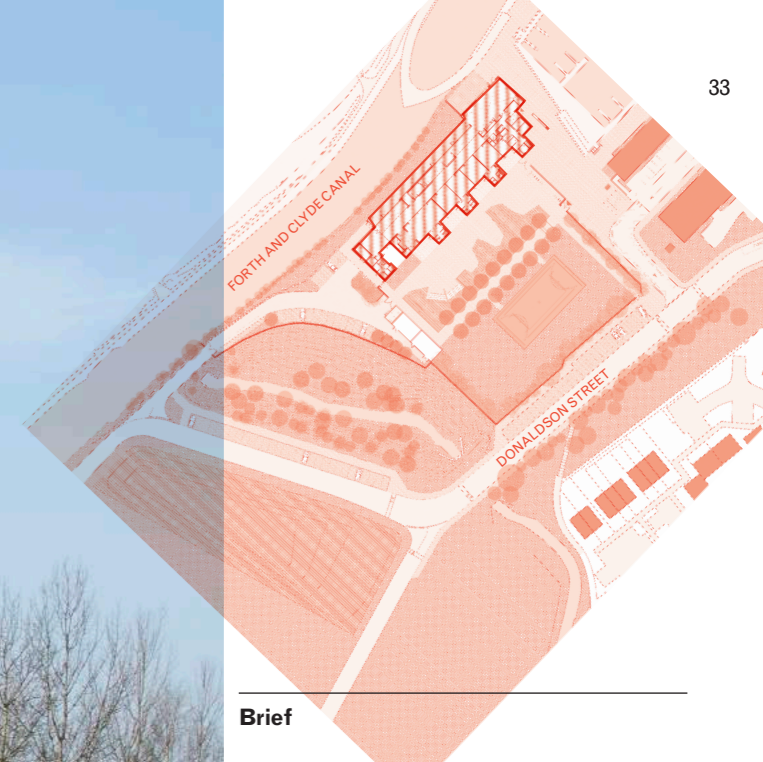


BUILDING STUDY

LAIRDSLAND

PRIMARY SCHOOL

WALTERS & COHEN



Brief

*Michal Cohen, director,
Walters & Cohen Architects*

Scotland's Schools for the Future programme aims to replace or refurbish some of the country's poorest-quality school buildings. To this end, in 2012 Scottish Futures Trust issued an invitation to tender for a reference primary school design. During an intensive 10-week consultation and research period, two architectural practices developed the brief with client groups, and produced costed designs to RIBA Stage C.

East Dunbartonshire Council subsequently chose Walters & Cohen to design Lairdland Primary, a new school for up to 320 pupils, novating to the contractor, Morgan Sindall, at Stage E. Community engagement informed a design that enhances and rejuvenates its locale.

Data

- Start on site** February 2014
- Completion** April 2015
- Gross internal floor area** 2,108m²
- Form of contract or procurement route** Design and build
- Construction cost** £7.3 million, including all fees, abnormalities and site works
- Architect** Walters & Cohen Architects
- Client** East Dunbartonshire Council, led by development partner Hub West Scotland, delivered by main contractor Morgan Sindall
- Structural engineer** Woolgar Hunter
- MEP consultant** Morgan Sindall Professional Services
- Quantity surveyor** Sweett Group
- Civil engineers** Woolgar Hunter and WSP
- Acoustics** Max Fordham
- Landscape consultant** Iglu Studio
- CDM co-ordinator** Sweett Group
- Approved building inspector** East Dunbartonshire Council Building Control
- Main contractor** Morgan Sindall Construction
- CAD software used** Vectorworks Architect 2012
- Annual CO₂ emissions** 9kg/m² (estimate)

BUILDING APPRAISAL

By Alan Dunlop
Photography by Dennis Gilbert

Kirkintilloch is some eight miles north of Glasgow city centre and has a population of 20,000. In the past the town was highly industrialised, with textiles, foundries and light engineering works. It is now the administrative centre of East Dunbartonshire Council and a dormitory for Glasgow. The Forth and Clyde Canal cuts through the town and has recently been regenerated as a tourist attraction.

