

CASE STUDY

THE ROSE BUILDING, RALPH ALLEN SCHOOL, BATH FEILDEN FOWLES

The £1.32 million teaching block, replaces 10 demountable classrooms as part of an Education Funding Agency priority maintenance grant. The project is proof that, even in austere times, good-quality design doesn't need to be squeezed out of state education projects.

The building is a two-storey linear block, which emulates the rationality of the school's Lee building. Constructed from cross-laminated timber and steel, it is extremely efficient structurally. The northern elevation facing onto the courtyard, is lined with tanalised Douglas fir, which will maintain its rich colour.

A theatrical bright red steel stair and walkway animates the north elevation and provides a shaded undercroft facing onto the courtyard. The stair is supported structurally through the facade, lightly touching the ground in a move inspired by the visually arresting polyester sculptures of the South Korean artist Do Ho Su.

The south, east and west facades are clad in Marley Eternit fibre cement panels, while the windows have been slightly recessed to provide some solar protection. A darker tone of panel accentuates the recesses adding depth to the elevation.

Fergus Feilden, partner, Feilden Fowles



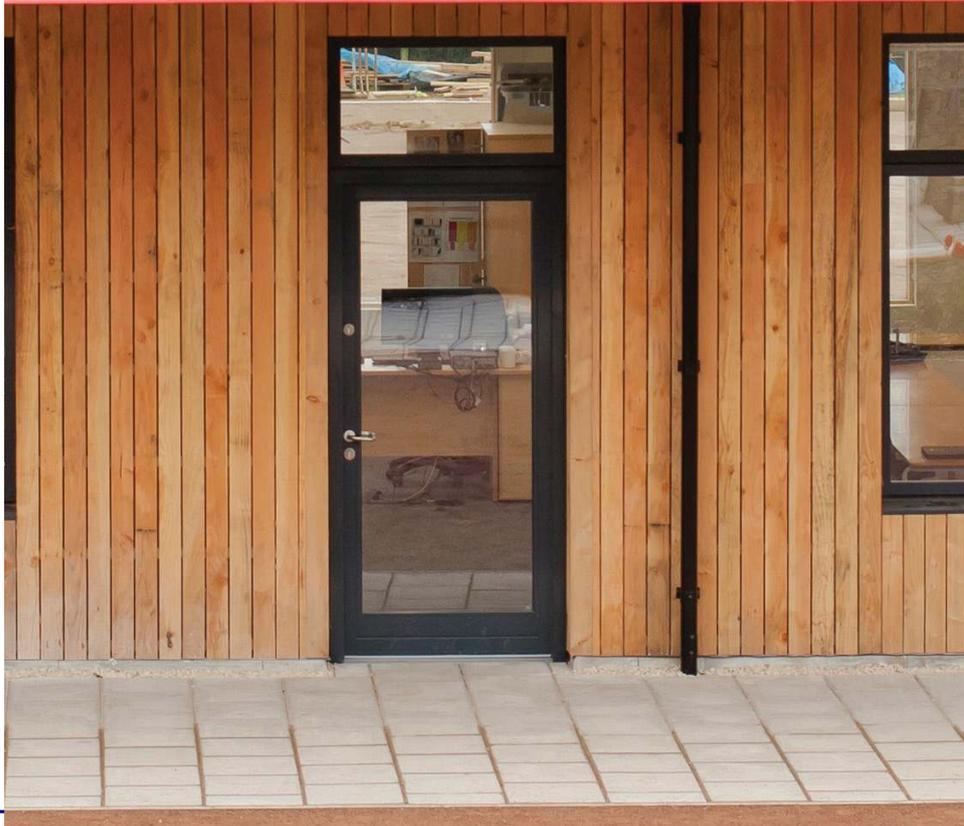


Left The north facade of the two-storey block is clad with tanalised Douglas fir and home to a walkway overlooking the courtyard below

Below The vibrant red steel suspended walkway provides a stark contrast to the warm tones of the external timber cladding



DAVID GRANDORGE



HENRIETTA WILLIAMS

Project data

Start on site August 2013

Completion March 2014

Gross internal floor area 1,000 m²

Form of contract or procurement route

Design and Build (Stage 2 novation to contractor)

