Know What Your Buildings Are Made Of — In Real Time

AI-powered Building Passports for UK asset owners, developers & contractors · Powered by Upcyclea

50%+	**£bn**	**2030**
of London building emissions are embodied carbon	in stranded asset risk from unreported Scope 3 exposure	London's carbon neutrality target — GLA Green New Deal

THE CHALLENGE

Operational energy is increasingly regulated and measured. But embodied carbon — the carbon locked into the materials of your buildings — now accounts for more than 50% of whole-life emissions in new UK builds, and is rapidly becoming the next frontier of regulatory scrutiny. The UK Net Zero Carbon Buildings Standard, PAS 2080:2023, BREEAM V7 Mat 01, and the GLA Circular Economy Statement are raising the bar: whole-life carbon reporting is no longer optional for major projects.

Yet most asset owners, developers and contractors cannot answer a simple question: what are your buildings actually made of? Without a verified material inventory, Scope 3 carbon calculations are estimates at best. Reuse potential goes unquantified. BREEAM and PAS 2080 submissions rely on assumptions. And when demolition or renovation comes, valuable materials — steel, glass, aluminium, timber — are destroyed rather than recovered, generating avoidable waste and avoidable carbon.

WHAT IS A BUILDING PASSPORT?

A Building Passport is a verified digital inventory of every product and material in a building — structured, ESG-enriched, and connected to real-time carbon calculations. Think of it as a building's material memory: it knows what every element is made of, where it came from, how much carbon it carries, whether it contains hazardous substances, and what its next life could be.

Upcyclea pioneered the concept of the Building Passport — then called Material Passport — within the EU BAMB research programme in 2015, a decade before it became a regulatory requirement. Today, Upcyclea manages the world's largest library of Digital Product Passports (20,000+) for construction products, recommended by the UK Green Building Council (UKGBC), and deploys Building Passports at portfolio scale across London and the UK for asset managers, developers and contractors.

WHY NOW — THE UK REGULATORY CONTEXT

- **UK Net Zero Carbon Buildings Standard**
  Introduces embodied carbon targets for new builds and major refurbishments. Building Passports provide the material data foundation for compliance.
- **PAS 2080:2023**
  Requires whole-life carbon assessments across the supply chain, from design to demolition. Upcyclea is pre-configured for PAS 2080 reporting.
- **BREEAM V7 Mat 01**
  Whole-Life Carbon credits now require verified material-level data. Building Passports feed directly into BREEAM Mat 01 submissions.
- **GLA Circular Economy Statement**
  Mandates circular economy strategies for all major planning applications in London. A Building Passport is the evidential backbone of a credible CES.
- **SECR & UK SRS S2**
  Scope 3 carbon reporting obligations for large UK companies. Building Passports enable 1-click, audit-ready Scope 3 calculations across portfolios.
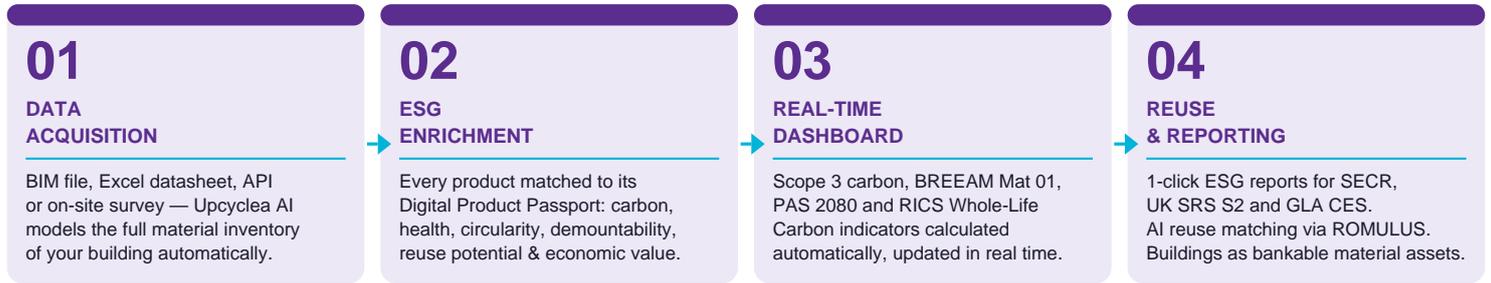
→ **Get your Building Passport — book a free demo today**

HOW IT WORKS

01
DATA ACQUISITION

BIM file, Excel datasheet, API or on-site survey — Upcyclea AI models the full material inventory of your building automatically.

02
ESG ENRICHMENT

Every product matched to its Digital Product Passport: carbon, health, circularity, demountability, reuse potential & economic value.

03
REAL-TIME DASHBOARD

Scope 3 carbon, BREEAM Mat 01, PAS 2080 and RICS Whole-Life Carbon indicators calculated automatically, updated in real time.

04
REUSE & REPORTING

1-click ESG reports for SECR, UK SRS S2 and GLA CES. AI reuse matching via ROMULUS. Buildings as bankable material assets.

WHAT YOU GET — 8 REAL-TIME ESG INDICATORS PER BUILDING

- **Embodied carbon (kgCO2e)**
  Per product, per building, per portfolio. Aligned with PAS 2080 & RICS.
- **Material health score**
  % healthy / non-toxic / unknown — aligned with WELL & Cradle to Cradle.
- **Demountability score**
  Reversibility rating per product — foundation of reuse planning.
- **Economic residual value**
  Financial value of recoverable materials at end of use.

- **Carbon intensity (kgCO2e/m2)**
  Benchmarkable against UK NZC Buildings Standard thresholds.
- **Circularity Index**
  Share of recycled, bio-sourced and demountable materials per building.
- **Reuse share**
  % of materials with a verified next life via ROMULUS or other channels.
- **Scope 3 carbon (1-click)**
  Audit-ready SECR and UK SRS S2 output, generated automatically.

USE CASES BY PROFILE

ASSET OWNERS & DEVELOPERS

- Scope 3 & SECR compliance
- BREEAM Mat 01 submissions
- GLA Circular Economy Statement
- Portfolio decarbonisation strategy
- Residual value of materials

CONTRACTORS & ARCHITECTS

- PAS 2080 carbon management
- Eco-design from DPP library
- Pre-demolition reuse planning
- ROMULUS deposit creation
- Whole-life carbon at design stage

PUBLIC SECTOR & POLICYMAKERS

- GLA CES evidence base
- London Environment Strategy KPIs
- UK Greening Government Commitments
- Urban mining policy data
- Portfolio-level carbon dashboard

WHY UPCYCLEA?

- **10 years ahead**
  We invented the Building Passport concept in 2015 — before it was regulation.
- **UKGBC Recommended**
  Endorsed by the UK Green Building Council since 2023.
- **Portfolio scale**
  From a single building to thousands — same platform, same data standard.

- **20,000+ DPPs**
  The world's largest verified ESG library for construction products.
- **ROMULUS-connected**
  Building Passports feed directly into London's urban mining platform.
- **Proven results**
  96% material recovery rate · 25% reuse by operation · Domofrance, Chanel, S

→ Get your Building Passport — book a free demo today