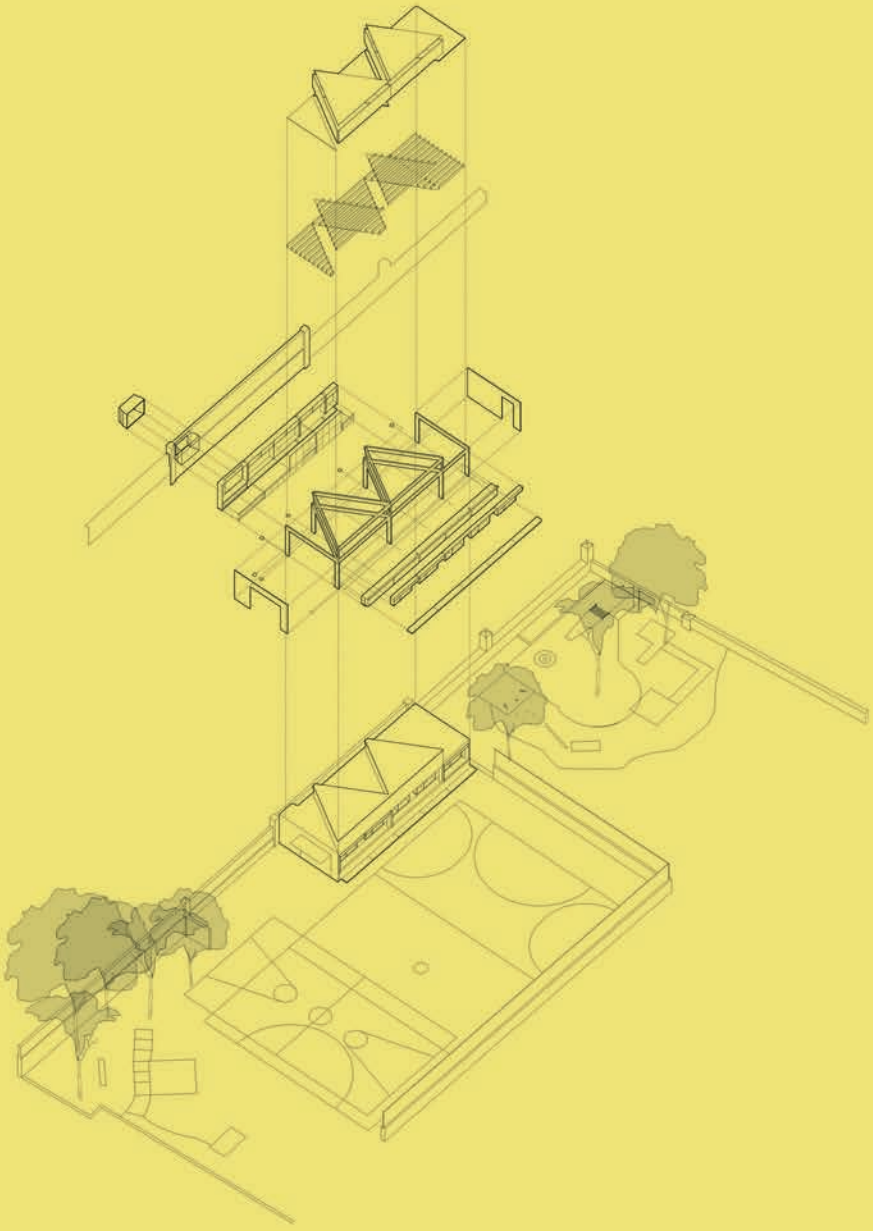
DESIGN FOR LEARNING

Camden Schools: Architecture in the Age of Austerity



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UNIVERSITY OF WESTMINSTER
DESIGN RESEARCH FOLIO 2021

DESIGN FOR LEARNING

Camden Schools: Architecture in the Age of Austerity

ANTHONY BOULANGER

Project: *Torriano Junior School Entrance*
Location: *Kentish Town, London*
Architect: *AY Architects*
Client/Funder: *Torriano Junior School*
Collaborators: *Yeoryia Manolopoulou*
Cost: *£125,000 (Phase 1 £25,000)*
Dates: *2015-2016*

