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WEST BUCKLAND SCHOOL, DEVON

Rundell Associates enlivens a 19th-century school with a timber-clad arts building – page 24

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Arts Building, West Buckland School, Barnstaple, Devon, by Rundell Associates

CLEARING UP THE CAMPUS

Rundell Associates adds to Devon's plethora of architectural styles with a timber-clad arts centre that complements the existing 19th-century West Buckland School and adds some coherence to the campus. But where is the masterplan?
By *Felix Mara*. Photography by *Ben Blossom*

MRJ RUNDELL ASSOCIATES

The volume on Devon in Nikolaus Pevsner's *Buildings of England* series is emphatic: 'No English county contains so great a variety of building materials as Devon.' But at Work Stage B of the expansion of West Buckland School near Barnstaple, the architect, Rundell Associates, seized upon an exterior cladding material that was unfamiliar in this part of north Devon: timber boarding. The client, an independent school that was founded in 1858 to provide a public school education for the sons of farmers and middle-class families, was sceptical. It had bought into the environmental logic of a timber structure at a very early stage. But the London architect had to demonstrate that timber would work as a cladding material on a practical level, and that untreated sawn Siberian larch would sit comfortably next to the local stone facades of the Victorian gothic Karslake Hall when it weathered to a silver-grey finish.

West Buckland School, which comprises a senior and prep schools and a nursery, appointed Rundell Associates in 2006 to design a range of new facilities that opened last month. The completed building provides exemplary teaching facilities for art, design and technology, together with a theatre and drama studio. The school refers to it as the 150 Building because its principal structure, the Grade II-listed Karslake Hall, was completed 150 years ago to designs by prolific local architect Richard Davie Gould.

The school's bursar, Roger Jackson, explains that the project was prompted by a generous donation. Because the school has limited resources, previous construction projects have been modest and piecemeal. Rundell Associates principal Mike Rundell is very conscious that the school doesn't really have a masterplan. 'Why weren't the new buildings aligned with the existing?' he asks. He laughs at the tennis courts in front of the hall and has no regrets that some rather ordinary buildings were demolished to make way for the new development.

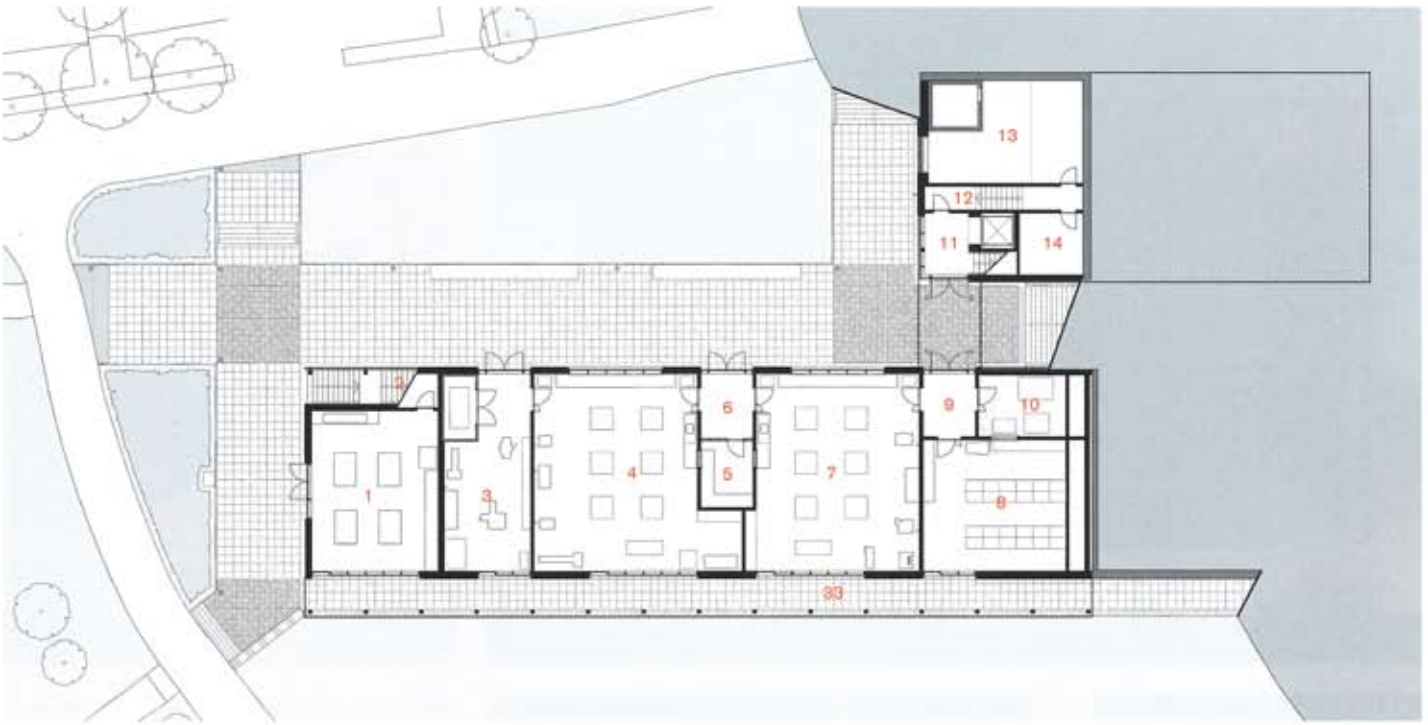
Rundell Associates' addition adds coherence to the site layout at a local level. It is divided into two oblong blocks aligned with Karslake Hall. The south block accommodates art, design and technology and the north block a theatre and drama studio for an audience of 120, with additional seating in a gallery. These blocks are connected by a bridge and they

