrier.

CONTRIBUTING FACTORS:

- Certified fire systems installer costs can be prohibitive and not adequately allowed for in project budgets
- Situation exacerbated by the need to provide access and safety supervision for the fire systems installer

ACTIONS TAKEN TO PREVENT REOCCURENCE:

- Service Advisory **TP.DS 61.06 SA2 Substation Buildings Internal Fire Stopping** issued to provide specific guidance on Transpower approved solutions for non-certified fire stopping of penetrations
- **TP.DS 61.06 Substation fire mitigation**, Issue 5.1 (10/18) has been updated to include the requirements for non-certified fire stopping in Section 8.8

LEARNINGS FROM THIS

- Service Providers must ensure all penetrations are correctly fire stopped before leaving site
- Service Delivery Managers need to actively monitor compliance with TP.DS 61.06, SA2
- Project Managers to ensure these objectives are clear in all Contract conditions

For more information, please contact:

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