Project: *Eleanor Palmer Primary School Science Lab*
Location: *Camden, London*
Architect: *AY Architects*
Client/Funder: *LB Camden & CSG*
Collaborators: *Yeoryia Manolopoulou*
Cost: *£330,000*
Dates: *2019*

Project: *Camden School for Girls Main Building Extension*
Location: *Camden, London*
Architect: *AY Architects*
Client/Funder: *LB Camden & CSG*
Collaborators: *Yeoryia Manolopoulou*
Cost: *£925,000*
Dates: *2019*

Project: *Camden School for Girls Sixth Form Building Extension*
Location: *Camden, London*
Architect: *AY Architects*
Client/Funder: *LB Camden s106 Funding*
Collaborators: *Yeoryia Manolopoulou*
Cost: *£350,000*
Dates: *2019*

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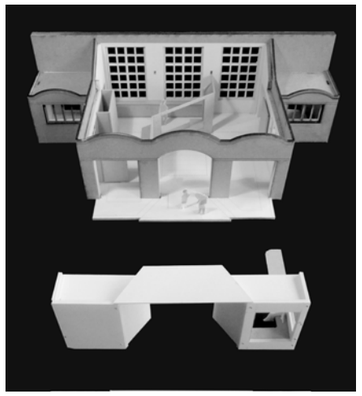

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Fig. 1
Eleanor Palmer Science Lab, exterior view above existing wall

Fig. 2
Torriano Junior School Entrance

Fig. 3
Camden School for Girls Sixth Form, Building Extension

Fig. 4
Camden School for Girls, Main Building Extension

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ABSTRACT

This group of small specialised projects demonstrate the possibilities for significant and enriching architectural work in high quality school buildings in a time of extreme austerity in current school building in the United Kingdom. Centred on the Eleanor Palmer state Primary School's new science laboratory building (the first of its kind in the country) Anthony Boulanger and AY Architects demonstrate the possibilities for significant architectural improvement of school facilities and pupil and staff experience despite very low budgets, no significant or obvious sites, and in response to changing and emerging needs and requirements for school provision.

Individually and collectively these interventions have generated a group of special buildings and improvements out of very little financing. The four projects provide valuable teaching/learning, communal, dining and office space, are strongly connected to their sites, briefs, landscapes and urban fabric and are in contrast with projects from the age of major school building programmes. The solutions are innovative, well-crafted and environmentally-minded, realised with very tight budgets and working with challenging constraints on difficult sites.

Taken as a whole, the projects critique standardised approaches to educational buildings and far exceed expectations of minimum requirements set by the government's programme of 'baseline designs and strategies for schools'. Though modest in scale, they mark a new phase in the history of school building in the UK, contrasting restrictive sector-wide responses and typologies with specialised solutions that do more with less; prioritise spatial quality and environmental design principles; use timber construction for the stand-alone buildings, marking a shift in the educational construction sector in the UK; and offer new typologies of provision such as the country's first science building for primary school children.

RESEARCH QUESTIONS

- How can architecture respond to the demands of state school education in the times of austerity to create valuable and inspiring additions to challenging school sites and within tight budgets?
- How can architects create new building typologies by integrating learning content and ideas in the building design and by extending learning experiences outside the building envelope to new pedagogic landscapes?
- How can contemporary high quality architectural interventions help existing schools acquire a new identity, revitalising their connection with local contexts and communities?
- What methods of sustainable construction and operation can create energy efficient and environmentally-minded school buildings, enhancing teaching, learning and well-being?

Fig. 5
Torriano Junior School Entrance, façade drawing of proposal

Fig. 6
Eleanor Palmer Science Lab, interior photograph

GENERAL DESCRIPTION

AY Architects was founded by Anthony Boulanger and Yeoryia Manolopoulou in 2006, on the basis of the cross-fertilisation between teaching, practice and research. AY Architects has spent the last several years working directly with state schools in North London to successfully deliver a range of small, high quality and distinctive and award-winning building projects spanning from nursery to sixth form education.

