

## Nursery Classroom | North Oxfordshire Academy

**CLIENT;** United Learning Trust C/O North Oxfordshire Academy (NOA)  
**STATUS;** Completed May 2015  
**SIZE;** 262m2 internal floor area  
**COST;** £373,016  
**PRICE EPSM:** £1,423 (Full Turnkey inc. Airsource, bringing all services to site & hard landscaping)  
**ARCHITECTS;** Richard Walker, Walker Graham [www.walkergraham.co.uk](http://www.walkergraham.co.uk)  
**STRUCTURAL ENGINEERS;** : Ian Harban Associates [www.ianharban.com](http://www.ianharban.com)  
**EPC RATING;** A  
**AIR PERMEABILITY:** 2.47 m3/h/m2 @50pa

*In August 2014 Timberworks Europe Ltd were contacted by Walker Graham Architects to tender for the supply and finish of a high quality, thermally efficient contemporary Nursery Building classroom ready for use by babies and infants from April 2015. Following an extensive quality/price analysis Timberworks were delighted to win the tender ahead of three others.*

### DESIGN

Throughout the initial consultations with the client and their architects, the intention was that the building had to deliver a fabric led solution to deliver high levels of energy efficiency as well as delivering a bright, useful and happy place for young people to learn in. The building is positioned so as to derive the maximum amount of natural light and solar heat gain and is laid out so that it delivers versatile space for the children.

Having reviewed the plans, elevations and outline specification with our fabricators and the clients' architects and our principle sub-contractors the final building specifications were agreed and the North Oxfordshire Academy issued their letter of Intent in late September 2014. The whole house is triple glazed, there are aluminium/wood window frames and the roof is tiled.

WALES, MIDLANDS & NORTH WEST

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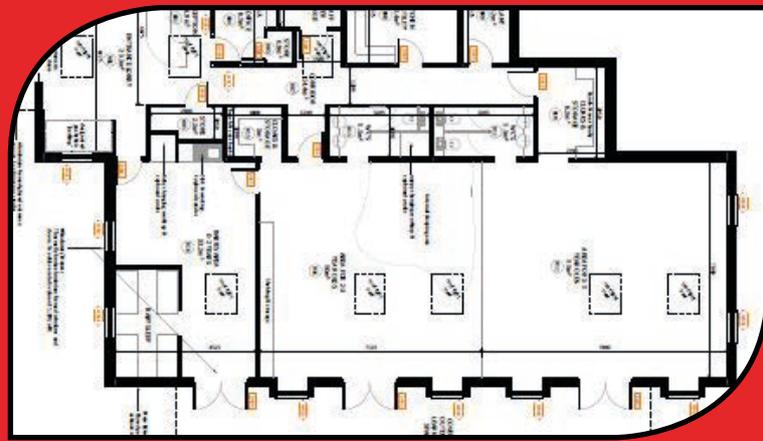
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## THE BUILDING

The building was built offsite in our facility in Estonia.

The client and their advisers were particularly keen on offsite manufacturing for the following reasons;

- 1) The speed of building shortens site times, reduces weather delays on site and provides significant cost savings.
- 2) Improved quality and consistency of build.
- 3) Reduced site times minimise Health and Safety risks associated with delivering building projects in a working school during term time.
- 4) Reduced traffic movements (all the materials for the superstructure arrived on 4 lorries) lessens the impact on neighbours and the environment.

The whole structure comprised of only 63 panels. All the internal, external walls as well as the roof were delivered as panels on four articulated lorries and were offloaded and installed using a 35t crane. The panels were pre-clad internally in Fermacell and externally in either battens for diagonal cladding, or PowerPanel for rendering on site. The panels were insulated with 150mm of Rockwool insulation prior to delivery and the pre-installed Alu-wood framed windows were double glazed and Argon filled as were the external doors.

