

Building the Future of Theatre: A Construction Industry Guide to the Theatre Green Book



A Mandate for Change: The Theatre Sector's Unified Path to Net Zero

- Theatres are vital cultural hubs, but many of their buildings are aging and energy-intensive, representing a significant environmental challenge.
- The Theatre Green Book is the sector's unified response—a collective journey to make UK theatre sustainable, with an ambition for all theatres to meet baseline standards by 2026.
- Developed by sustainability experts, architects, and theatre professionals, it provides a complete, practical framework for planning and measuring progress toward Net Zero.

**National
Theatre**

RSC
ROYAL
SHAKESPEARE
COMPANY

SOCIETY OF
**LONDON
THEATRE**

EST 1908

**UK
THEATRE**

EST 1894

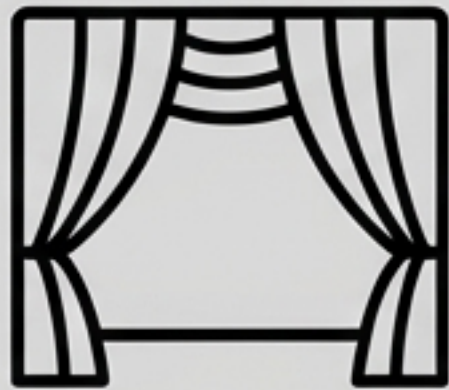
**YOUNG
VIC**

**National
Theatre**
of Scotland

**Chichester
Festival
Theatre**

The Three Pillars of Sustainable Theatre

The *Theatre Green Book* provides a holistic framework, addressing sustainability across three interconnected areas. This guide focuses specifically on **Buildings**- the physical foundation for a greener stage.



Productions

How shows are made, from sets and costumes to touring. Focuses on a circular economy of materials.



Operations

The day-to-day running of a theatre, including catering, waste, travel, and administration.