The town's Lairdsland Primary School was one of the first of the new schools commissioned by the Scottish Futures Trust (SFT), a body set up by the Scottish National Party to counter Labour's heavily criticised Public Private Partnerships (PPP) programme. The SFT is an 'arms-length, independent company' whose purpose is to manage the procurement of all public, infrastructure and building works 'cost effectively and efficiently'.

Built as part of the Schools for the Future Programme, Lairdsland is one of seven primary schools in the town, and replaced a dilapidated Victorian school building in the town centre. The brownfield site is on the edge of a small industrial park to the south-east of the town, fronting on to the Forth and Clyde Canal to the north-west and sitting alongside a recently constructed canal basin, adjacent to new council headquarters.

After a competitive tender process, architects Reiach and Hall and Walters & Cohen were invited to prepare costed 'reference' designs to RIBA Stage C for a school for 300 children. The site presented unique challenges, since the canal it abuts is a Scheduled Ancient Monument, but nevertheless both practices were instructed to develop a 'prototype design' that could be



used for other schools. The competition was won by Walters & Cohen, a London-based practice with a number of award-winning school projects in England to its credit.

The idea of a prototype for a school remains controversial, with many architects – myself included – who consider that site context, function, and sense of place should always determine the design response. Walters & Cohen agrees, but envisaged an ‘association of spaces’ for the new school; a relationship between formal and informal spaces, a barrier-free layout, and a standard classroom design, which it believes can be used as references for other schools.

According to Grant Robertson, SFT associate director and leader of the Schools for the Future programme, there are huge financial benefits for ‘cash-strapped’ councils in adopting design prototypes. He says councils now ‘have a tried-and-tested architectural concept at their fingertips, ready to use immediately without having to embark upon lengthy procurement processes that suck in resources and waste time and money’.

Walters & Cohen took the project to RIBA Stage D in 2012, collaborating with East Dunbartonshire, and was then employed by the newly formed Hub West,

a public-private joint venture development organisation set up by the SFT. In 2013, the design was put out to competitive tender to three Tier 1 contractors, and won by Morgan Sindall, which then negotiated within an ‘affordability cap’ agreed at the start. The architects and the design team were then novated and all worked through to detailed design. On-site works started in 2014.

The linear, two-storey structure runs parallel to the Forth and Clyde Canal and is separated from the water by a strip of terrace and new soft landscaping to which the staff and pupils have controlled access. The north-west elevation is double-height, almost fully glazed and fronts on to the canal. It is punctuated at its centre by larch, which clads a feature ‘amphitheatre’ staircase and the much higher gymnasium by the school’s visitor entrance.

The pupil entrance is well considered and controlled. A single gateway is supervised in

There are no classroom doors, thresholds being defined by changes of flooring materials

the morning when children arrive and in the afternoon when they leave. Inside, there are landscaped grounds, designed by landscape architect Iglu, with pupils free to move around the campus without restriction. Visitor access is by a separate supervised entrance on the north-east elevation, where support facilities and the head teacher’s office are also located.

Classrooms are to the south-east and, in contrast, the elevation here is layered with much greater depth of structure. It is defined by four ‘towers’, each of which marks entrances on the ground floor from the playground, giving the youngest pupils direct access to their classrooms, cloakrooms and toilets.

Older pupils in primary classes 5 to 7 are on the first floor, which is accessed from a staircase off the school campus. While the classrooms are brightly lit, on a Scottish December morning the interior depends much on supportive task and ceiling lighting. On a clearer day I have no doubt the circulation space and classrooms will benefit from natural light. The interior is open on both floors with a balcony on the first floor overlooking the shared ground floor. Unusually, there are no classroom doors, thresholds instead being defined by changes of flooring materials. Pupils spill out on to the main circulation space and into specially designed seating and meeting areas, so the overall impression is lively, and full of activity. Important areas and informal seating are picked out in bright colours, which also act as orientation cues.