The group of projects in this folio centres around Eleanor Palmer Primary School Science Lab (completed in 2018) which has been particularly recognised nationally as an exemplar of innovative design in straitened conditions. The other projects are: Torriano Primary School Entrance Renovation (completed in 2016), and two extensions to Camden School for Girls (both completed in 2019). These projects demonstrate a commitment to facilitating the increasing demands of state sector education in the current socio-economic climate and the age of austerity when diminutive state funding is available for capital investment and when little state school building is taking place.

The projects included in this folio are:

Torriano Junior School Entrance (2016)

The project is located in Kentish Town, London. The construction budget of the renovation and extension was £125,000. The construction cost of phase one was £25,000 and the project was funded by school reserves.

This low-budget project involves an extension and refurbishment of the existing entrance building of Torriano Junior School, which was itself built in 1998 as an extension to the original Edwardian Arts & Crafts school building.

The project was designed as an inviting extension and renovation to improve the relationship of the entrance into the school grounds with the main building entrance, while improving administration office space and creating a waiting area as the first point of entry into the main school building.

Eleanor Palmer Primary School Science Lab (2018)

Eleanor Palmer Primary School Science Lab is a small stand-alone facility dedicated to teaching the sciences to primary school pupils ages 3-11. Completed in 2018 the science lab is understood to be the first of its kind in the UK, creating a new building typology for teaching primary school STEM (science, technology, engineering and maths) within the London Borough of Camden. It was part of the Council's programme for developing STEM teaching in primary schools and is supported by Section 106 funding. The building accommodates classes and after school clubs for up to 32 pupils and is a shared resource with other schools and the local community. The environmentally-conscious building is entirely made of timber, visually demonstrating its 'building physics' as part of teaching and learning.

AY Architects won the commission through a competitive interview in 2015 and the design developed through working closely with an advisory body of 10 core members made up of the head of teaching, business manager, science teachers, parents, governors and pupils.

Fig. 7
Camden School for Girls Sixth Form Building Extension, view from Camden Road

Fig. 8
Camden School for Girls, Main Building Extension

Camden School for Girls Main Building Extension (2019)

Camden School for Girls tendered much-needed building work to extend and partly refurbish two areas of the school campus following the government's scrapping of a significant Building Schools for the Future (BSF) supported project in 2010 to rebuild its existing sports hall with a new facility while extending and refurbishing other teaching spaces. AY Architects were appointed in 2015 for both the main school building and the sixth form building projects after winning the commission through a competitive interview.

The project is located in Kentish Town, London and was completed in 2019 for a construction sum of £925,000. The project was primarily funded by London Borough of Camden Communities and Investment Plan (CIP) funding for sustainable design improvements to schools along with school reserves and school-organised fundraising. The Main Building Extension project involved a two storey extension to provide additional space to the dining hall, a new secured entrance, reception area and landscaping on the ground floor and additional teaching staff office space on the first floor, all on an incredibly compromised site with significant level changes.

Camden School for Girls Sixth Form Building Extension (2019)

The Sixth Form Building Extension project at Camden School for Girls was also completed in 2019 for a construction sum of £350,000. The project involved the creation of an additional classroom with alterations to existing classrooms on the first floor and an extension to the existing pupil common space, quiet study space and outdoor landscaping on the ground floor. The design extends the existing Sixth Form teaching block fronting Camden Road located on a very confined site within close proximity to the school boundary.

Fig. 9
Camden School for Girls the 1950's post war infill of the existing main building and entrance – the site of the extension

Fig. 10
The Guardian, Newspaper article July 2010 announcing the scrapping of the Building Schools for the Future programme

CONTEXT

State School Procurement

The history of state sector school building in the UK is characterised by a few sustained periods of centralised procurement, with clearly emerging architectural typologies, coupled by long periods of under-investment with a focus on maintaining and adapting existing school facilities. AY Architects' work falls into the latter category, in a time when the government is investing very little in school building and refurbishment projects.

The first large scale school building programme started in the late nineteenth century, when often elaborate architecture such as the Queen Anne style and the central hall plan was the predominant typology for urban schools being built by local school boards and local authorities across the country.