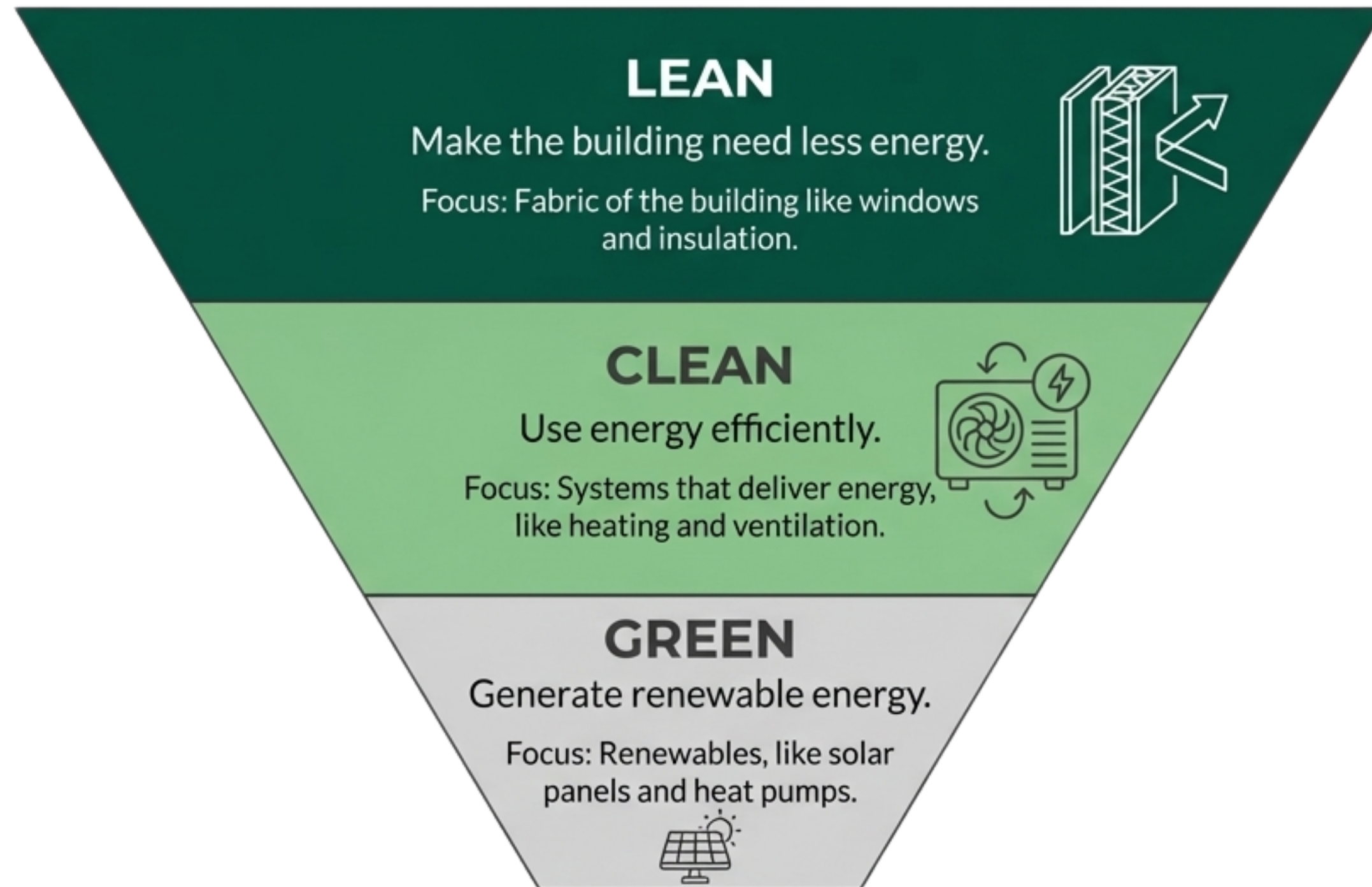


Buildings

Upgrading the physical structure and systems to be energy-efficient and fit for the future.

The Guiding Philosophy: Lean, Clean, Green

All building upgrades and retrofits should follow the energy hierarchy. This ensures the most impactful and cost-effective measures are prioritised, minimising energy savings from the outset.



Why “Lean” First? The Greatest Impact Is in the Fabric.

The data is clear: improving the building envelope delivers the majority of potential energy savings. Your core work on insulation, glazing, and airtightness is the single most effective step toward a Net Zero theatre.

The Business Case

For an average 3,300m² theatre, these savings can amount to approximately **80 tonnes of CO₂** and **save £30,000 per year.**

