AGBIS

Annual Conference 2024

Matching Strategic Planning to Sustainability in a Heritage-rich Environment

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18th March 2024

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- Strategic Planning
- Master Planning
- Sustainability Principles
- Case Studies
- Heritage Buildings
- Some Solutions
- Any Questions

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SPACE AUDITS, STRATEGIC AND MASTER PLANS

MEB Design is well experienced in strategic planning, these are some of the elements involved.

Space Audits

This is a factual exercise to schedule what exists by way of grounds, buildings and all the spaces within them, their uses, levels of occupancy, capacity and quality. This will help establish what the organisation has, whether the spaces best serve the stated needs, what is over or underused, and what is missing. Areas in plan are colour coded to make it clear what each space is used for. And, where applicable, the areas are compared with the statutory requirements where they exist.

Strategic Plans

The aim of a strategic plan is to establish what any organisation needs by way of buildings and grounds to fulfil its mission efficiently into the future, what options there are, and what the costs are likely to be, in order to make best use of what exists, develop what exists, and / or demolish what is no longer required. It develops from the space audit and identifies as far as possible what will be needed in the most preferred way for the foreseeable future.

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SPACE AUDITS, STRATEGIC AND MASTER PLANS

Master Plans

A master plan takes the process to a greater level of detail, and formalises the strategic plan ideally once the local authority planning department has been consulted, and after other risks such as ecology and trees have been evaluated besides the planning risk. Other consultants will be needed and matters such as timescales will be addressed as well as any other factors that are identified to directly affect feasibility.

The Benefits of Careful Planning

Well planned buildings, grounds and facilities make everyone's life easier; and the achievement of the aims and mission of the organisation are more likely to be realised. 'Quick fix' solutions to problems are avoided - which all too often have to be abandoned before they have justified their expense, or are put in locations that prejudice future development. A degree of overlapping between these three exercises is only to be expected.

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SWOT ANALYSIS

Strengths

- Large site
- Natural hierarchy of functions
- Good range of existing facilities
- Good quality existing buildings
- School heritage and identity
- Exceptional landscape setting
- Available land for development

Weaknesses

- Distance to sports fields
- Ageing sports facilities
- No dedicated dance facility
- Disjointed maintenance and storage
- Traffic flow and parking issues
- Existing busy road dissects site
- Disjointed science department
- Lack of on site staff accommodation
- Poor learning support facility

Opportunities

- Centralised sports facilities
- Sports centre of excellence
- Dance facilities - public access
- More flexible dining and function area
- Re-purposing of Lowman Fields
- Land disposal for housing
- Improved pupil social spaces
- Dedicated EAL / LS department
- Improved reception / welcome
- Unified science department

Threats

- Tidcombe Lane Fen SSSI
- Historic henge
- River Lowman flood plain
- Conservation area
- Tree constraints
- New road
- New housing
- 39 Tidcombe Lane Grade II listed.

Summary

The majority of the site is bordered by trees - the street facing sections forming the Green Belt.

The buildings along the Golf course boundary provided a solid bookend to the northern end with flatter more open car park plots further east. There is a covered pathway providing a link between these buildings.

The buildings located centrally are separate blocks allowing site permeability between the developed site to the north and west, and the natural green outdoor spaces to the south and east.

The natural outdoor spaces to the south and east comprise playing fields, tennis courts, cricket practice nets, outdoor classroom and cricket pitch within the wall garden.

Natural avenues and vistas are provided by strong tree lines and hedges in areas surrounding the walled garden. Gates and framed openings make access possible through these boundaries.