School building during the inter-war years was slowed by poor economic circumstances and lack of funding from parsimonious governments. Temporary and pre-fabricated systems were adapted to the re-building effort after one in five schools in England were destroyed or severely damaged in the Second World War. The Consortium of Local Authorities Special Programme (CLASP), was established in the 1950s by architect Donald Gibson with Nottinghamshire County Council. The programme utilised a lightweight modular steel-framed system for school building, supporting the surge in primary school expansion in response to the post war baby boom. The low-cost pre-fabricated system became more widely used throughout the county until the mid-1970s, taking on a number of variations. During this time, some local authorities started to bring in their own architectural approaches as a reaction to pre-fabricated systems. Hampshire County Architect Colin Stansfield Smith notably contributed to this movement when traditional typologies of the school and classroom were given a contemporary re-interpretation with an emphasis on environment, daylight, materials, craft and more flexible use of communal and circulation areas.

For several of London's Victorian school buildings, including Camden School for Girls, which had been partially damaged by the war, low cost panelled systems were used to fill in and rebuild.

The Building Schools for the Future (BSF) Programme was initiated in 2005 as the first comprehensive school building programme since the CLASP programme. The programme set out to rebuild or revamp all the country's 3500 secondary schools by 2020 with a total investment of £55bn. In 2007 the Primary Capital Programme (PCP) was established to renovate about half of the country's 17,000 primary schools with a total investment of £7.6bn. The 2009 financial crisis and change of government saw the cancellation of both the BSF and PCP programmes in 2010, scrapping the re-building or refurbishment of over 700 committed secondary school projects (171 in London alone) and the PCP all together.

Procurement during Austerity

In 2011 the government introduced the Priority School Building Programme (PSBP), committing £4.4bn to delivering improvements for the worst effected schools in the country by 2021. The programme was set up with a very restrictive approach to procurement with extremely tight budgets with little emphasis on design. This one-

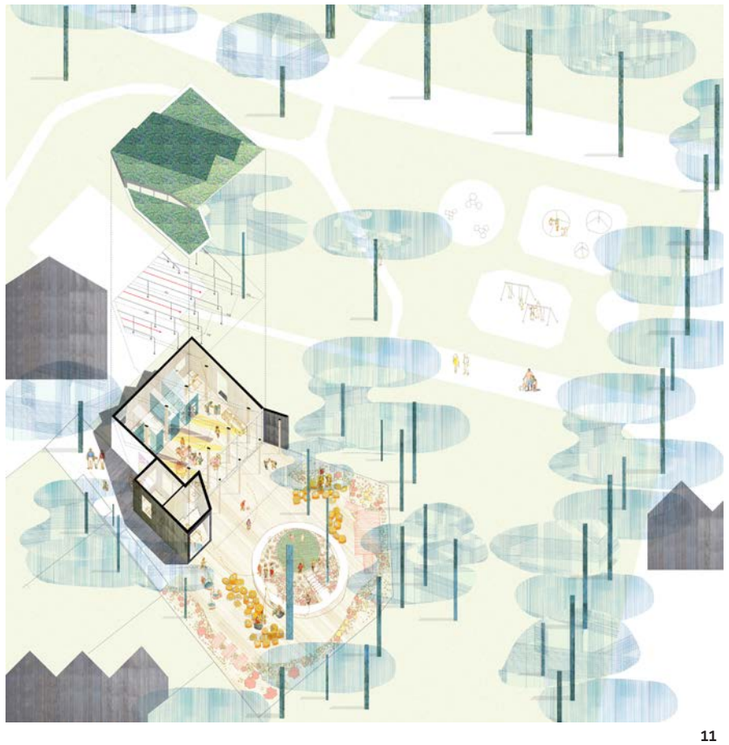

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Fig. 11
Montpelier Community Nursery (completed in 2012). A previous project by this practice contributing to this body of work. Axonometric drawing illustrating the life of the nursery in its context

Fig. 12
Montpelier Community Nursery (completed in 2012), exterior view

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Fig. 13
Torriano Infant School Library (completed in 2013), flexible classroom design

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size-fits-all attitude challenges innovation and quality and is unable to respond to the specific needs of each school and its locality.