Clockwise from right Internal and external circulation converge at the bridge without creating a bottleneck; Rundell responded to the vernacular and agricultural qualities of this building on the campus; the colonnade at ground-floor level reduces solar gain; facades are carefully composed; steps at the front of the art department, on the edge of the courtyard

define a route between the hall to the east and the prep school and car park to the west.

The two blocks are offset, so that the one to the south slides westwards to provide space for a loosely defined courtyard. This is open to the south and partially framed by the west facade of Karslake Hall. Project architect Daniel Burt suggests an allusion to, on the one hand, college quads, and on the other, farmyards. This courtyard would be more convincing if there wasn't a vehicle access on its east side. But the traffic is intermittent – mainly for deliveries – and there is talk of a shared surfaces arrangement in the future.

Despite the alignment of the principal axis of the new building with the hall, you couldn't really say that it has a strong geometrical relationship with its neighbours; it is as though it doesn't want to get too friendly with them. Nor could you say that the architect has taken the site by the scruff of the neck. Although this wasn't a requirement of the brief, it might have been possible to make proposals for the new building which anticipated the long-term development of the school more fully, rather than merely rejecting it as a site without a masterplan. But, given >>



Ground-floor plan

Site plan

the ramshackle nature of the campus, it is understandable that Rundell Associates allocated its resources elsewhere.

The real strength of the project lies in its response to, and development of, the brief through the arrangement of the internal accommodation. The layout is notable for the way in which it avoids hierarchies. As security is not a great concern, there are several entrances to the building; for example, through the tall doors into the drama studio foyer, up the steps to the art department, or down the generous steps between the blocks and into the workshop and technology suite lobbies. You can go straight into the prep school art studio or up the stairs at the west end to the art corridor. As the building will be used mainly by a closed community, it is of little concern that it isn't obvious that one set of courtyard doors leads to the drama studio while the steps lead to the art department.