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SITE ANALYSIS

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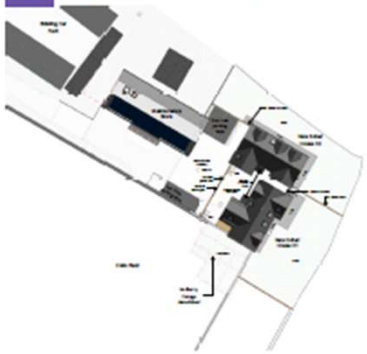
1 Approved Planning for Housing



Area: House 1 143m² and House 2 130m²

New housing scheme of 2x 3-Bed houses already has Planning Permission in perpetuity.
Could be developed as Staff housing or redesigned / enlarged as 1x Head's House – TBC.
Refer to Planning Drawings in Appendix C for more detail.

PRIORITY LEVEL:

3

2 Pre-Prep Extension and Refurbishment

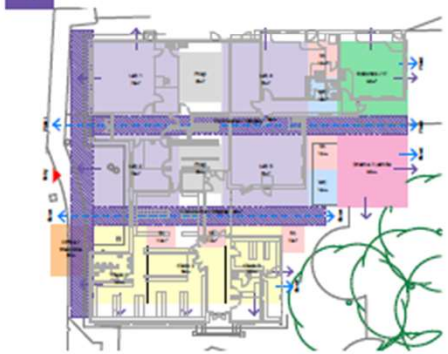
Area: 304m² Extension; 626m² Refurbishment; 355m² Playground Upgrade

Pre-Prep to be extended to add 3x Classrooms currently on other side of Playground.
Internal alterations to include improved / more WCs, Storage and Staff facilities.
Main Entrance to be improved and connected to new external walkway / covered link.
Improved access to outdoor space to be provided, new larger doors / windows.
External Playground areas to be upgraded.

PRIORITY LEVEL:

1

4 New STEAM Hub



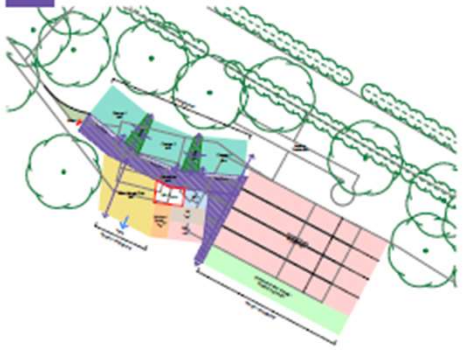
Area: Option 1 843.4m² and Option 2 1046m²

New STEAM Hub building assumed new building on site of demolished Science / Changing building.
Exemplar modern teaching facility including Science, IT / Robotics and display areas / atrium / concourse.
Refer to Pages 13-15 for further detailed information.

PRIORITY LEVEL:

1

5 New Community Hub



Area: New Build 976m² and Covered Nets 988m²

New Pavilion and Changing building to replace existing Pavilion.
Changing Rooms to be relocated and enlarged, with new Club Room / Hospitality spaces, Kitchen and Stores etc.
Refer to Pages 16-17 for further detailed information.
Temporary access or cranage will be required to site.

PRIORITY LEVEL:

1

7 New Junior Classrooms over Improved Changing Rooms and new Entrance

Area: 293m²

Existing Swimming Pool Entrance and Changing Rooms to be refurbished and improved.
Entrance / circulation to be connected into new walkway / covered link.
New Junior Classroom to be created In existing roof space over.

PRIORITY LEVEL:

3

8 Dining Room Extension

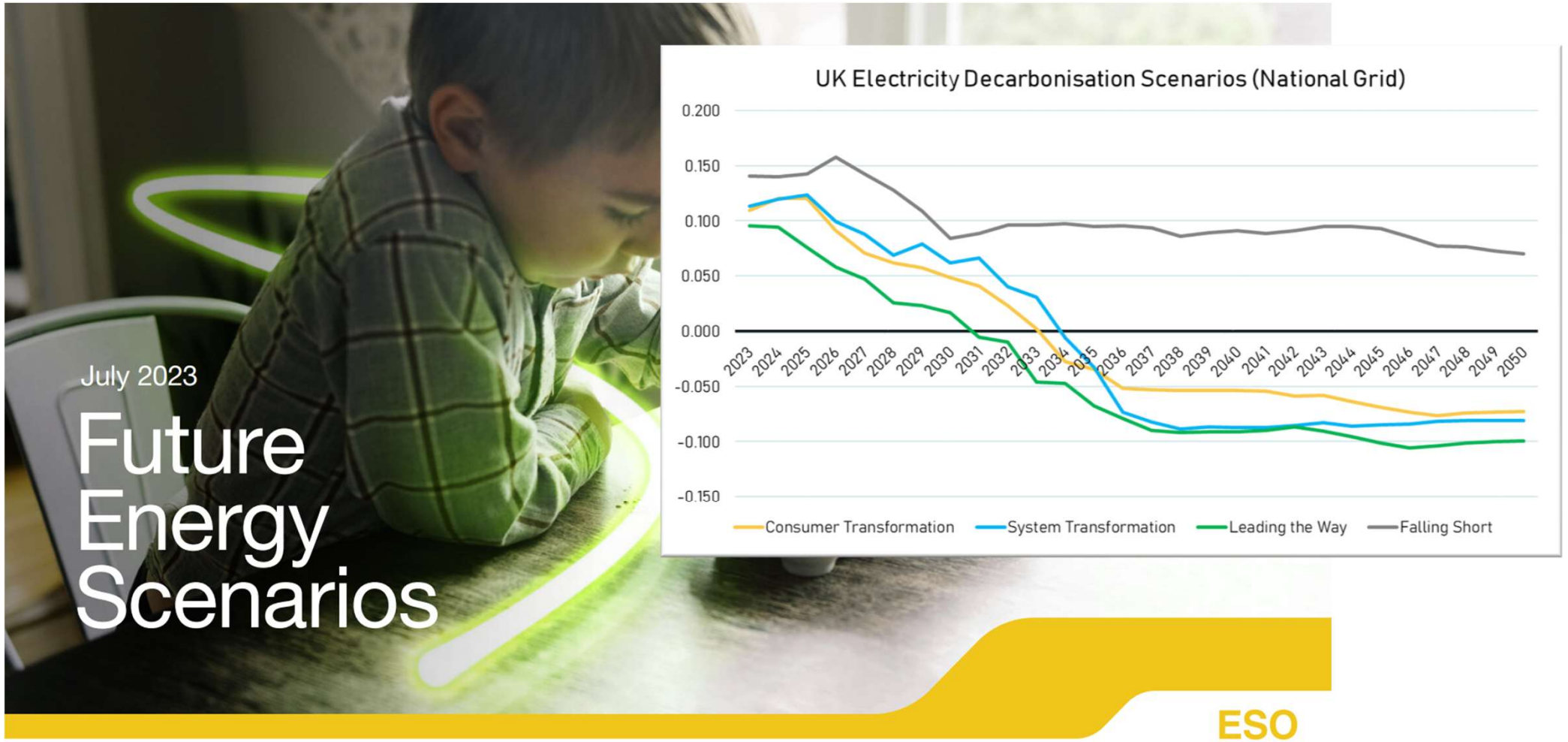
Area: 184m² Extension; 84m² Refurbishment

Extension to existing Dining Hall to provide more seating.
Entrance and queuing / servery areas also to be improved / refurbished.
Minor alterations to existing Kitchen to make more prep space.

PRIORITY LEVEL:

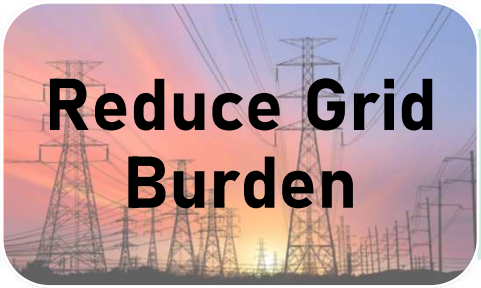
1

Net Zero?