Many schools desperate to improve and increase their sites in response to increased pupil numbers, and spending large sums to maintain dilapidated buildings, sought to carry out one-off individualised projects from localised and small-scale fundraising.

The body of work in this folio falls within the period of the PSBP, when very little is being done to address the needs of state school building. The body of work is a reaction against current government practice, to realise considered, high quality and highly crafted architecture in a time of a national school crisis. The buildings are the result of individual grant bids and highly individualised briefs.

This work is also set within the context of a serious concern for environmental sustainability, material and passive design principles, the well-being of the end user and changing and emerging patterns of education provision.

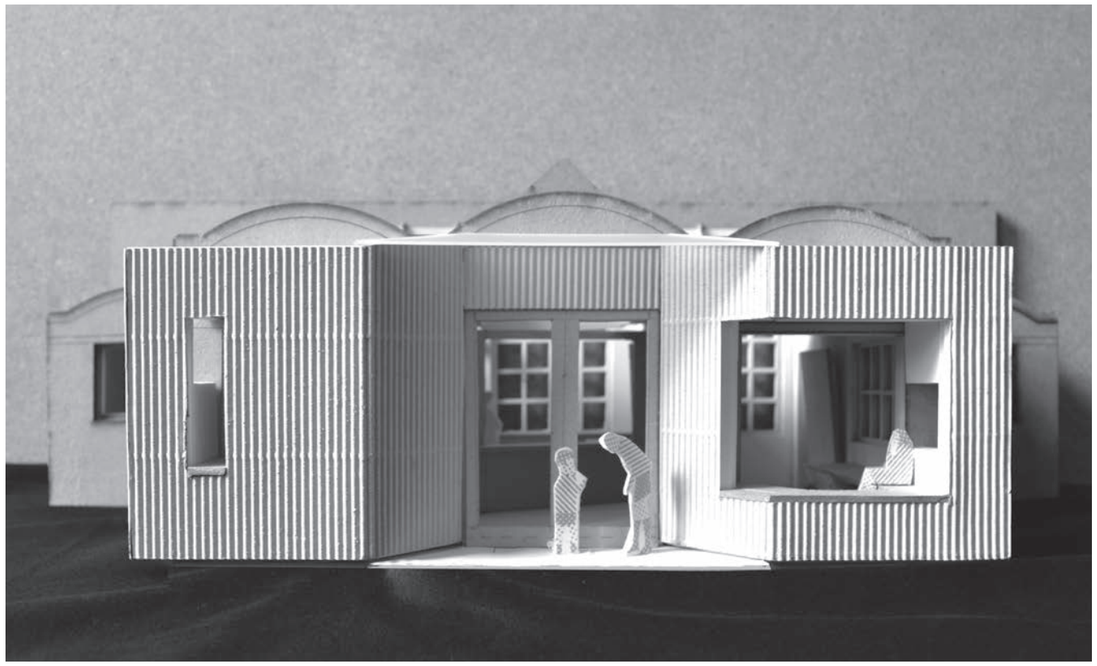
The projects are developed on highly used areas with very challenging site constraints, common to many central London schools where land values are extremely high.

Practice Context

AY Architects works as an open form of practice that includes clients, consultants, artists and trades, with an overriding concern for the creation of unique experiences of space, time and environment. Their projects are diverse, ranging from ideas, competitions and art installations to small public and educational, and private residential buildings. AY Architects sees the role of craftsmanship and materials as central to all its projects. This diversity tests ideas in different contexts through a layered, open-minded attitude to design. Several of the practice's educational projects evolved through a close relationship with client groups (advisory groups) made up of managers, teachers, parents and pupils. The practice engages in consultation with end users and the general public and carries out workshops with school children.

In particular, this body of work draws on expertise and methodologies developed through the design and realisation of Montpelier Community Nursery (2012) a REF2014 output for Anthony Boulanger and Yeoryia Manolopoulou, and Torriano Infant School Library completed in 2013. Montpelier Community Nursery, located in Montpelier Gardens in Kentish Town, London was built, replacing an existing dilapidated building, to provide voluntary sector affordable childcare for 2-5 year olds. The project is a low-cost, environmentally-friendly building, designed to enhance indoor/outdoor learning and an engagement with the natural environment. It embodies passive environmental design principles expressed in its architecture utilising natural light and ventilation with a legible cross laminated timber superstructure and environmentally sustainable materials.