The real strength of the project lies in its internal arrangement

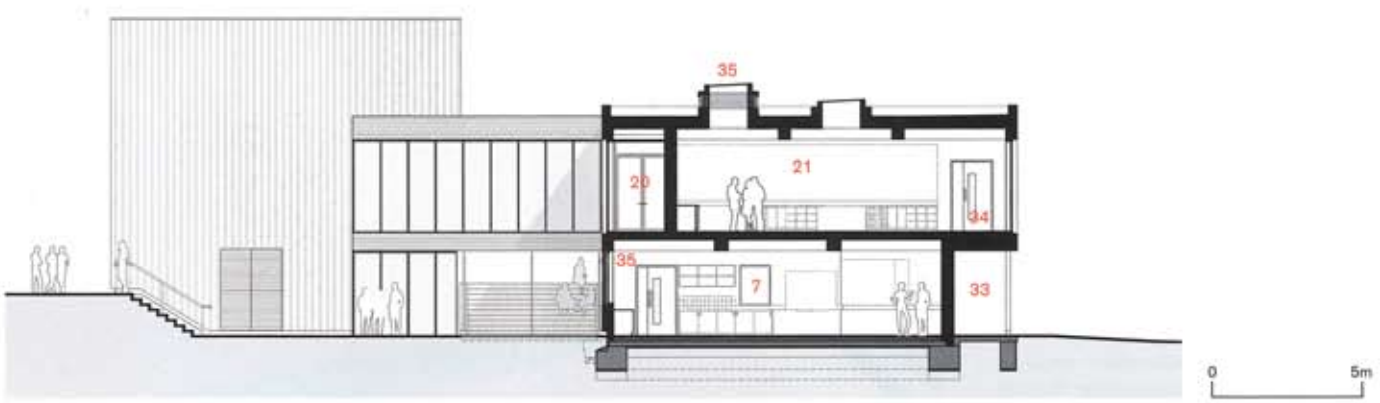
This is a building you can walk through: up the generous steps to the art department and along its daylit gallery, leading to an external staircase, or across the bridge and into the drama studio foyer. The bridge is the point at which everything comes together, taking full advantage of the half-storey difference in levels between the two blocks. On the north side of the bridge, an internal staircase and platform lift (with doors on opposite sides of the car) connect all the major levels in the development. The thoroughfare between >>

1. Karslake Hall
2. Memorial Hall
3. Delderfield (preparatory school)
4. Orchard Lisle Building (maths and physics)
5. Main car park
6. Boarding house
7. Headmaster's house

First-floor plan

1. Prep school classroom
2. Store
3. Technician's store
4. DT classroom 1
5. DT staff office
6. Entrance lobby
7. DT classroom 2
8. PC suite
9. Entrance lobby
10. CAD/CAM store
11. Lift lobby
12. Plant room staircase
13. Plant room
14. Switch room
15. Sixth-form classroom
16. Western entry staircase
17. Kiln store
18. Art staff office
19. Art classroom 1
20. Long gallery
21. Art classroom 2
22. Darkroom
23. Cleaner's store
24. Print workshop
25. Main entry staircase
26. Link bridge
27. Disabled WC
28. Boys' WC
29. Girls' WC
30. Backstage
31. Theatre lobby
32. Studio theatre
33. Colonnade
34. Natural ventilation ingress
35. Natural ventilation egress

Section KK



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Top Screen separating external steps **Above** Art classroom. The entire building structure is cross-laminated panels and glulam beams **Right** Bridge. Circulation areas have rubber flooring

The configuration of these spaces and routes is the essence of good design

the hall and the prep school passes below, and on the south side there is an enfilade through the art studios, plus a terrace with a framed view and steps where pupils can sit at the edge of the courtyard. The configuration of these spaces and routes is the essence of good design.

The project has a strong environmental agenda that reflects the aspirations of the architect and the client. As Burt points out, due to the nature of the site and the brief, there were limited opportunities to gain BREEAM points in categories such as consultation and proximity to facilities. With only a few exceptions, all rooms are naturally ventilated and have high daylight levels. Renewable energy is provided by a wood pellet biomass boiler and photovoltaic panels on the roof.