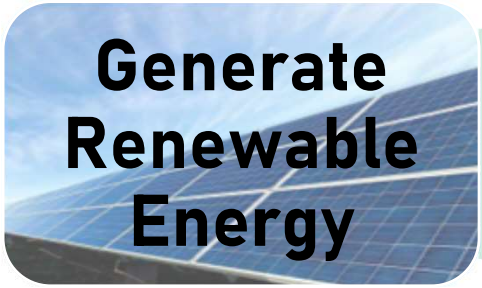

July 2023
Future Energy Scenarios
UK Electricity Decarbonisation Scenarios (National Grid)
0.200
0.150
0.100
0.050
0.000
-0.050
-0.100
-0.150
2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
Consumer Transformation
System Transformation
Leading the Way
Falling Short
ESO

Principles Approach

- Heat Pumps (air, ground, water)
- Other gas uses (e.g., kitchens)
- Electric heating

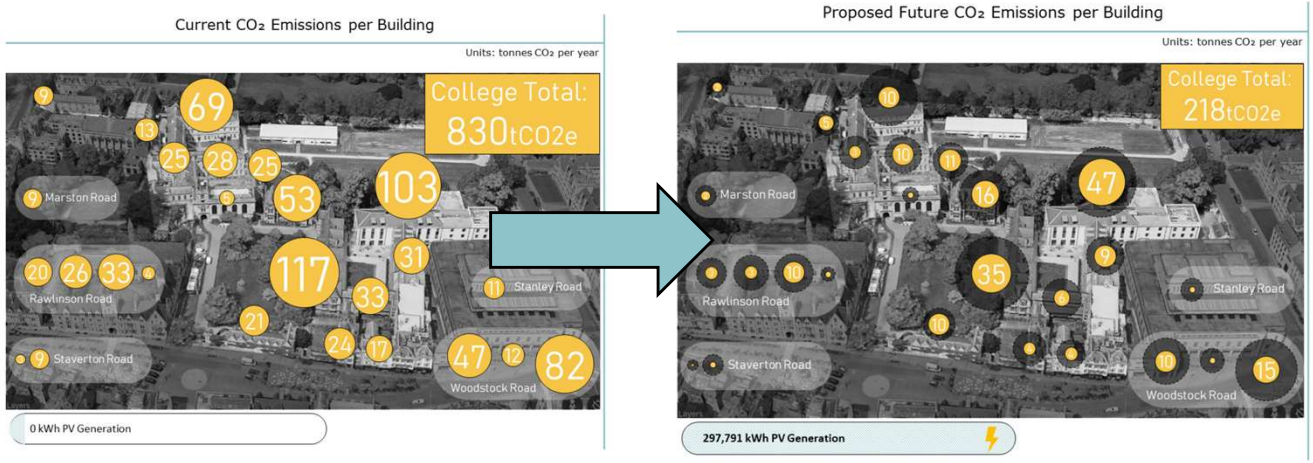


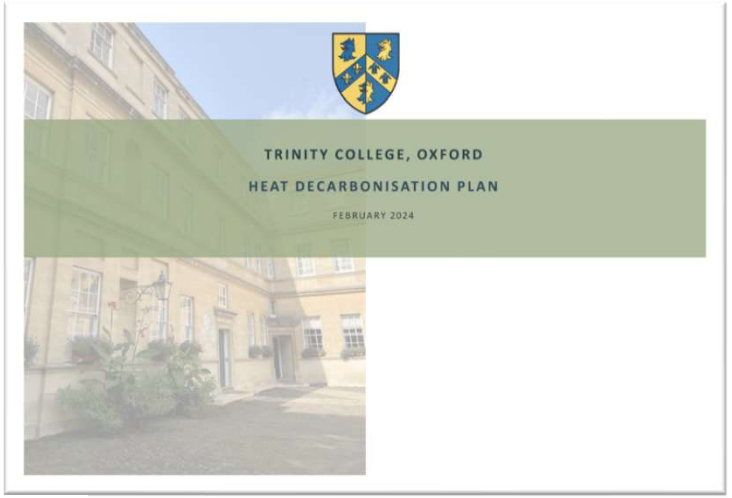
- 'Fabric first'
- Building services
- Appliances & equipment
- Management & behaviour
- Energy storage



- Solar PV
- Others – solar hot water, wind, microhydro?