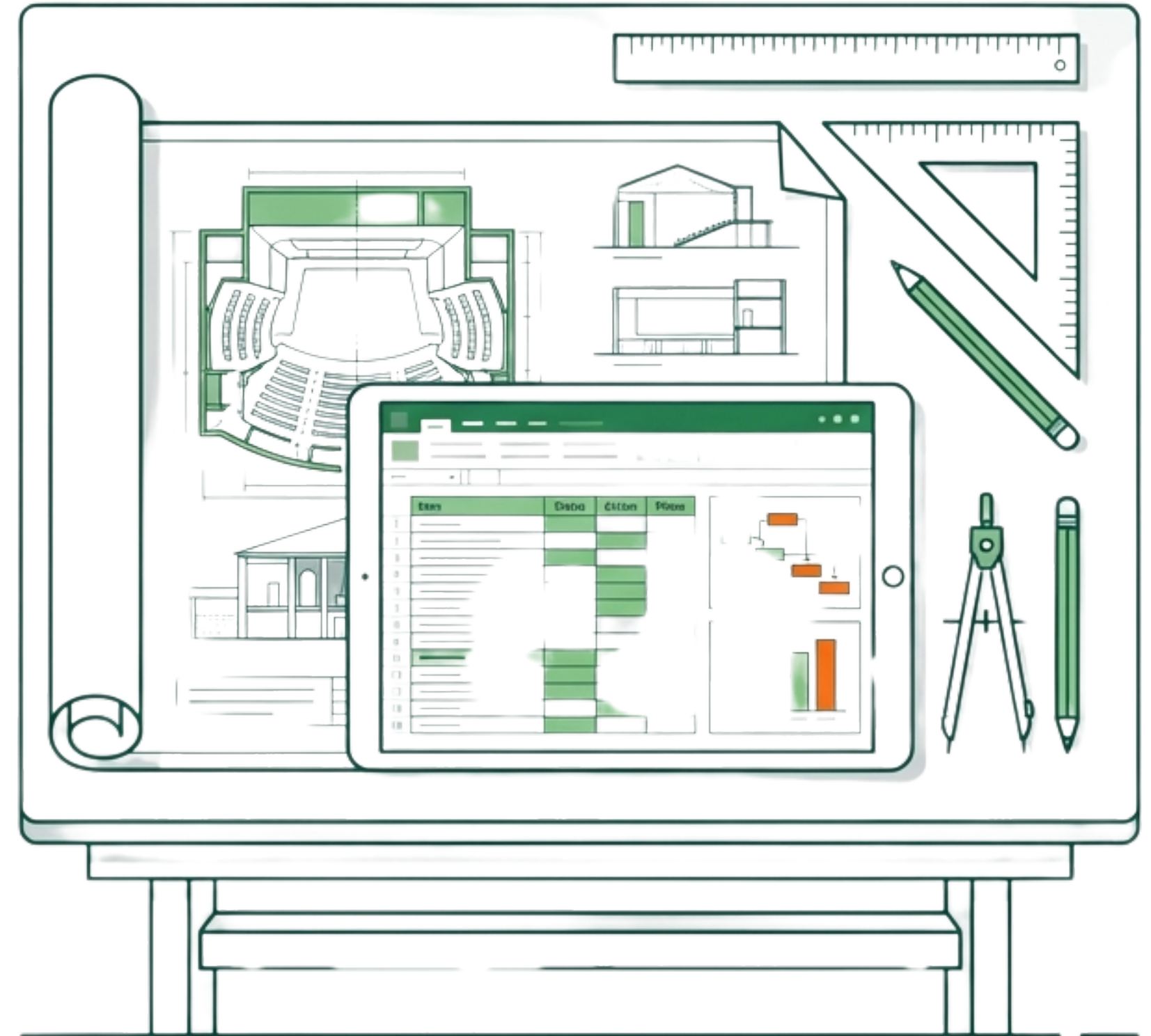


Step 1: Charting the Course with a Sustainability Plan

The journey to a sustainable building begins with a comprehensive assessment and a clear plan. The goal is to move beyond ad-hoc improvements to a strategic, phased approach.

The Key Tool

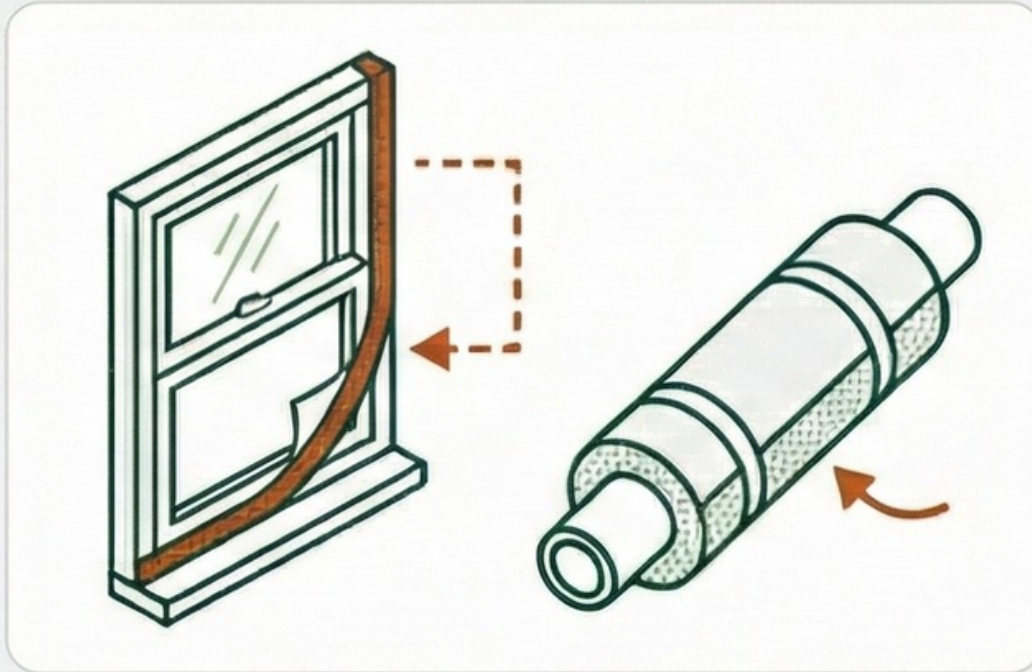
- The Theatre Green Book provides a **Building Survey Tool** (an Excel-based workbook).
- This tool guides users through a series of questions about their building's fabric, systems, and renewables.
- The output is a preliminary **Sustainability Plan** that categorizes necessary actions into three manageable phases, prioritized by impact.