AY Architects has worked with all the schools to examine pedagogical approaches that consider the external environment as part of the teaching/learning experience and where natural light and ventilation and distinctive high quality materials matter to learning and well-being.



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Figs 14, 15
Torriano Junior School Entrance, scale model, & ceramic tile ‘flute’ prototypes, designed for the front elevation of the extension (unrealised)

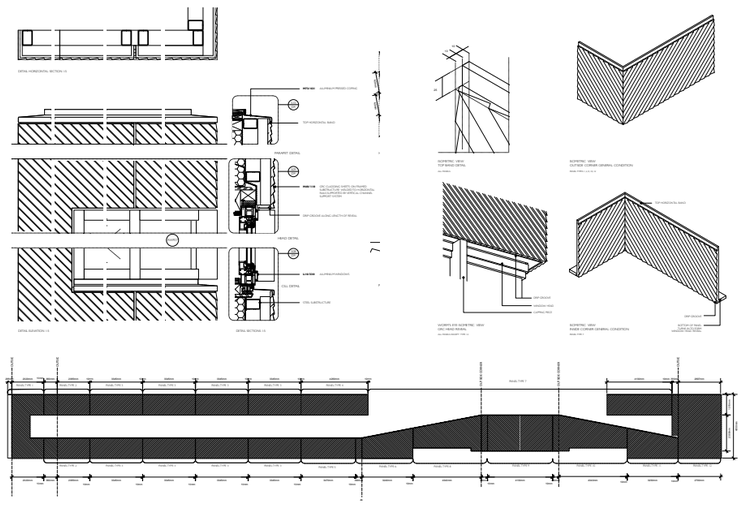

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Fig. 16
Camden School for Girls Main Building, construction drawing for pleated glass reinforced concrete (GRC) façade panel design

AIMS AND OBJECTIVES

- To engage with local schools in designing and delivering high quality, inspiring and site specific buildings to satisfy explicit incremental needs with low budgets in the time of austerity when little capital investment is being made in the state school sector.
- To create exceptional additions on very challenging school sites, revitalising each school’s architectural and urban presence in its local context.
- To help schools to provide valuable teaching and support spaces that exceed current standards for school building.
- To explore the possibility of a new building typology that respond to the specifics of teaching the sciences to primary school pupils.
- To explicitly demonstrate the logic of a building’s construction and passive environmental design principles as a learning tool for children.
- To create pedagogic and sociable settings that engage the external landscapes of these project.

METHODOLOGY

AY Architects practice develops designs as an iterative process engaging its clients and stakeholders through physical model making and material prototypes made in-house and in collaboration with workshops. Physical models at all stages of the project development are not only an essential design tool but are also an important communication tool for teachers, parents and school children.

Making of Prototype Components

The design for a new entrance at Torriano Junior School involved creating a playful and inviting ceramic tiled façade derived from closely studying Victorian mouldings and profiles present in the original Arts & Craft school building. The tile design is based on drawings of typical moulding details and the systematic manipulation of these details to create a new tile type with variation, rhythm and light as an enriched repetitive configuration. The process included hands-on experimentation with different clay types, casting techniques and glazes. High density foam prototypes and 3D prints at different sizes were made before the ceramic casts.

Several pleated paper models helped to conceive the external envelope design that wraps the new extension to the main building at Camden School for Girls. The design starts from the regular pre-cast concrete panelled façade of the main building, a section re-built in the 1950s to infill the war damaged school. The bespoke glass reinforced concrete envelope (GRC) is influenced by Sol LeWitt’s (untitled) vertical, horizontal and diagonal lined wall drawing (1971) and James Stirling’s prefabricated concrete panels for Andrew Melville Hall at St Andrews University (1967). The diagonal pleats play against the grid of the existing building, and whether it is seen in sun, wind or rain, the skin expresses rhythm, variation and the potential of surprise.