Decarbonisation Plans





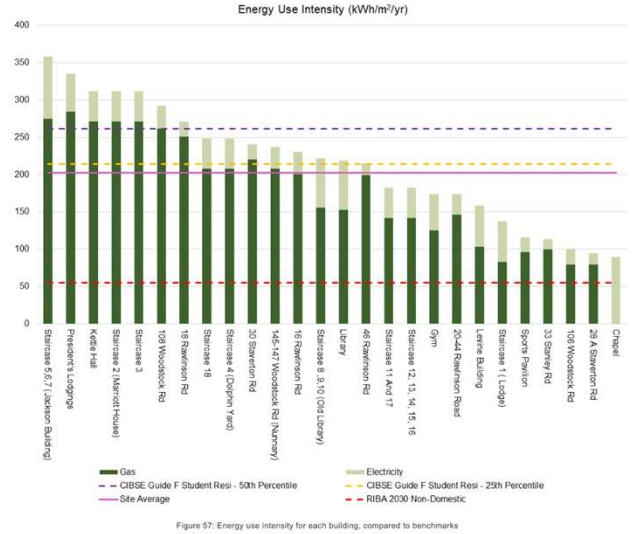
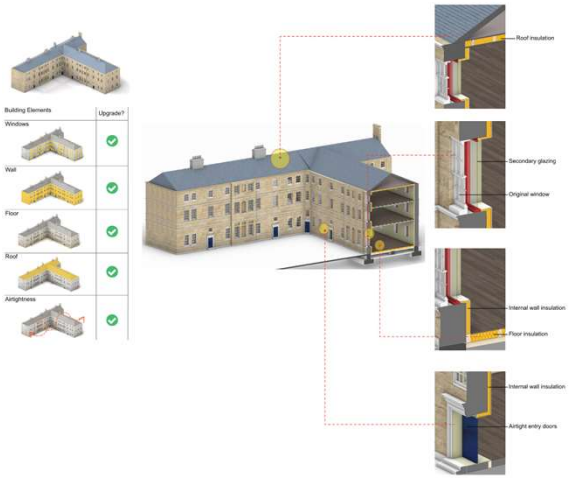


Figure 57: Energy use intensity for each building, compared to benchmarks

Figure 29: Summary of fabric upgrades to each building of Trinity College



Case Study: Jackson Building

Trinity College

‘Light fabric retrofit’:
- Secondary glazing
- Loft insulation
- Door seals (air tightness)