Step 2: The Quick Wins (Reaching 'Basic' Standard)

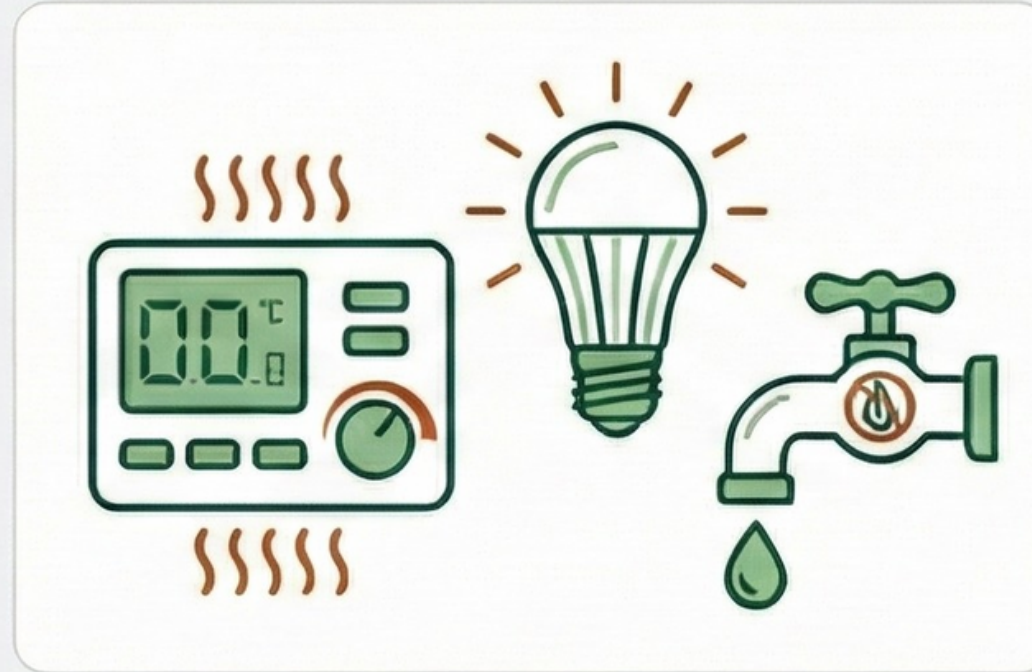
The 'Basic' standard is achieved by implementing "Easy Wins" – improvements that can be made with little cost or disruption, often delivering significant energy savings. These are ideal for integration into annual maintenance schedules or minor works.

Key Examples of Easy Wins



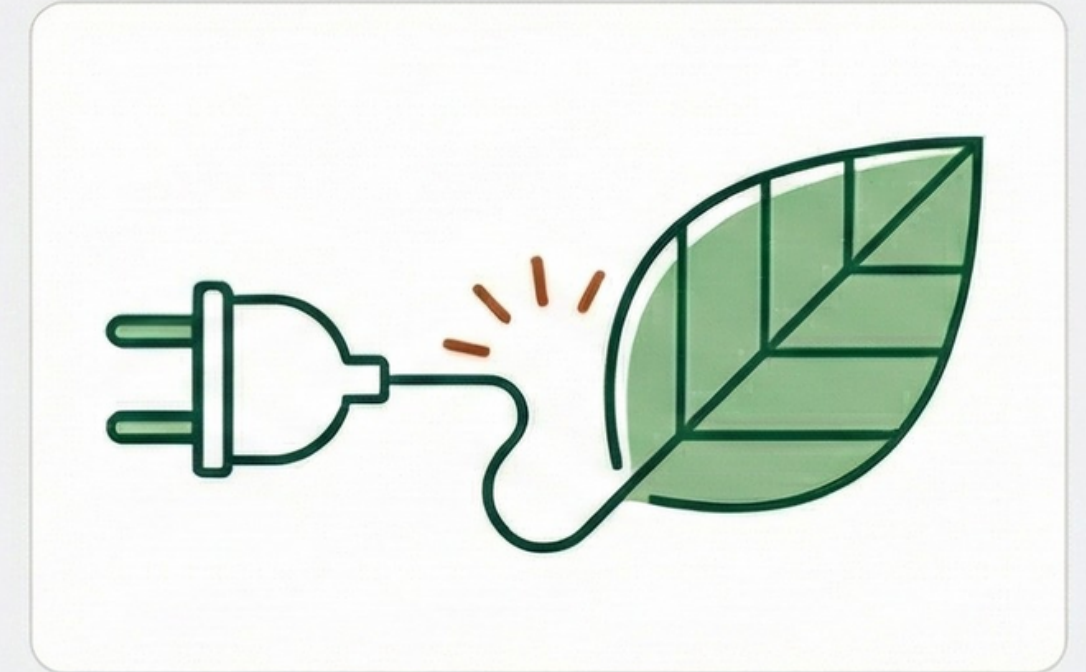
Insulation

Draught-proofing windows and doors; insulating hot water tanks and pipework.