Construction cost £1.32 million

Construction cost per m² £1,515, including the upper access balcony

Structural engineer Momentum Structural Engineers

Quantity surveyor Peter Gunning and Partners

Project manager Capita

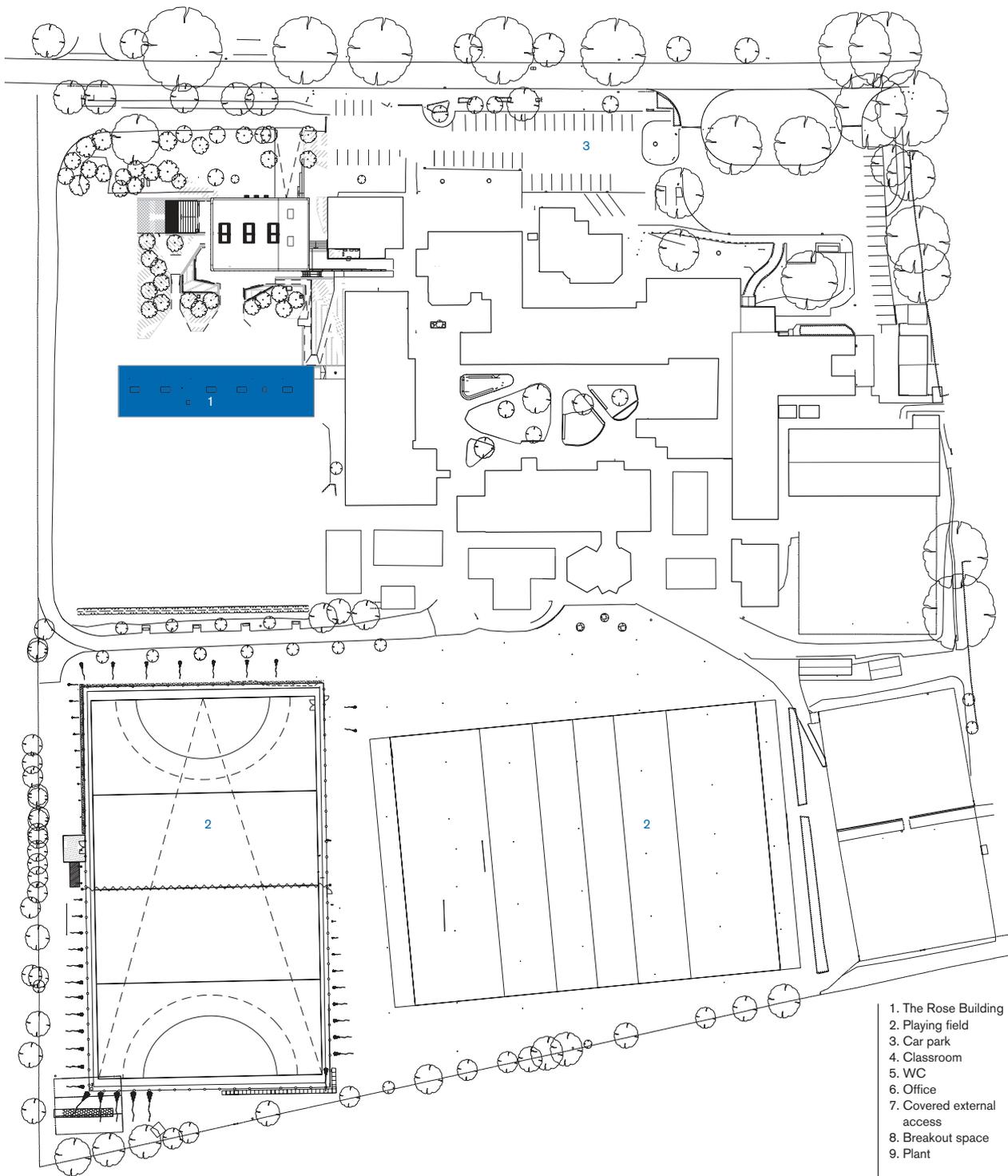
CDM coordinator Peter Waylett

Approved building inspector Bath and North East Somerset local building control authority