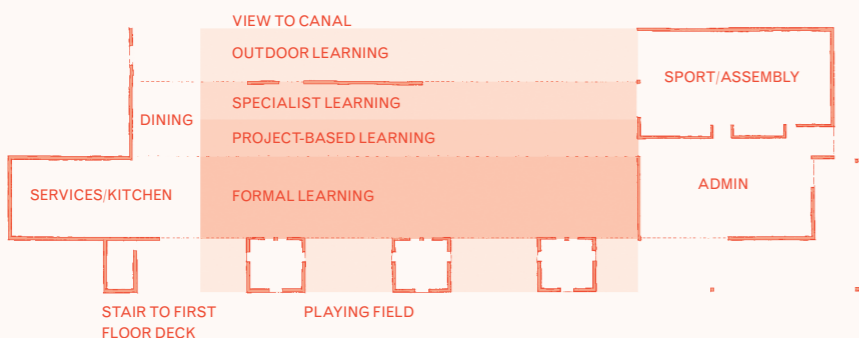
Most Design-and-Build projects are subject to cost cutting once the tender is won, but to its credit Morgan Sindall has followed much of the architect’s specifications, and the building and its exterior and interior finishes are completed with consideration. The main circulation space has oak flooring – often the first specification item to be ‘value engineered’ – and this provides warmth and character.

This is a fine project and has been carried through by the architect and design team with flair. But the notion of it providing a prototype for civic buildings remains a challenging one. The design for Lairdland Primary is clearly influenced by its unique location, but it is now to be used for three other schools in the area. One of those three schools is now being built and the plan at the centre of this new school presents as more than a ‘reference’, looking very much like a copy of Lairdland Primary with two additional wings added at either side. For my part, I think that such an approach is short-sighted and lacking in ambition.

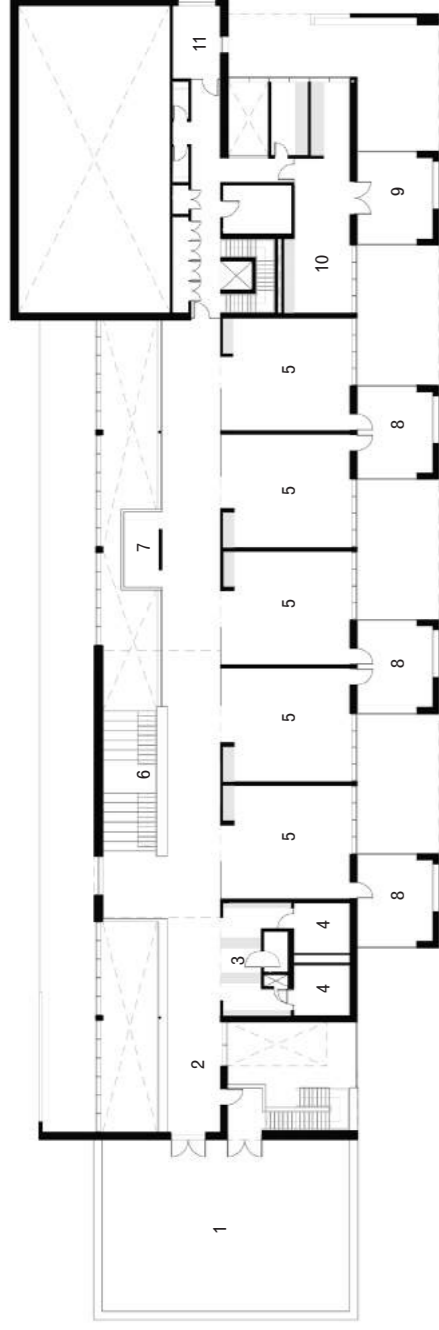
Alan Dunlop is visiting professor of architecture and honorary chair in contemporary architectural practice at the University of Liverpool and visiting professor of architecture at Robert Gordon University

- 1. (opening spread) The school fronts on to the Forth and Clyde Canal with double-height windows maximising views
- 2. (previous spread) Main circulation space with amphitheatre staircase
- 3. (below) Sketch showing how the building has been conceptualised in zones
- 4. (opposite) The younger pupils’ classrooms are on the ground floor