Efficiency

Installing smart heating controls (timers, thermostats); upgrading to LED lighting with occupancy sensors; fitting hot water flow restrictors.



Process

Switching to a green electricity supplier.

Step 3: Integrating with Maintenance (Reaching 'Intermediate' Standard)

The 'Intermediate' standard focuses on "Maintenance Projects." The principle is to "kill two birds with one stone" by integrating sustainability upgrades into planned refurbishment and maintenance cycles, making them more cost-effective.

The Principle in Action



When re-roofing...



...add a high-performance insulation layer.



When replacing rotten windows...



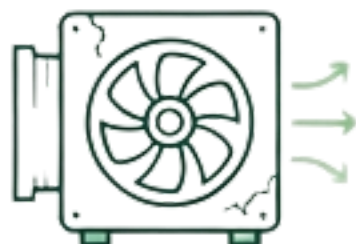
...upgrade to high-quality double or triple glazing.



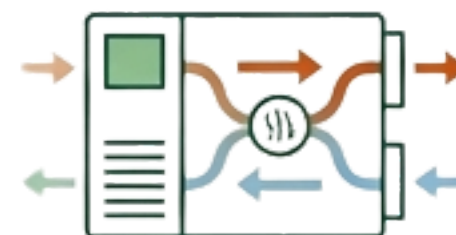
When redecorating back-of-house...



...install LED fixtures and motion sensors.



When replacing ventilation plant...



...install units with heat recovery mechanisms.

Step 4: The Capital Project (Reaching 'Advanced' Standard)

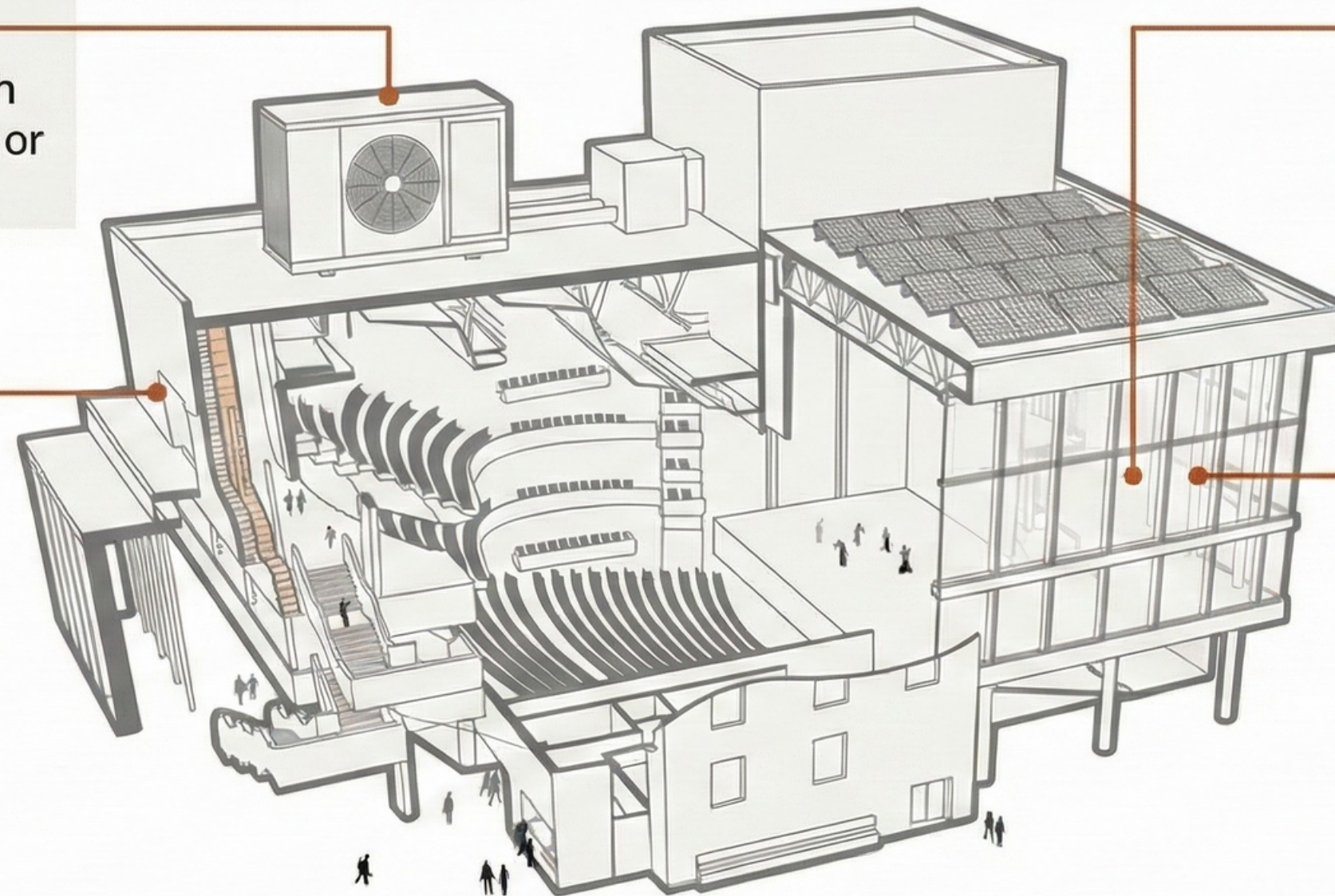
Reaching the 'Advanced' standard requires "Capital Projects" – major works that involve significant investment, planning, and potential theatre closure. These projects deliver transformative sustainability outcomes and represent the largest opportunities for the construction sector.

