

The Reuse of Doors

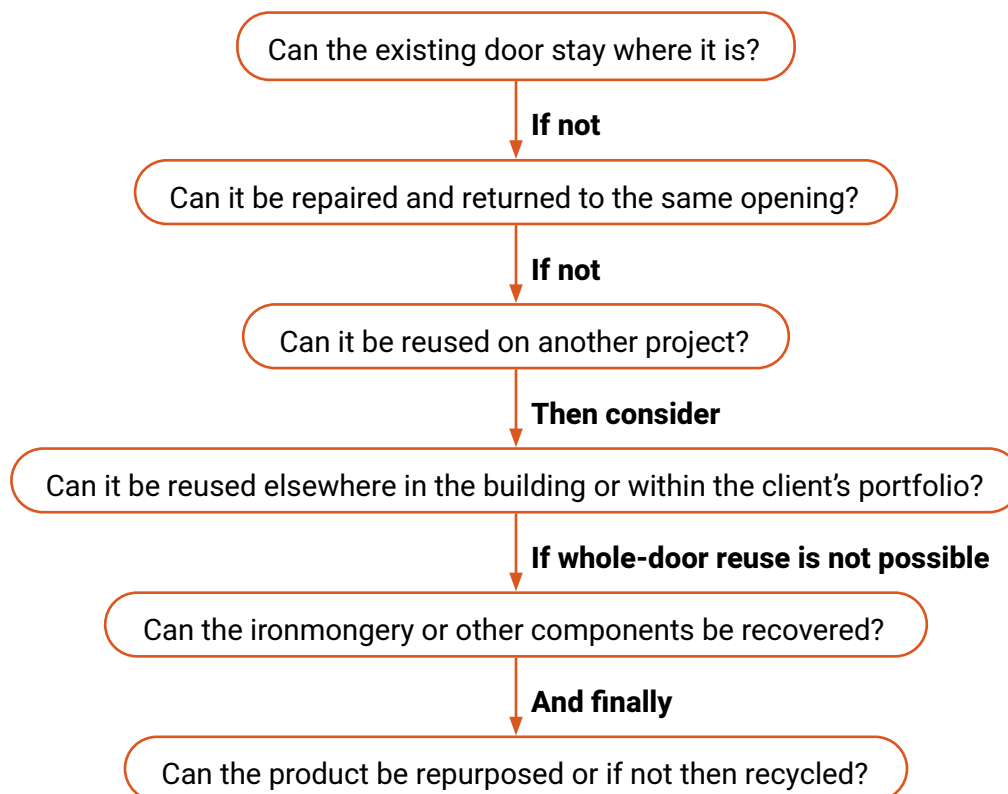
Specify/Procure for Reuse: A summary for design teams, contractors and clients

Make reuse part of the brief – not an afterthought

Doors are often removed from buildings because of refurbishment and changing layouts rather than because they have reached the end of their technical life. Approximately, 470,000 doors are removed from offices each year in England and Wales. Even if only 10% were reused, the potential avoided A1–A3 emissions could be approximately 6,570–24,220 tCO₂e per year, depending on the mix of door types.

If reuse is considered only when a building is being stripped out, many opportunities have already been lost. Design teams, contractors and clients have the power to create demand for reused doors and to influence the design of new doors so they can be reused in the future.

For reuse to be most effective the existing building/ fit out will have been designed with reuse in mind. With or without that being the case, reuse for a current project needs to be considered from the earliest stages with Pre-refurbishment Audits (PRAs) undertaken before design decisions are finalised. In-situ retention and same building reuse are two of the strongest financial opportunities.



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Retention, reuse, component recovery and repurposing are cascading and complementary pathways - rather than treating disposal as the default end point if reuse of the complete unit is not possible.

1. Design for future reuse

Where new doors are required, specify them with their next life in mind. Prioritise standard sizes, consistent hardware positions, durable construction, repairable components, accessible fixings, disassembly without damage and digital product information. Ensure clear maintenance requirements are included.

A digital passport should ideally capture manufacturer, specification, installation, maintenance and performance information and remain accessible throughout the building's life.