## ENERGY PERFORMANCE

The as built energy performance figures for the building are as follows;

- The roof has a u-value of 0.16w/m<sup>2</sup>K and the walls deliver u-values of 0.22 w/m<sup>2</sup>K.
- The Air Permeability of the finished structure was an impressive 2.47 m<sup>3</sup>/m<sup>2</sup>/hr @ 50pa.
- Heating and hot water is provided by an Air Source Heat Pump and fed through 2.5km of underfloor heating pipes.
- ... and the building has an overall EPC rating of A

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Company Number 06739200



With energy performance figures like these it has been estimated that the running costs of the nursery will be significantly less than an equivalent building built to current UK average EPC and Air Permeability standards... and that is before any consideration is made of the cost offset via Renewable Heat Incentive payments generated by the Air Source Heat Pump.



**AIR PRESSURE TEST UK LIMITED**  
providing a professional experience



**ATTMA**  
AIR TIGHTNESS TESTING & MEASUREMENT ASSOCIATION

### Part L2A Air Permeability Test Certificate

Certificate No 53646

This document confirms that the Air Tightness Testing in compliance with ATTMA TS1 Issue 2 was conducted by

**AIR PRESSURE TEST UK LIMITED**

On the following building:

**New Nursery Building, North Oxfordshire Academy,  
Warwick Road, Banbury, Oxon. OX16 1BD**

<b>Measured Air Permeability</b>	2.47 m <sup>3</sup> /(h.m <sup>2</sup> )
Design Air Permeability	5.0 m <sup>3</sup> /(h.m <sup>2</sup> )
Envelope Area of Building	690 m <sup>2</sup>

Test Commissioned by Timberworks Europe Ltd (Justin Bentley)

Date 29/04/15

[www.airpressuretestuk.com](http://www.airpressuretestuk.com)  
 Air Pressure Test UK Limited.  
 Reg Office: The Ghyll, 20 Brookside, Weedon, Northampton NN7 4SW  
 T: 01327 340244  
 E: admin@airpressuretestuk.com  
 Please review the information provided in this certificate and advise us of any discrepancies

### Energy Performance Certificate

Non-Domestic Building



**NURSERY BUILDING**  
North Oxfordshire Academy  
Drayton Road  
BANBURY  
OX16 0UD

**Certificate Reference Number:**  
0393-0235-4349-8205-2006

This certificate shows the energy rating of this building. It indicates the energy efficiency of the building fabric and the heating, ventilation, cooling and lighting systems. The rating is compared to two benchmarks for this type of building: one appropriate for new buildings and one appropriate for existing buildings. There is more advice on how to interpret this information on the Government's website [www.communities.gov.uk/epbd](http://www.communities.gov.uk/epbd).

#### Energy Performance Asset Rating

**More energy efficient**

**A+**

**A** 0-25

**24**

Net zero CO<sub>2</sub> emissions

**B** 26-50

**C** 51-75

**D** 76-100

**E** 101-125

**F** 126-150

**G** Over 150

This is how energy efficient the building is.

**Less energy efficient**

#### Technical Information

**Main heating fuel:** Grid Supplied Electricity  
**Building environment:** Heating and Natural Ventilation  
**Total useful floor area (m<sup>2</sup>):** 202  
**Building complexity (NOS level):** 3  
**Building emission rate (kgCO<sub>2</sub>/m<sup>2</sup>):** 18.89

#### Benchmarks

Buildings similar to this one could have ratings as follows:

**25**

If newly built

**72**

If typical of the existing stock

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## TESTIMONIAL

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**Julie Hughes, the Academy Business Manager who co-ordinated the project for the school is quoted as saying ...**

*“We are absolutely thrilled with the building; it does everything we asked for and more. I’d be extremely happy to speak to anyone who is looking to undertake a similar project”.*

**...and Richard Walker (Architect and Contracts Administrator) commented saying ...**

*“We are absolutely thrilled with the building; it does everything we asked for and more. I’d be extremely happy to speak to anyone who is looking to undertake a similar project”.*

**We here at Timberworks are equally chuffed with the outcome!**

They say there is no better recommendation than repeat business and proof of this is that the United Learning Trust and the North Oxfordshire Academy have already asked us if we to like to be involved be involved in the fabrication, supply and delivery of a larger structure to be the new pavilion and changing room facility for a new 4G sports pitch at the school ... obviously appointment will be after the normal tendering process but we are confident that we will be extremely competitive and if we are appointed we very much look forward to working with NOA team again.

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