System Overhaul

Replacing fossil-fuel boilers with low-carbon alternatives like Air or Ground Source Heat Pumps.

Deep Retrofits

Comprehensive upgrades to the building envelope, including external or internal wall insulation.



Major Glazing Replacement

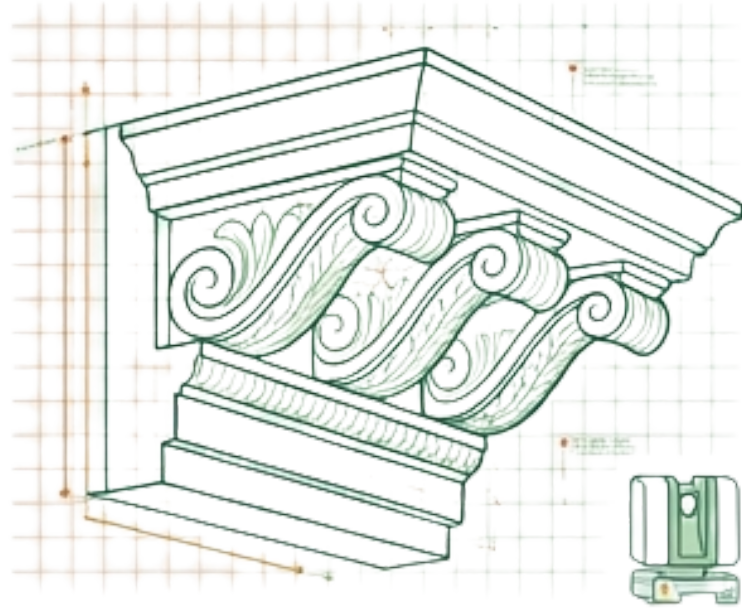
Installing high-performance glazing systems in large areas like foyers.

Renewable Energy Installation

Fitting large-scale solar photovoltaic (PV) arrays on suitable roof spaces.

Your Expertise is Critical: Unique Theatre Challenges

Upgrading theatre buildings requires more than standard construction knowledge. Specialist skills are essential to navigate the unique complexities of these performance spaces.