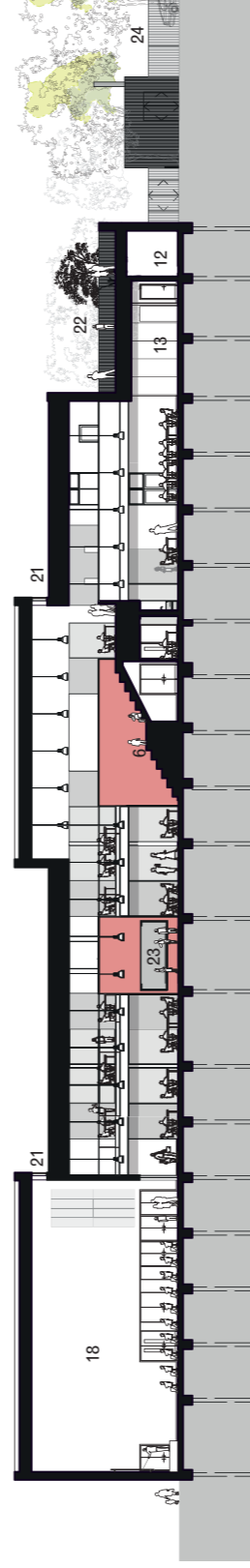
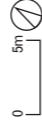
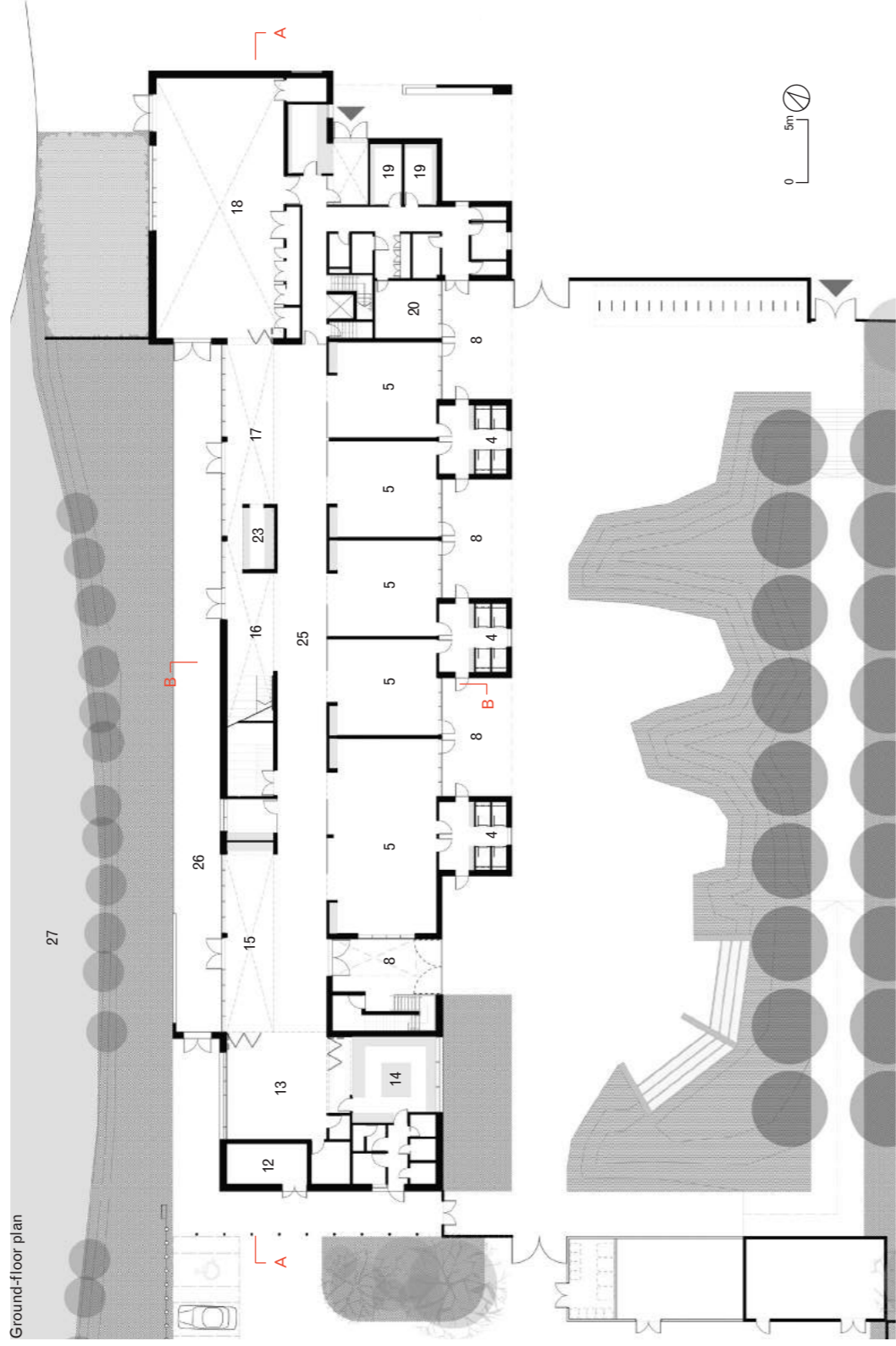
WALTERS & COHEN ARCHITECTS