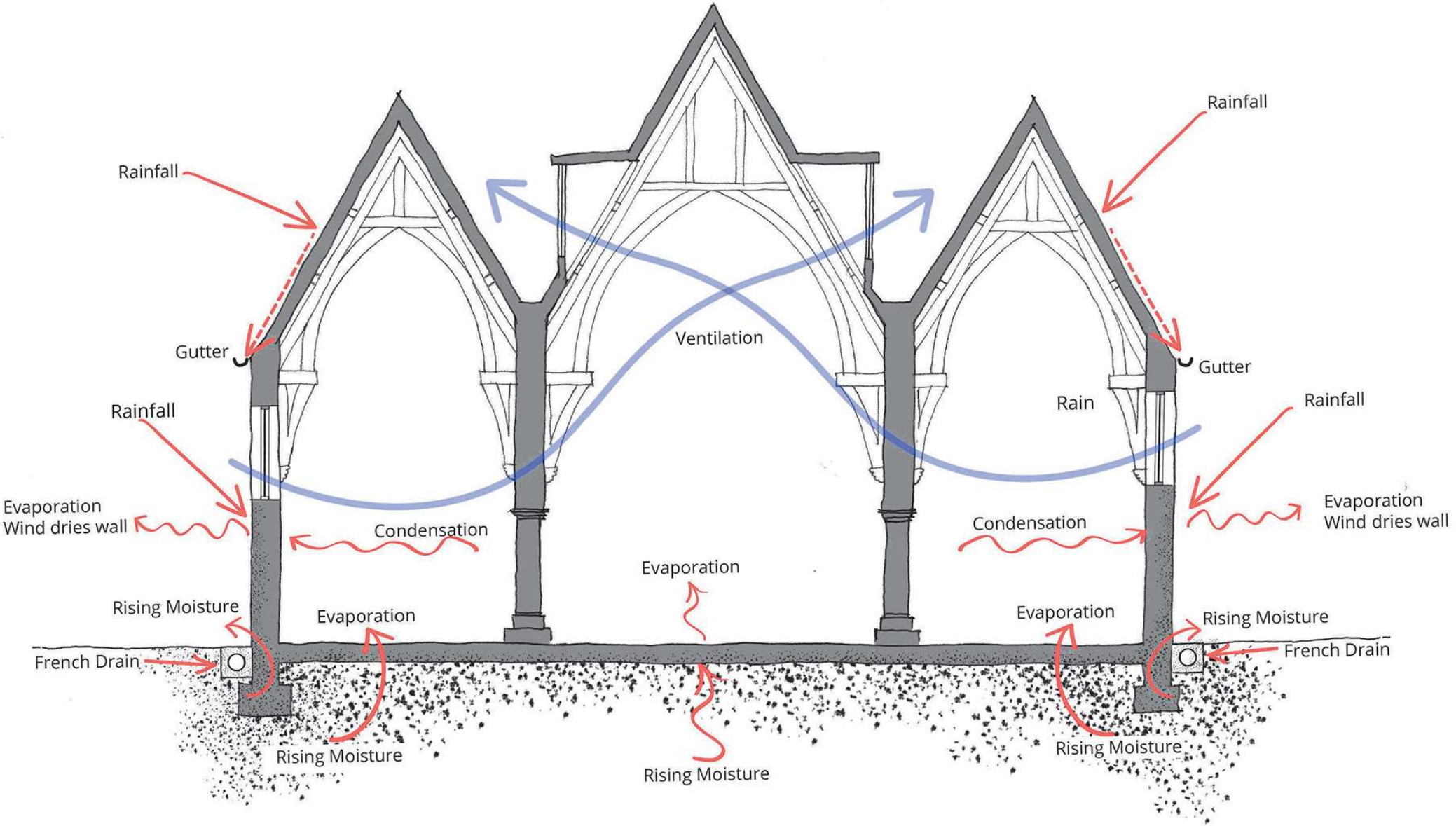
Heat source:
Ground source heat pumps

Case Study: Frewin Hall

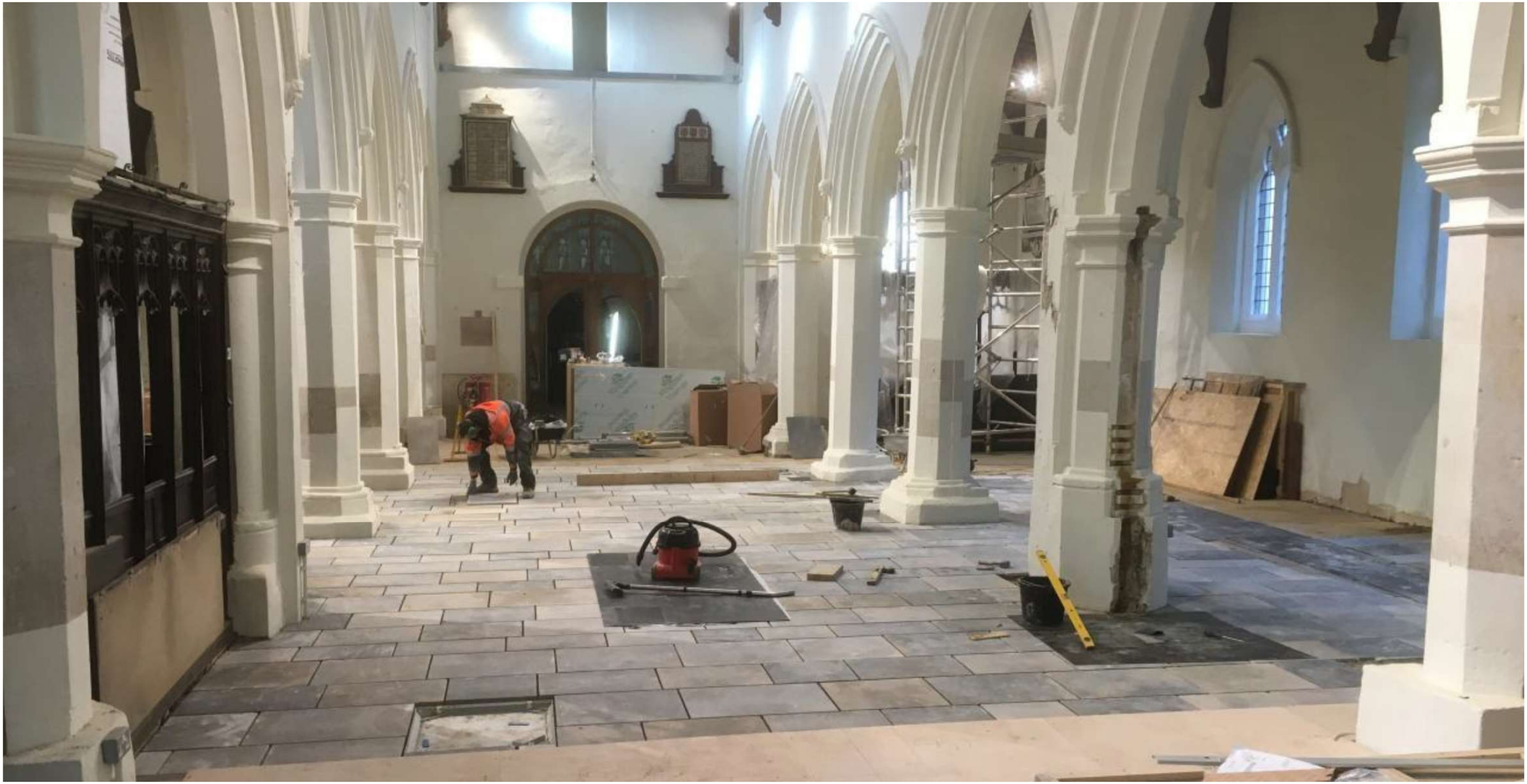
Brasenose College

‘Deep fabric retrofit’:
- Woodfibre wall insulation
- Secondary vacuum glazing
- Roof insulation
- Airtightness measures throughout
- Heat recovery ventilation

Heat source:
Ground source heat pumps


Rainfall
Rainfall
Gutter
Ventilation
Rainfall
Gutter
Rain
Rainfall
Evaporation
Wind dries wall
Condensation
Condensation
Evaporation
Wind dries wall
Evaporation
Rising Moisture
Evaporation
Evaporation
Rising Moisture
French Drain
French Drain
Rising Moisture
Rising Moisture
Rising Moisture


13.2 °C
2.7



SOME SOLUTIONS – UNDERFLOOR HEATING

SOME SOLUTIONS – SOLAR / PV PANELS

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SOME SOLUTIONS – FABRIC IMPROVEMENTS

ANY QUESTIONS?

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