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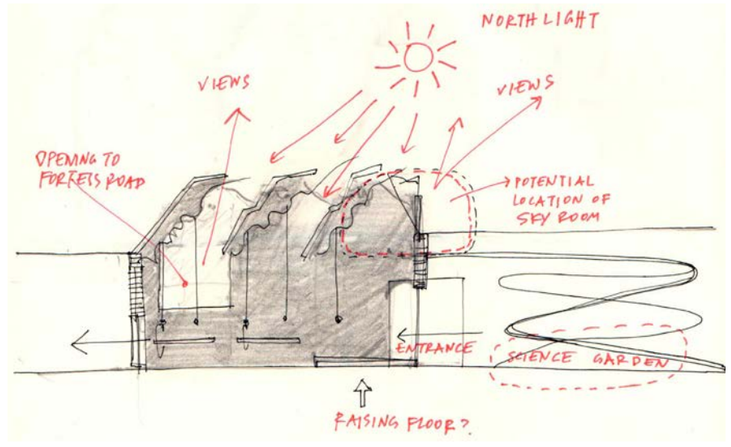

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Fig. 17
Torriano Junior School Entrance, pupils' ideas for the new design

Fig. 18
Eleanor Palmer Science Lab, – Anthony Boulanger and Yeoryia Manolopoulou consulting with pupils and staff at a school assembly

Fig. 19
Eleanor Palmer Science Lab, initial Concept Sketch sketch

Fig. 20
Eleanor Palmer Science Lab, proposed building massing as part of planning negotiations

Fig. 21
Camden School for Girls, remaining part of Victorian school building built in 1909

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This practice is reflected in Anthony's teaching at University of Westminster's MArch Design Studio 16 (DS16) since he became lead tutor in 2011. The ethos of the studio's teaching is to interrogate architectural concepts through in depth explorations of materials and techniques of making, both analogue and digitally, involving collaborations with different professionals and trades. This preoccupation forms an important part of his research and carries over to the emphasis of craft in the practice's projects.

Close Engagement with the School and the Community

Engagement with the school bodies is a key part of the realisation of these projects. For the development of Eleanor Palmer Science Lab, an advisory group made up of staff, parents, scientists, governors, and pupils (referred to as the LabRats) provided important input for the design process on a regular basis from the initial stages of the project. The process enhanced the consideration of how architecture could be manifested through the means of the curriculum and its teaching; processes, forces, materials, energy and living things. AY Architects also gave presentations to consult the wider school body at an assembly and to parents with an open morning event and exhibition before submitting a planning application.

At Torriano Junior School, a presentation and workshop was organised at the early stages of the project, where pupils were asked to create design ideas for a welcoming new entrance to the school. This gave the pupils the opportunity to participate in the conversation around their changing school building and put forth some playful designs, including a statue of the head teacher!

Passive Environmental Design Strategies

AY Architects has a profound interest in passive environmental design and how architecture can be developed to reduce reliance on energy-consuming equipment. The practice advocates an integrated passive design approach for all its projects and this is a key approach for the school projects. The servicing of buildings should be kept simple and much of the environmental control should be provided within the building fabric, such as intelligent use of façade and roof openings, and the use of natural light and air. The objective is to create comfortable environments where environmental factors generate a meaningful part of the architectural design.

Contextual Study of Each Site

Typical to all of these projects is the absence of a clear and distinct site. AY Architects effectively have to find places within the school's boundaries in which to squeeze in the new amenities. They are therefore studying the way the school operates to find locations where a new building would enhance and facilitate school activities, rather than restrict them. In Eleanor Palmer, for instance, reusing the site of the existing open canopy structure and turning a staff car parking area into a playground area of the same size, allowed for the whole building to be accommodated without loss of playground amenities, and giving its keynote display window on to Fortess Road. Getting the most out of very small site footprints is key to this approach.