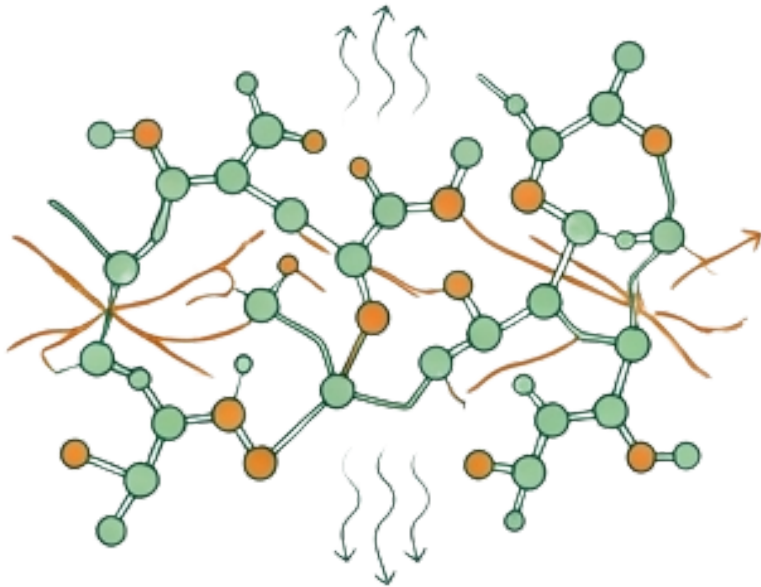


Heritage Buildings

Balancing historic conservation mandates with the need for modern thermal and system performance. Requires deep knowledge of traditional materials and sensitive intervention techniques.

Complex Retrofits

The risks of poor retrofit are significant (e.g., interstitial condensation, mould, undermining building safety). Applying principles from frameworks like **PAS 2035** is critical to ensure long-term building health.



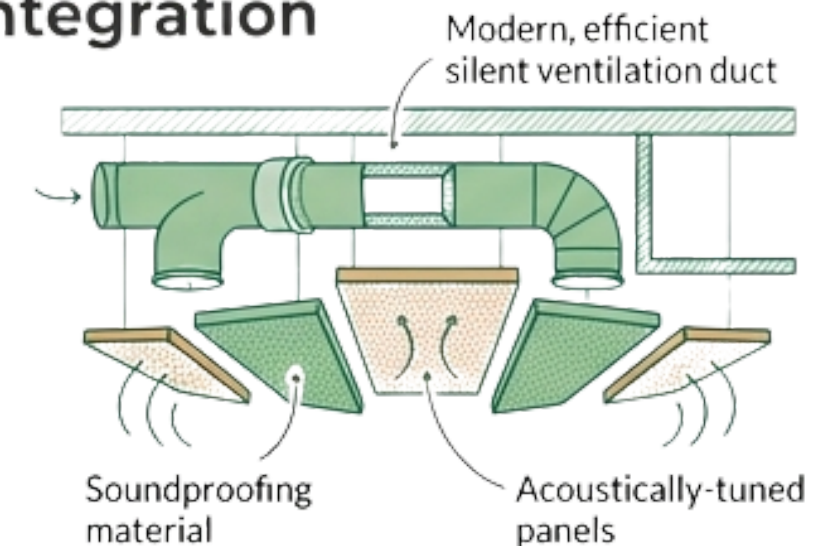
Material Science

Specifying low embodied carbon and non-toxic materials.

Understanding the use of **breathable ('vapour open') materials like wood fibre insulation** is vital for traditionally constructed buildings.

Acoustics & Systems Integration

Designing and installing **modern, efficient MEP systems without compromising the acoustic integrity or operational requirements** of the performance spaces.

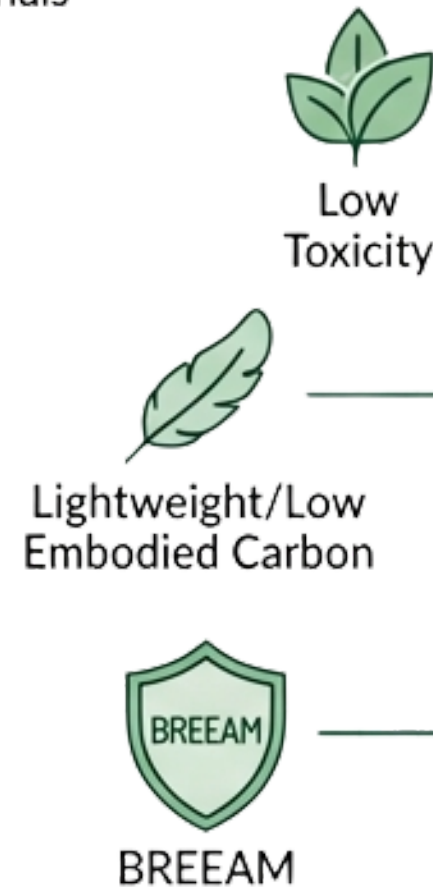


Beyond Carbon: Building Healthy, Accessible & Responsible Spaces

True sustainability considers the health of people and the full lifecycle of materials. The goal is to create buildings that are not only energy-efficient but also safe, healthy, and responsible.

