



## Theme: Resource Efficiency

### Summary:

Using a cloud based system, Madaster — a material passport has been created for the building by extracting data from digital models.

The passport supports a Circular Economy through the collation of data which creates a building specific materials bank. This in turn informs on future improvement, adaptability and material reuse.

### Sustainability Benefits:

- Monitors and tracks use of materials in buildings
- Supports circular economy decisions for residual value
- Enables upcycling, reuse & minimising Waste

### Business Benefits:

- Aids the acceleration of the UK construction industry transition to a Circular Economy
- Aligns with clients building management processes for efficient use.

## Materials Passport

### 1 Broadgate

To ensure that 1 Broadgate can become a material bank and contribute to a Circular Economy the project team supported the creation of a cloud based material passport for the building.

With no current viable solutions in the UK, the team partnered with a Dutch company called Madaster, to deliver what is believed to be the first material passport in the UK.

Key data was extracted from structure, Façade and MEP digital models, allowing the Madaster platform to:

- Organise data on building elements, volume, and materials into relevant building layers
- Provide a circular index score enabling review of circular economy strategies such as non-virgin materials, component life extension and end-of-life scenarios

Prior to handover to the building management team the passport will be updated with as-built information and specifications which they can then incorporate in to the building management system processes for the life of the building and beyond.

As a materials passport has not been undertaken on a project of this scale before in the UK, it was put forward and was successful in being recognised by the BRE as an industry Innovation. This recognition by the BRE within its BREEAM assessment method is very rare with only three being awarded in 2021 so to be recognised at such a level is a great achievement for the project.

Learnings from the 1Broadgate Materials Passport process will be taken forward to the 2 Finsbury Avenue project to enable improvements and efficiencies.