Main contractor H Mealing and Sons

Annual CO₂ emissions 12.36kg/m²

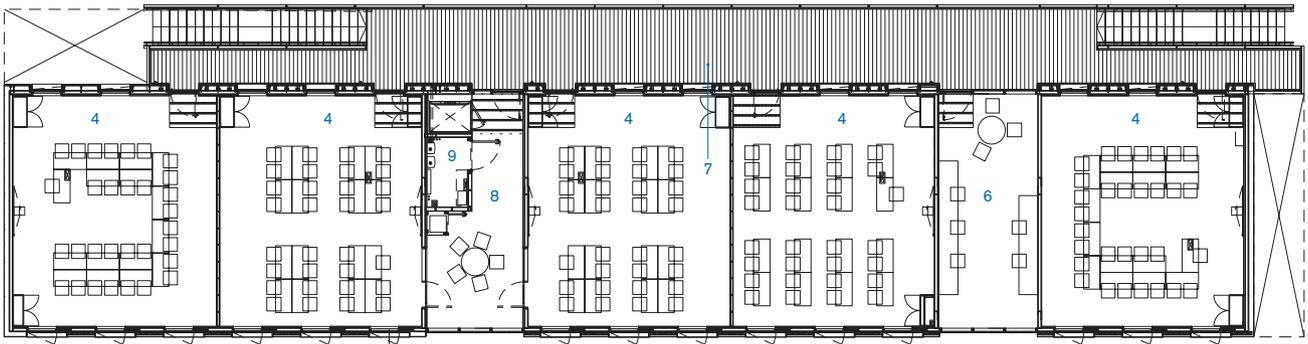
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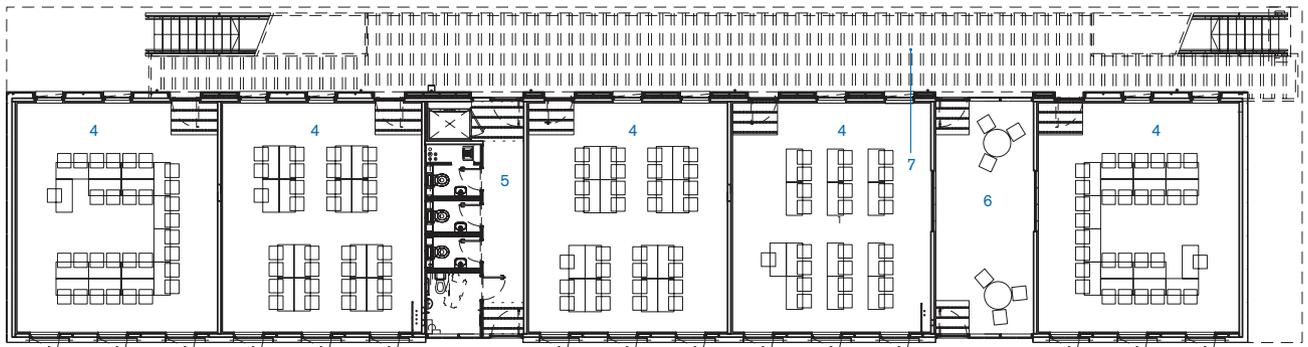
- 1. The Rose Building
- 2. Playing field
- 3. Car park
- 4. Classroom
- 5. WC
- 6. Office
- 7. Covered external access
- 8. Breakout space
- 9. Plant



Site plan



First floor plan



Ground floor plan



Right The steel stair is supported through the facade **Far right** The original school building

