

Wereham Village Hall



Wereham, Norfolk

Status: Passivhaus certification Summer 2018
Client: Wereham Village Hall Committee
Operator: Wereham Village Hall Management Committee
Value: c. £1.1 million



The United Kingdom's first village hall to achieve Passivhaus certification

Overview

The new village hall, near Downham Market, replaces a First World War YMCA hut that did not meet community needs and had structural problems beyond economic repair. It acts as a new hub for the active local community in Wereham and the surrounding villages.

Approximately 200 people can now be accommodated in the new building – the first village hall in the UK to achieve Passivhaus certification. It offers a varied

programme of physical activities and coaching for adults and children, toddler groups, meeting facilities for local and regional businesses, a community café and a cinema.

Passivhaus is a rigorous energy efficiency standard and certification scheme for buildings. The methodology significantly reduces energy use for heating and cooling. Internal comfort is increased through high levels of insulation, reduced thermal bridging and low air leakage. Fresh air is also provided mechanically and constantly-tempered through heat exchangers.

See the Passivhaus website for more details at: https://passiv.de/en/02_informations/01_whatisapassivehouse/01_whatisapassivehouse.htm

Sustainability
Facility Case Study



It was our aim to deliver a facility with reduced energy use to ensure economic accessibility for all. The Passivhaus design meets this objective."

Victoria Gray

Chair of the Wereham Village Hall Management Committee



New hall

What?

The sustainability concept is strongly rooted in the objectives of the charity to run the village hall for the benefit of local people – without distinction of gender, sexual orientation, age, disability, nationality, race or political, religious or other opinions – and financial hardship or social and economic circumstances – and in the interest of social welfare and improving the conditions of inhabitant’s lives.

During the 5-year preparation and fundraising period, the project group developed an environmentally-friendly approach for a local facility with low running costs. Sustainability credentials for the new building and a low carbon footprint were seen as key benefits for the local environment and future generations.

This vision was embedded in the project briefing documents and was critical in the selection of an Architect, environmental engineer and other members of the design and delivery teams.



Old building



New foyer

Ground floor plan



Key

1. Hall
2. Hall storage
3. Male toilets
4. Female toilets
5. Accessible toilet
6. Meeting room
7. Cleaner’s store
8. Plant
9. Community room
10. Foyer
11. Kitchen
12. Store

Why?

The project team carefully considered the overall feasibility and operational implications of the building in consultation within the Wereham community. They took the view that an attractive environmentally-friendly building was critical to the long-term success of the project.

Passivhaus buildings can achieve a significant reduction (75%) in space heating requirements compared to the standard practice for UK new build. It gives a robust methodology to help achieve the carbon reductions that are set as a legislative target for the UK Government.

How?

Statement of requirements (SOR)

The project team developed a SOR for a new building with an air-tight and efficient thermal envelope, reduced energy costs and high levels of internal comfort. This would result in low hire costs ensuring economic accessibility for all and environmental and financial sustainability of the building and charity structure for future generations. In addition, this would help reduce the need for fundraising in the future.

Selection of design and construction teams

The SOR influenced the selection of both teams:

- The Architects were based in Norfolk and had experience of Passivhaus projects and sensitive designs within conservation areas
- The Environmental Engineer had a national reputation in Passivhaus design and was a member of the Passivhaus Trust
- The Main Contactor had previous experience of the more exacting construction techniques that are critical to achieve the air-tightness standard.

Technical collaboration

The Architects and Environmental Engineer also consulted with Sport England over the appropriate ventilation and fresh air requirements and controls for the hall when used for physical activity.

Recorded energy performance (Passivhaus values)

Heating demand	14 kWh/m ² /year
Heating load	10 W/m ²
Primary energy requirement	42 kWh/m ² /year
Air tightness	n ₅₀ = 0.03/hour
Calculated demand for heating / hot water / electricity	14 kWh/m ² /year

Thermal envelope U-values (Passivhaus values)

External walls	0.117 W/m ² K
Floor slab	0.104 W/m ² K
Roof	0.124 W/m ² K
Frame	0.181 W/m ² K



Commissioning and monitoring

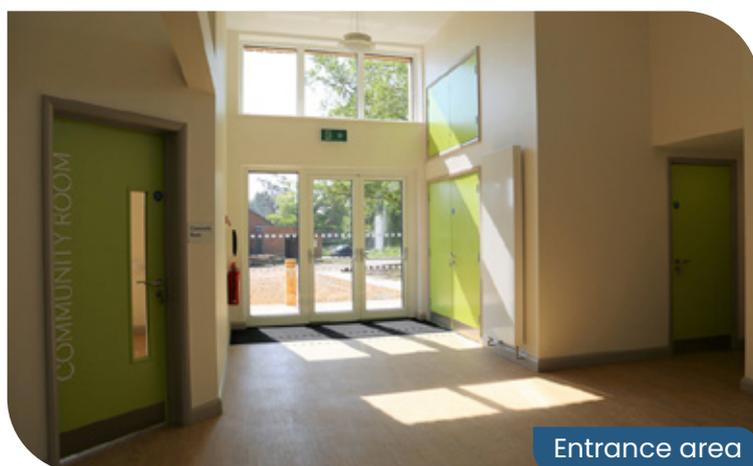
The project delivery of the Passivhaus hall included monitoring of the technical performance of the building. The village hall is now registered with the Passivhaus Institute in Germany and the details published on their online database at:

https://passivhausprojekte.de/index.php?lang=en#d_5733

Passivhaus is a rigorous standard for energy efficiency in a building, reducing its ecological footprint. It results in ultra-low energy buildings that require little energy for space heating or cooling, providing a high level of occupant comfort.

Typically, Passivhaus buildings achieve a 75% reduction in space heating requirements compared to standard practice for UK new build. The Passivhaus standard therefore gives a robust method to help the industry achieve the 80% carbon reductions that are set as a legislative target for the UK Government.

This will result in reduced energy costs and low hire costs ensuring economic accessibility for all, environmental and financial sustainability of the building and charity for future generations.



Project / delivery teams

Client	Wereham Village Hall Committee
Construction cost	£884k excluding professional fees and VAT
Architect	Parsons + Whittlely
Contractor	Walker Construction Services Ltd
Environmental engineer / services consultant	Alan Clarke
Cost consultant	G C Baxter & Associates Ltd
Passivhaus certifier	MEAD Ltd

Funding partners

The following have provided capital grants towards general project costs:

- Borough Council of King's Lynn & West Norfolk
- Foyle Foundation
- Garfield Weston Foundation
- Leader
- Love Norfolk
- Shelroy Charitable Trust Fund
- Sport England
- Tesco Bags of Help
- The European Agriculture Fund for Rural Development: Europe investing in rural areas
- The Geoffrey Watling Charity
- The National Lottery Community Fund
- The Paul Bassham Charitable Trust
- The Prince's Countryside Fund
- West Norfolk Recycling Rewards
- Wereham Parish Council
- WREN

Click here for **User guide** and other **Design and cost guidance**

Images provided by Lingo Design Ltd, Wereham Village Hall and Parsons + Whittlely