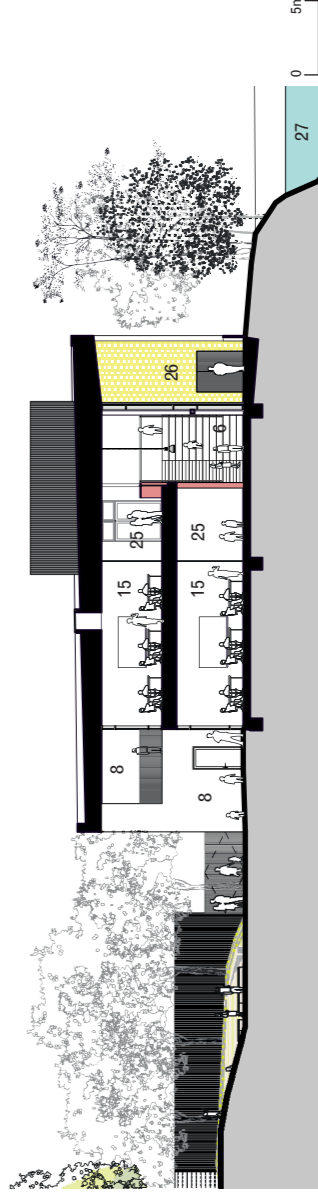
First-floor plan



Ground-floor plan



Section A-A



Section B-B

- | | | | | |
|-----------------------------|----------------------------------|----------------------------------|-------------------------------------|----------------------------|
| 1. Outdoor learning terrace | 7. Group space | 13. Dining and music area | 18. Assembly hall and exercise area | 24. Staff car park |
| 2. Resources | 8. Covered outdoor learning area | 14. Kitchen | 19. Changing room | 25. Project learning space |
| 3. Coats | 9. Covered outdoor staff area | 15. Science and art area | 20. Head teacher's office | 26. Covered canal terrace |
| 4. WC | 10. Staff area | 16. Display and performance area | 21. Clerestory glazing | 27. Forth and Clyde Canal |
| 5. Learning hub | 11. Meeting room | 17. Science zone | 22. Terrace | |
| 6. Amphitheatre staircase | 12. Plant | | 23. Cooking kiosk | |

ARCHITECT'S VIEW

Michal Cohen, director, Walters & Cohen Architects

In 2003 the Department for Education commissioned Walters & Cohen to design an exemplar primary school. Since then we have built out our ideas, adapting them to suit different locations, sizes and types of school, and continually learning how our architecture can best respond to our clients' various needs.