DAVID GRANDORGE



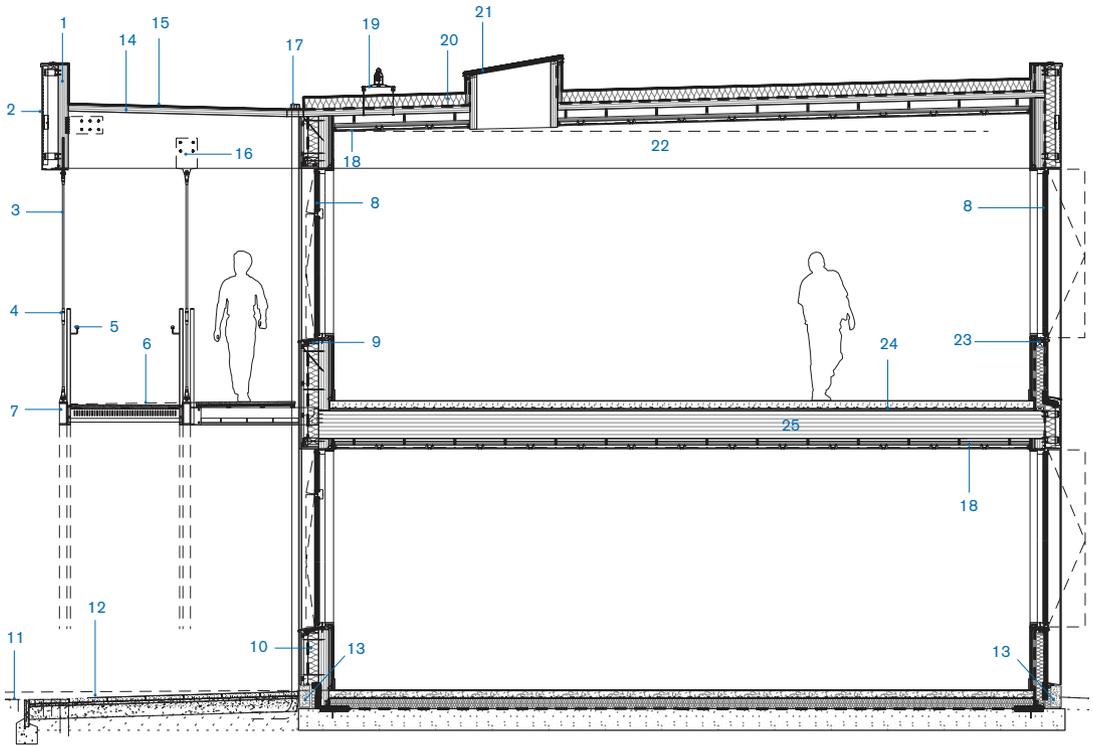
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Right and far right Timber doors, architraves and beams add character to the building's interior **Next page, top** The timber-clad north facade with red steel walkway and stair **Next page, bottom** The south facade is clad in fibre cement panels

ALL IMAGES: HENRIETTA WILLIAMS



1. Cross-laminated timber frame
2. Marley Eternit Tectiva panel
3. Polyester powder-coated tension rod
4. Turnbuckle
5. Sweet chestnut 45mm round handrail
6. Duradek decking
7. 225mm C-section steel
8. Velfac200 series window
9. Polyester powder-coated sill
10. Rigid mineral wool
11. Redgra surfacing
12. Marshalls 450 x 450 bevelled paver
13. Marshalls kerbstone
14. 40mm cross-laminated timber deck
15. Single-ply membrane roof
16. Fitch plate supporting tension rod
17. Birdcage protection to gutter
18. Gyptone acoustic ceiling
19. Mansafe system
20. 140mm rigid closed-cell insulation
21. Lareine rooflight
22. 200 x 600mm tapered glulam beam
23. Marley Eternit sill
24. Underfloor heating
25. Cross-laminated timber slab



Section A-A

0 1m





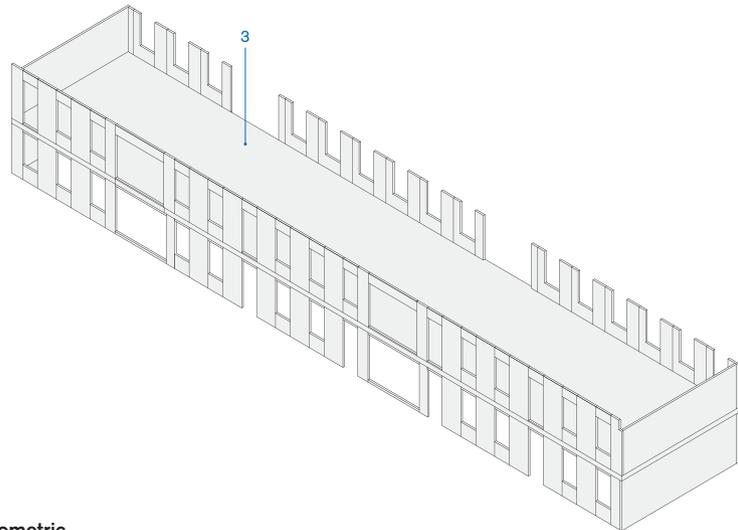
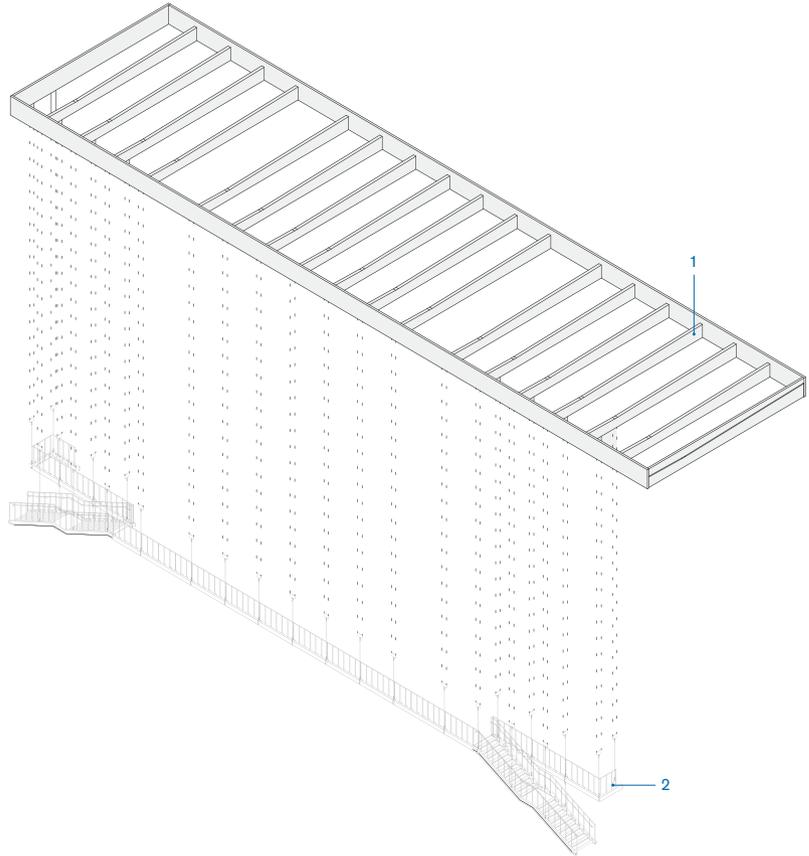
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Below The steel walkway and stair, which is supported by the facade, during the construction phase

