

selo[®]

Concealed Frame Doorsets
Riser Doors & AOVs

Sustainable, Reusable **Temporary Fire Doors**

**A Step towards more environmentally
friendly construction practices.**

NOVEMBER 2023



Sustainable
Doors & Frames

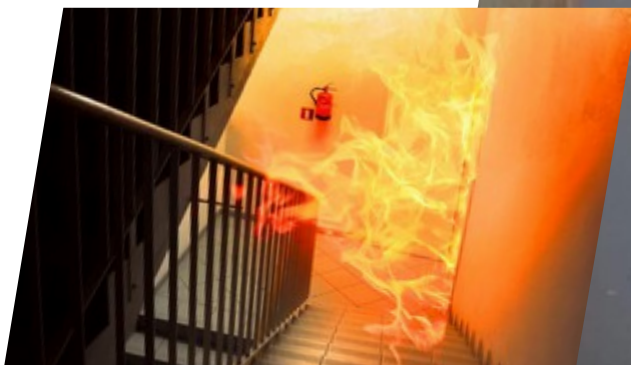


Construction and demolition waste is a significant *Environmental* concern, contributing to greenhouse gas emissions.

In recent years, there has been growing demand for more sustainable practices on sites to reduce the impact construction has on the environment.

One area in particular is around the use of timber temporary fire doors. There are several requirements for these set out in the Joint Code of Practice for Fire Safety on Construction Sites, but here are 3 key areas that must be considered:

1. **Compliance**
2. **Sustainability**
3. **Cost**





1. Compliance

Whilst sustainability is a key factor we are all striving for, compliance is of the utmost importance, especially when it comes to life safety on construction sites.

Live sites are the highest risk of fires breaking out, and can often be well populated with access restricted from works being carried out etc. Therefore, fire doors, temporary or otherwise, must be tested and certified in the surrounding wall construction, according to the standards set out in Approved Document B.

Regularly old or incorrect sized doors are patched up and installed into openings that they haven't necessarily been tested with, which renders them non-compliant from the beginning. Then with the wear and tear of a construction site, and moisture from weather and wet trades combined, causes them to damage and swell so they no longer close as they should and won't provide the fire barrier they are there to create.

Some may argue that timber is compliant when installed and it's the responsibility of the subcontractor who fit the doorsets to ensure they remain compliant. Therefore, they need to be using something that is 'fit for purpose in the environment it's expected to perform in'. If not, they become a liability and high-risk in relation to protecting the personnel on site in the event of a fire.



Scan the QR to see a short overview of the common **timber door issues** found on site.

Non-compliant installed timber fire doors

- A. Extra lipping screwed on to increase door width
- B. Hinges cut out for the opposite handed door



B.



2. Sustainability

A key component when looking at sustainability is carbon, so if we look at the life of a timber fire door set from raw state to end-of-life, there is a significant amount of carbon produced for each one.

According to a study carried out by TRADA, the average amount of embodied carbon in an FD30 softwood door set is 135kg CO₂e. Then when it comes to end-of-life how the door set is destroyed will make a difference to how much more carbon is produced. If it is burned, as a rough estimate, this could produce another 75kg of CO₂.

If the door set is disposed off in landfill it will produce methane as it decomposes, which is even more harmful than carbon dioxide. Based on the average size and weight of a softwood timber fire door set, this could produce around 1.3kg of methane as it decomposes.

Whilst these numbers are relatively low for a single door set, this soon adds up to large quantities as the doors stack up. For instance, a project with 50 temporary fire doors on, if all burned would produce 3,750kg of carbon, or 65kg of methane if sent to landfill.



Scan the QR to discover more about our Asset Management Service - **The most sustainable solution for temporary doors.**





3. Cost

As we all know, cost is always at the forefront of everyone’s mind when it comes to products used on a construction site.

The project has to run on time and within the contractor’s budget in order for them to produce the completed building the client is looking for, but also make a profit themselves allowing them to invest and grow as they have planned. There are 3 main types of cost associated with temporary fire doors:

- 1. Upfront Cost (Initial Purchase & Installation)**
- 2. Maintenance & Repair**
- 3. Wastage & Disposal.**

The Up-front cost is often the only one looked at when procuring temporary fire doors, and more often than not, the cheapest wins. Then there is the installation, which can vary in time depending on the level of pre-assembly the door set arrives in. However, the part that is drastically overlooked is the maintenance and repair costs.

With the rigours of a busy construction site, timber doors get damaged quickly after installation by equipment being forced through, held open by ‘popping’ closers to allow for long items to be carried through, and general heavy use by the many operatives on site. On top of this is the intake of moisture into the timber from weather (buildings are often not watertight at the point of temp door installation) and wet trades, can cause the doors to

swell and jamb in the frame or so they cant even close into the frame opening itself, rendering it effectively useless as a fire barrier.