We were therefore delighted to have the opportunity to design a reference primary school for Scottish Futures Trust, creating design principles in response to the Scottish Curriculum for Excellence and Scottish Futures Trust's area and cost metrics.

Time and again we find that successful projects take root in meaningful consultation and as architect for Lairdsland Primary School we experienced a stimulating period of engagement with staff, pupils, parents and local people.

For example, pupils helped choose the colours in and around the school, selecting the vibrant red because it reflected the colour of a particular boat on the marina. Other consultation activities resulted in a building that is unique to its site; tailored to the way this particular school wanted to teach. The canal-side location, the double-storey glazing to give views of the canal, and the internal free flow for those using the school were all locally-led design decisions.

One of our most successful initiatives was to show a client group around some of our completed schools. Seeing our design principles translated into reality fostered a great deal of enthusiasm for making Lairdsland a beacon in its community and a quality learning environment.

Clockwise from top left:
5. Pupils are free to move around the landscaped grounds
6. Covered outdoor learning areas jut out from the first-floor classrooms
7. Ground-floor classroom
8. Larch cladding
9. The amphitheatre staircase



WORKING DETAIL

*Anna Pemberton, associate,
Walters & Cohen Architects.*

The detail shows a section through the double-height heart space that opens out on to the canal and terrace to the north. The design intent was to strike a balance between safety and openness. The prominent canalside setting presents an opportunity for Lairdsland Primary to be an attractive, welcoming and positive addition to its locale. Our design combines the need for pupil safety with the desire for a visual connection to the canal.

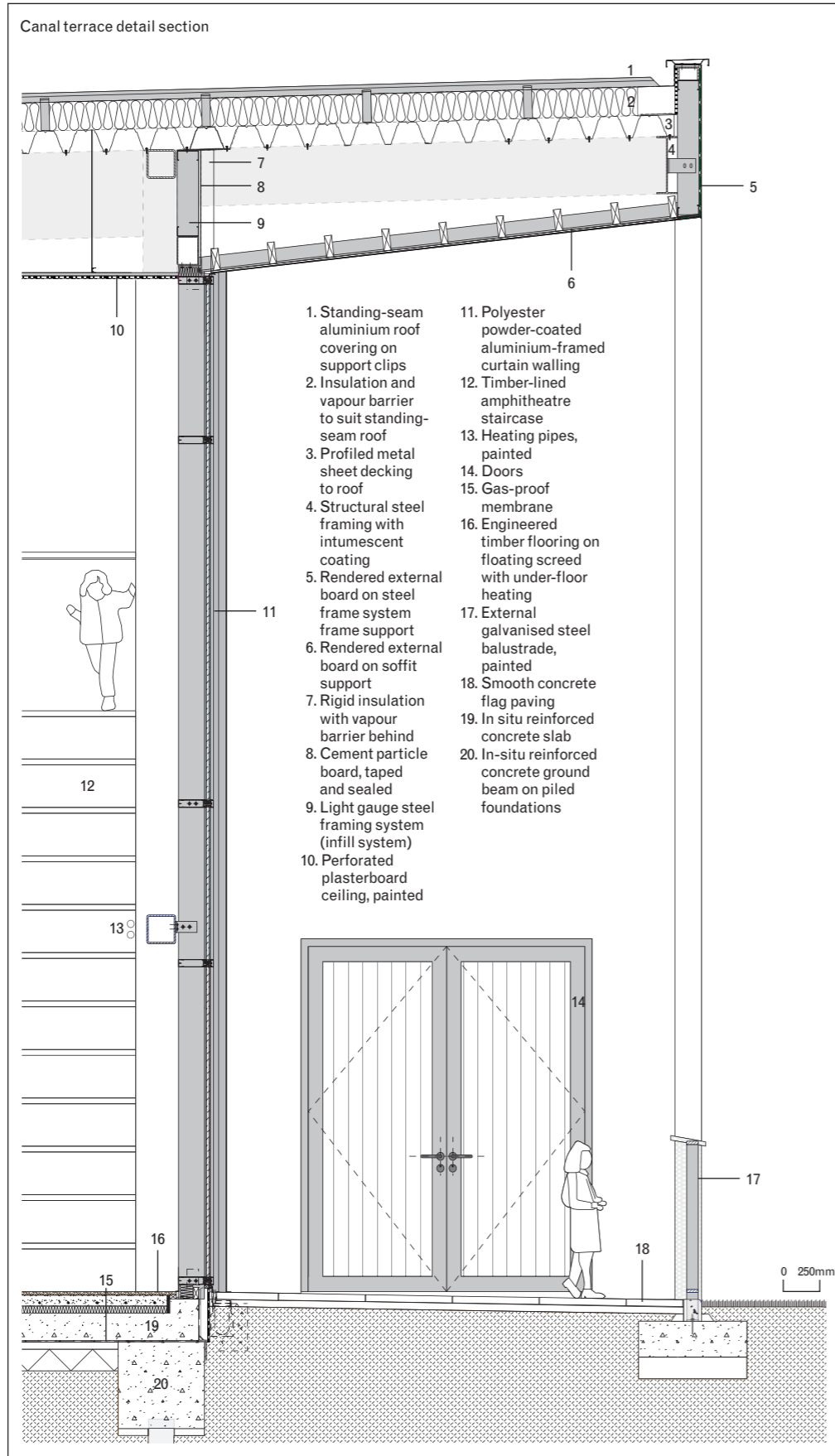
Floor-to-ceiling glazing floods the heart space with natural light, while an open vertical metal balustrade encloses the learning terrace, allowing views out to the canal, even for the youngest pupils. Three large double doors open out on to the canal terrace from the heart space, providing a covered outdoor learning environment to those along the south elevation, while also acting as smoke vents as part of a fire engineered solution to address the layout's open-plan nature.