But this isn't just a worthy ecology project. It is graced by Rundell Associates' experience of gallery design, which includes collaborations with Damien Hirst. In this, his first school, Rundell draws on his experience as a painting student at Camberwell College of Art. That south London institution had a students' exhibition space, which inspired the long glazed gallery that allows passers-by to view the paintings on display. On the other hand, Rundell chose not to emulate Camberwell's painting studios, which were daylit by side windows only. The art classrooms at West Buckland have rooflights, providing a more uniform distribution of light, and these generous spaces are one of its joys. The floor-to-ceiling composite curtain walling has slender glulam mullions and the combination of exposed timber structure and white acoustic panels is fresh and appealing. This is reinforced by exposed and carefully set-out services: light fittings, conduit and dado trunking. >>

Externally, the Siberian larch boards and slats form subtle rhythms

MRJ RUNDELL ASSOCIATES

Externally, the Siberian larch forms subtle rhythms, with horizontal bands to emphasise the bridge, horizontal plant room louvres precisely framed by metal sections and slatted light-filtering screens. On the south side of the art, design and technology building there is local flint walling which reads as a plinth and forms a visual link to the facades of Karslake Hall. The decision to specify timber cladding may have been influenced by cost and Rundell Associates has done well to work to a rate of £2,120 per m², which puts many Building Schools for the Future and Academy projects to shame, including Elmgreen School by Scott Brownrigg at £2,128 (AJ 25.03.10) and Feilden Clegg Bradley Studios' St Mary Magdalene Academy at £2,500 (AJ 24.09.09). But when explaining the choice of cladding, Rundell invokes neither the building's context nor its budget, but the fulfilment of its brief. 'We wanted it to do what it said on the can,' he says. Likewise, the can's label is a good indication of the environmental considerations within. ■

Previous page Siberian larch cladding was chosen for its longevity

Above Rooflights provide a uniform distribution of daylight in the art classrooms

Read a report from the structural engineer at **architectsjournal.co.uk**

Start on site February 2009
Contract duration 12 months
Gross internal floor area 1,400m²
Form of contract SBC05
Total cost £3.25 million
Cost per m² £2,120
Client West Buckland School, Devon
Architect Rundell Associates
Landscape architect MHP Design
Structural engineer Atelier One
M&E consultant E3 Consulting Engineers
Cost consultant Gardiner & Theobald
Main contractor Pearce Construction (Barnstaple)
Annual CO_2 emissions 8.1kg/m²

ARTS BUILDING, WEST BUCKLAND SCHOOL

Rundell Associates

Terraced seating and entrance staircase

The terraced seating offers a sheltered meeting place for students, and the courtyard that separates the existing Victorian school and the new arts building acts as a social hub.

The paved surface of the courtyard continues up into the new building. Using the timber frame as the supporting structure for a precast concrete staircase seemed counter-intuitive, but once the engineers had demonstrated that the loadings were acceptable, it was a matter of ensuring that the timber frame was protected from water ingress.