- 1. Glulam tapered beam
- 2. Suspended steel balcony and stair
- 3. Cross-laminated timber frame



ALL IMAGES: FEILDEN FOWLES



Axonometric

SAMPLES BOARD

01. Steel suspended stair

The steel of the C-section beam and tension rod connector with the Mcevoy turnbuckle enabled the slender, lightweight, suspended steel walkway to contract with the more monumental proportions of the supporting glulam beams. A flitch was used on the rear of the beam to pick up the double joists
www.robbinengineering.co.uk

02. Cladding

Douglas fir timber was tanalised with a clear treatment to increase its durability and preserve the colour. The cantilevered roof also protects this elevation from the prevailing south-westerly winds
www.vastern.co.uk

03. Timber joists

Untreated Douglas fir joists were chosen for their durability and warm colour; the colour is protected by the cantilevered roof structure
www.vastern.co.uk

04. Hessian-coloured fibre cement panelling

This material was chosen for its cost, appearance and durability. The maximum panel sizes worked well with the structural grid, while the nVeloce bracket system and rivets allowed the panels to be installed quickly and in cold weather. The colour relates to the context of the old Redgra pitch upon which the building stands
www.marleyeternit.co.uk/facades/equitone

5. Pebble-colour fibre cement panelling

The darker pebble colour complements the hessian

The material palette is simple and robust. The north facade is lined with Douglas fir rough-sawn boards to relate to the school's Lee building and to give a softer lining under the cantilevered roof. Two tones of Marley Eternit Equitone Tectiva are used on the east, west and south facades, primarily as a robust, compositional cladding material. The bright red steel stair and suspended walkway is theatrical and durable, designed to be visually light and playful.
Fergus Feilden, partner, Feilden Fowles

panels. Used in the recessed panels to the south, their set-back plane emphasises the shadows
www.marleyeternit.co.uk/facades/equitone

06. Window

More than 800m² of Crittal and uPVC windows have been replaced. The slim 54mm profile of the Velfac product and the dark aluminium frames complement the lighter timber cladding
www.velfac.co.uk

07. Cross-laminated timber

Cross-laminated timber was chosen for speed and lack of disruption to the school. The off-site manufacture and sustainable credentials of using so much timber in one building was also favoured
www.eurban.co.uk
www.storaenso.com

08. Decking

Duradek composite decking was chosen as it is both robust and slip-proof. In addition, it has a high recycling content
www.duracomposites.com

09. Door handle

The Malta Lever on Rose door handle was used on all internal doors to the WCs and breakout spaces
www.sdslondon.co.uk

10. Acoustic panelling

Blazer Lite, 100 per cent wool acoustic panel lining was used in the office areas
www.camirafabrics.com



STÅLE ERIKSEN