Over a 2-year project on a large construction site, these doors could require re-visiting every month for maintenance and repair works, and may well need to be replaced during that period at least once depending on weather and site conditions. So the overall cost of using a timber temporary fire door could be 2-3 times the initial outlay cost.

Wastage and disposal costs can also be significant, especially as landfill sites fill up. This also has other knock-on effects, although maybe more intangible but important - corporate responsibility and brand or company reputation.



Scan the QR to discover the hidden costs associated with temporary fire doors





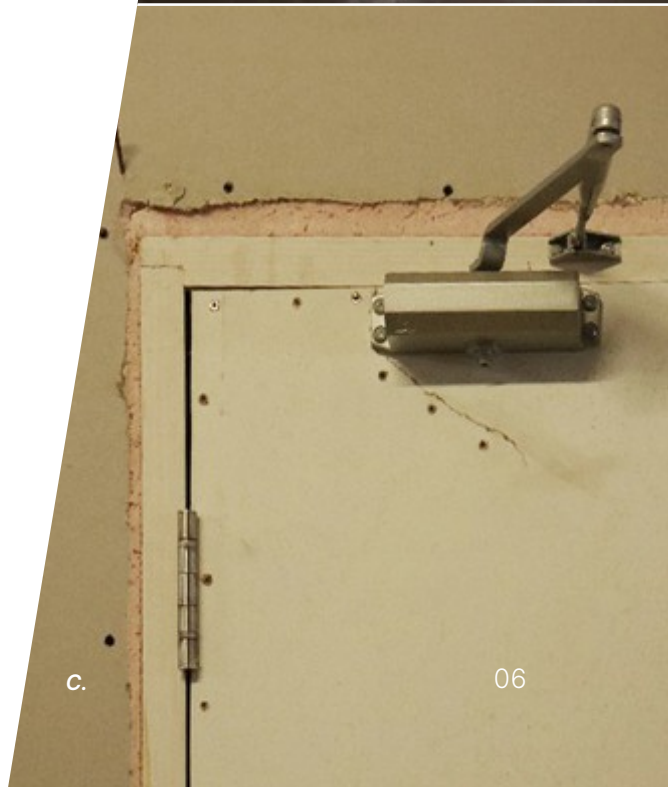
Costly repairs timber fire doors

Cost is always at the forefront of everyone’s mind when it comes to products used on a construction site.

Regular re-visits have to be made to ‘repair’ timber doors by reducing the width or screwing parts of the door together which have broken down (which also renders the door non-compliant straight away) – each visit costing the contractor money for the labour and any materials used for this repair work.



Scan the QR to see how a reusable doorset can save cost compared to a timber door.



Repaired timber fire doors

- A. Door swollen to point of not being able to close.
- B. Lipping cut away to try and allow door to close.
- C. Door face screwed around the closer where it’s de-laminated and broken away.

So whats the solution?

The Join Code of Practice (JCoP) sets out key requirements for temporary fire doors which should be seen as not only best practice but the only practice.

Through our work with Dan Martin, ex-fire-fighter and current UK Fire Safety Manager for Morgan Sindall, Selo were able to develop a product that addresses all of these issues and allows companies to finally have fire barriers on their sites they can have confidence in. The Tempus reusable temporary fire door is metal so not affected by moisture and withstand the rigours of site without the need for any maintenance, and can then be removed and reused on the next project. We have options for purchasing them as an asset or hiring for shorter timescales as required.

Tempus® TEMPORARY FIRE DOORS

Tempus Reusable Temporary Fire Doors are a logical investment for any contractor with a requirement for compartmentation and protection of the vertical and horizontal escape routes, as it eliminates the returns for repairs and maintenance and inevitable replacement, so they quickly become a great cost saver on your project.

This lack of any repairs or maintenance required and then reuse, makes it the logical solution to the whole subject of temporary fire doors, even making cumulative savings in the medium-long term.





“ The Tempus Door solves a number of fundamental, long-standing issues with respect to fire doors in construction. The solutions provided by the door have offered sites the ability to improve both general and fire safety on site.

The sample (in the CHSG boardroom) has also provided us with an excellent teaching aid to develop best practice examples for site! ”

Debbie Clarkson | CEO of the Construction Health & Safety Group

Repaired timber fire doors

- A. Face fixed to concrete opening.
- B. Back side of the Tempus door showing drop seal and push plate.
- C. Multiple doors fitted on fire escape stair cores.

Tempus

Get in touch for more information, and together we can lead the way in helping construction save money and become more sustainable at the same time!

Harry Purdom | Director at Selo

call 07848 452 077
email harry@selo-uk.com

Sustainable
Doors & Frames