One feature of the detail is the chamfered soffit, which conceals the structure and services and presents the hint of a colourful yellow surface to passers-by. The large north-facing glazed wall looks out on to the canal, linking the building to its surroundings and providing a window into the school, displaying the colour and vibrancy of the pupils' work and activity within.

Inside, the amphitheatre stair creates a generous double-volume space which ties the whole school together. Behaviour and learning are observed from the heart of the school, and achievements are celebrated here day by day.



10. (this image)
Staircase
11. (opposite)
The school overlooks
the canal, which is a
Scheduled Ancient
Monument



12. Pupils in the landscaped grounds
13. (opposite) Pupils spill out on to the main circulation space



CLIENT'S VIEW

Simon Mair, Primary School Improvement Programme lead, Education & Children's Services, East Dunbartonshire Council

The local authority required a school that provided a reference design for the development of primary schools in East Dunbartonshire. This meant a building designed to specific cost and area metrics, but most importantly, a building that enabled the school to deliver and develop new pedagogy in Scottish education.

To make sure that the design focused on the implementation of the new curriculum, consultation was very important. The design was developed through intensive work with staff, parents and pupils. The brief for the consultation was simple: design a school for the Curriculum for Excellence. Because sessions were led by architects working with all the school's users, the design accurately reflects stakeholders' needs, and users understand the design and have bought into it.

Key features of the building were developed through this consultation. The informal and formal learning areas that form the classrooms – and the transparent and open nature of the spaces – allow different activities to take place in one lesson, with teachers able to supervise each part of the space. Pupils can work confidently and independently in open spaces, with more formal work carried out in the class base. Shared spaces such as the staircase, gym hall, dining hall and art and science areas can support a wide range of activities and allow teachers much greater flexibility. Covered outdoor spaces for all learners, and stimulating and varied outdoor environments support outdoor learning throughout the year.

The quality of the design and the consideration given to acoustic engineering, pupil movement, and transparency and supervision has ensured the school can use all of the spaces as it develops new ways of working in the new building. This consultation approach together with these design principles and metrics are now being used as the basis for four further new schools across the authority.



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2011
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DENNIS GILBERT (FAR LEFT) ANDREW LEE (LEFT)