2. Audit at an early stage of the design process

Commission a pre-refurbishment, pre-redevelopment or pre-deconstruction audit or material inventory early enough to influence the design. A high-level audit can provide initial triage based on age, value, condition, door type, performance requirements and likely repair burden.

Where reuse is being pursued, this can be followed by a more detailed door schedule recording the door type, dimensions, materials, frame, glazing, ironmongery, condition and repair considerations, value and potential reuse route. Where available, the schedule should also capture the manufacturer and product code, fire and acoustic performance, age, certification and test evidence, maintenance history, and carbon and financial value.

The purpose is to establish which doors can be retained in situ, reused elsewhere, recovered for components, repurposed or recycled.



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3. Design around available doors

If reused doors are available, design using these rather than automatically designing for a new product. This means considering existing door dimensions and frame sizes, alongside opening locations, hardware compatibility, acoustic and fire requirements, accessibility, finishes and appearance, tolerances and availability of matching doors.

Where a client has a portfolio of buildings, consider whether doors removed from one project could meet requirements elsewhere. The strongest reuse opportunities are often found where design, procurement and available assets are aligned early.

4. Specify reuse explicitly

Reuse needs to become a project requirement rather than an optional aspiration. Requirements can be incorporated into employer's requirements, design briefs, procurement documents, specifications, contractor scopes, demolition or deconstruction packages and sustainability requirements.

Tenderers should be asked to explain their approach to identifying doors for reuse, the proportion they propose to reuse, how doors will be removed, protected and stored, how inspection and repair will be managed, how reused doors will be integrated into the design, and how evidence and documentation will be retained and managed.

Contractual clauses and tender requirements are drivers for increasing the proportion of reused products, including doors.

5. Fire doors: bring the right people in early

Fire door reuse requires a different level of assurance. Where existing fire doors are being considered, involve the fire engineer early and establish the required performance in the new location. The fire strategy should be reviewed, available test evidence confirmed, and the complete doorset assessed, including the frame, glazing, seals and ironmongery.

Any repairs or modifications should be identified and the assessment route agreed with Building Control and relevant specialists. The final decision should be documented.

A fire door label alone is not sufficient. Supporting evidence is needed for the complete doorset and installation to follow the relevant manufacturer requirements and test evidence. The emerging pathway for fire door reuse should be proportionate, evidence based and independently assessed, rather than allowing uncertainty to rule out reuse automatically.

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6. Think about the whole-life business case

Do not just compare the purchase price of a new door with the price of a reused door. Compare the whole system.

For a new door, this includes manufacture, purchase, installation and warranty, disposal of the existing door, and associated carbon. For reuse, consider careful deconstruction, inspection, repair or refurbishment, storage, transport, reinstallation and warranty.

Reuse can be financially competitive where it is considered early and well managed. It is generally strongest for in-situ/same-building reuse, projects with good information, higher-value doors and early design integration from the outset.

7. Make reuse someone's responsibility

Nominate a reuse lead or guardian for the project. Their role should be to ensure that the audit happens early, reuse opportunities influence the design, responsibilities are clear, supply and demand are matched, and storage and logistics are planned.

They should also ensure that fire door assurance is addressed, reused doors are included in procurement, and information is retained through handover.

A specification checklist

- ✔ **Before design:** Commission an early pre-redevelopment audit and door schedule audit, identify retention and reuse opportunities, identify potential recipient projects and establish required performance.
- ✔ **During design:** Design around reusable assets where possible, prioritise standard sizes and compatible hardware, allow for repair and refurbishment, consider logistics and storage, and compare whole-life costs.
- ✔ **Procurement:** Include reuse requirements in tender documents, require contractors to demonstrate their reuse approach, define evidence and assurance requirements, and consider take-back and reuse providers.
- ✔ **New doors:** Require digital product information and specify durable, repairable products designed for disassembly and future reuse.

Start with the easiest wins

Prioritise the reuse of non-fire doors and ironmongery alongside the industry developing stronger evidence around pathways for fire door reuse. Non-fire doors generally have fewer certification and liability barriers, while the reuse of ironmongery can provide a relatively simple route to retaining material and carbon value.

Specify for the building you need today – but also to enable reuse in the buildings of tomorrow.