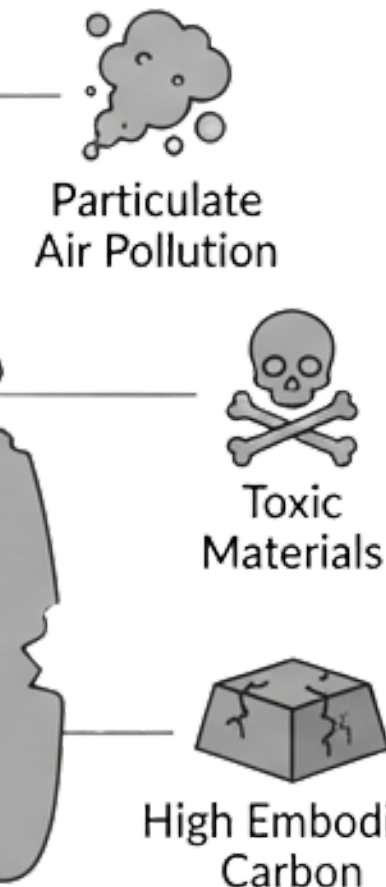
Worker & Occupant Health

Prioritize materials with low toxicity and low embodied carbon. Avoid materials that harm indoor air quality.



Critique of Biomass

While sometimes considered renewable, burning biomass (wood pellets/timber) produces high carbon emissions and significant air pollution. Government data shows wood burning is now the leading cause of particulate air pollution in the UK, and over 97% of UK addresses exceed WHO pollution limits. It should be an absolute last resort.



Embodied Carbon

Capital projects have a carbon footprint before the building even opens. Minimise this by reusing existing structures and choosing low-carbon materials like timber over steel and concrete where possible. Use frameworks like BREEAM to manage and report this impact.

The Business Case: Why Invest in These Skills?

Adopting Theatre Green Book standards is not just an environmental imperative; it's a significant commercial opportunity for the construction industry.

A Sector-Wide Market



The entire UK theatre sector is committed to this transition, creating sustained demand for specialist renovation and retrofit services. The ambition is for all theatres to reach baseline by 2026.

Dedicated Project Funding



This work is being actively funded. The Theatres Trust's Theatre Improvement Scheme, in partnership with the Wolfson Foundation, provides dedicated grants for environmental sustainability projects. In 2023/24, the scheme awarded **£115,982** to six theatres for this purpose.

Future-Proofing Your Business



Expertise in sustainable renovation, heritage retrofit, and low-carbon materials is moving from a niche speciality to a core requirement. Investing in these skills positions your firm as a leader in a growing market.

Your Blueprint for Action

1.  **Understand the Philosophy**

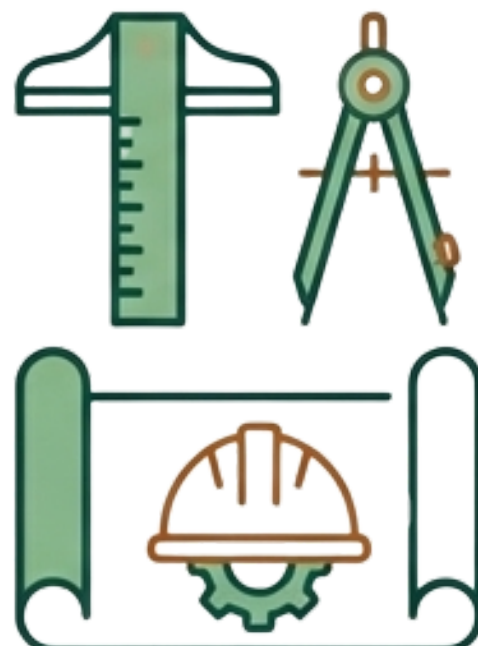
Embrace the '**Lean, Clean, Green**' hierarchy as the guiding principle for every project. Focus on the building fabric first for maximum impact.

2.  **Create the Plan**

Use the **Building Survey Tool** to conduct a thorough assessment and generate a prioritized, data-driven Sustainability Plan.

3.  **Execute in Phases**

Implement the plan strategically, moving from low-cost **Easy Wins** to integrated **Maintenance Projects** and ultimately, transformative **Capital Projects**.

4.  **Bring Your Expertise**

Apply your specialist knowledge of heritage, complex retrofits, materials, and integrated systems to deliver high-quality, genuinely sustainable theatre buildings.



**A sustainable theatre isn't
just a building. It's a legacy.
Let's build it together.**