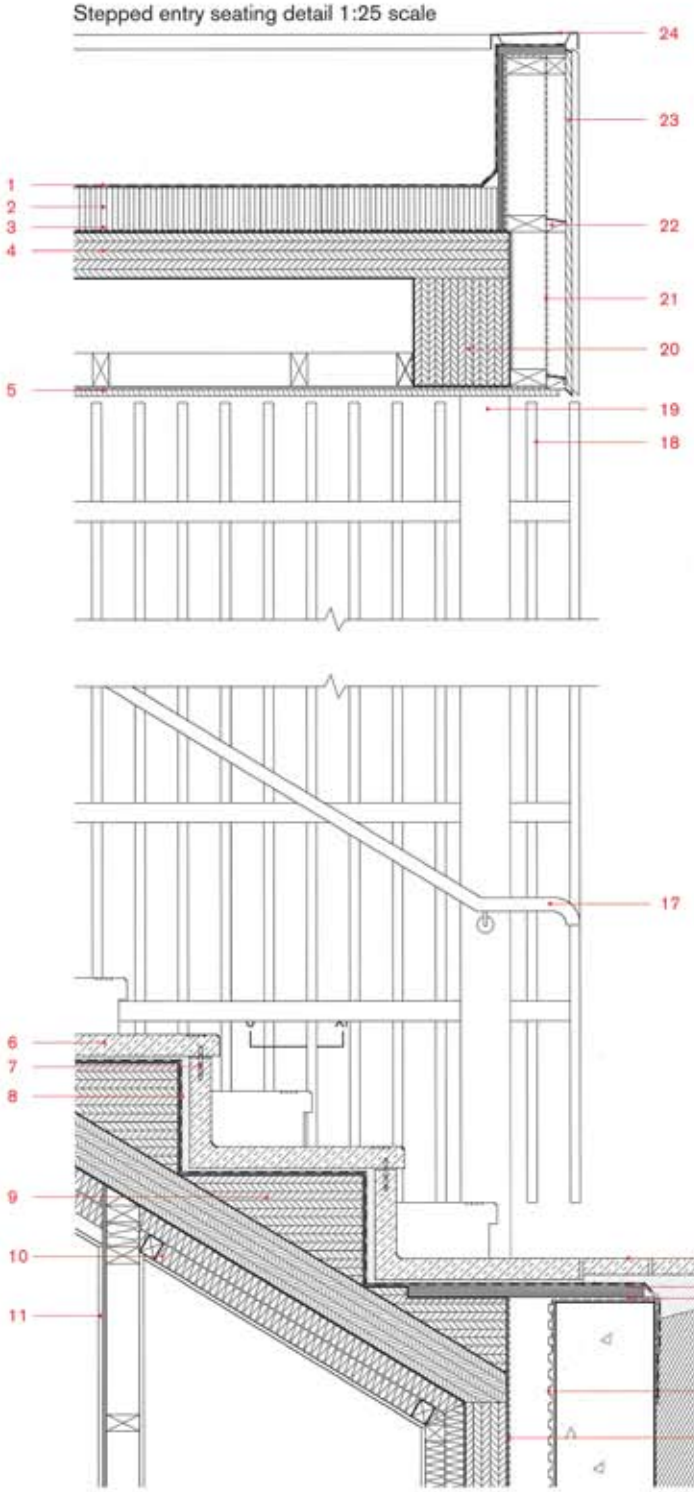
The changes in level across the site made it necessary to install a reinforced concrete retaining wall along the western edge of the courtyard. The KLH structural frame abuts the retaining wall, separated by a drained and ventilated cavity to prevent any moisture transfer into the timber. The inside face of the retaining wall is covered with a mechanically fixed studded membrane that drains to a cavity tray at the base of the wall.

The KLH staircase is wrapped in an EPDM membrane. Precast tread profiles were set on a continuous mortar bed along their entire length, with each level of treads fixed to the previous one with stainless-steel pins. Once the double-height terraces were completed the intermediate steps were installed, bedded on mortar and located with stainless steel pins.

The soffit above the stair is clad with 90mm-wide Siberian larch boards, fixed to softwood joists above a continuous layer of black insect mesh. The larch cladding is fixed with stainless steel, self-countersinking screws in a board-on-board arrangement, which provides ventilation behind the timber. A 50mm-deep PPC aluminium coping caps the roof parapet, providing a crisp edge to the elevation.

Daniel Burt, project architect, Rundell Associates

Stepped entry seating detail 1:25 scale



1. Single-ply waterproof roofing membrane, mechanically fixed
2. 1:60 cut to falls insulation
3. Vapour-control layer
4. 140mm KLH cross-laminated timber panel
5. 90 x 20mm fine-sawn Siberian larch soffit boards and continuous insect mesh
6. Minsterstone precast concrete stair treads on continuous mortar bed
7. Stainless-steel pin
8. Prelasti EPDM membrane, fully bonded
9. KLH cross-laminated panel with prefabricated steps
10. Two layers of Rockwool Flexi insulation between softwood battens
11. 12mm plasterboard on softwood stud wall
12. Tyvek breather membrane
13. Oldroyd Xv studded polypropylene membrane
14. Painted DPM to top of reinforced concrete retaining wall
15. 30mm marine-grade plywood
16. Courtyard paving
17. PPC aluminium handrail
18. Siberian larch entrance screen
19. 150 x 150mm KLH column
20. KLH glulam beam
21. Tyvek breather membrane
22. 60mm tapered softwood cavity batten
23. 20 x 90 and 20 x 140mm fine-sawn Siberian larch boards, fixed vertically, board-on-board with stainless-steel screws
24. PPC aluminium coping