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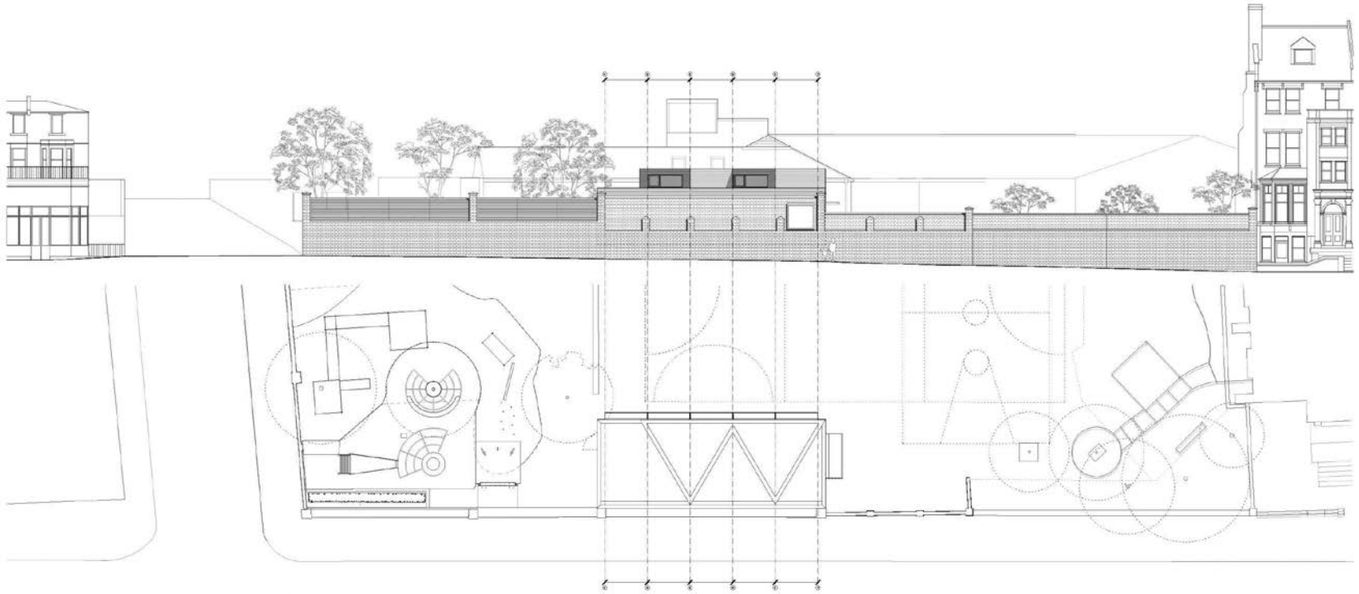

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Figs 22-25
Eleanor Palmer Science lab (clockwise from top left): street view, plan and street elevation in context, building situated within school playground

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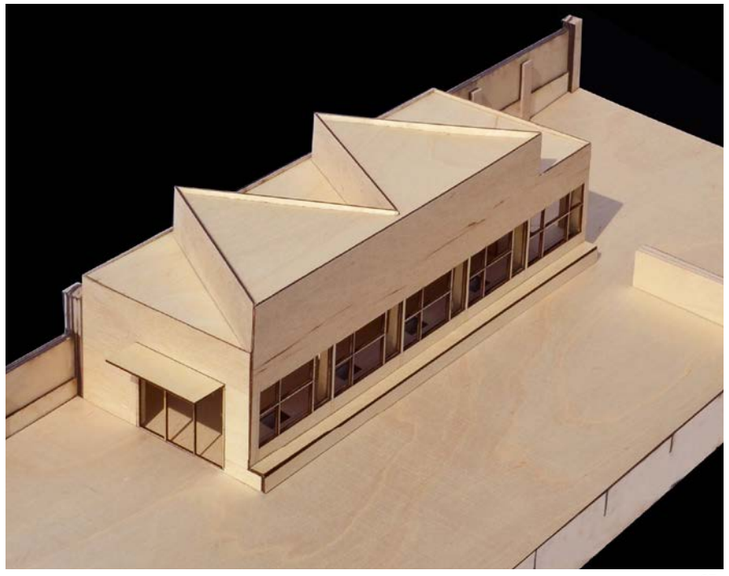
Figs 26-31
Eleanor Palmer Science Lab, (clockwise from top left): existing canopy structure, detail section drawing, excavations along boundary wall, timber frame construction on site, framing drawings, final design model



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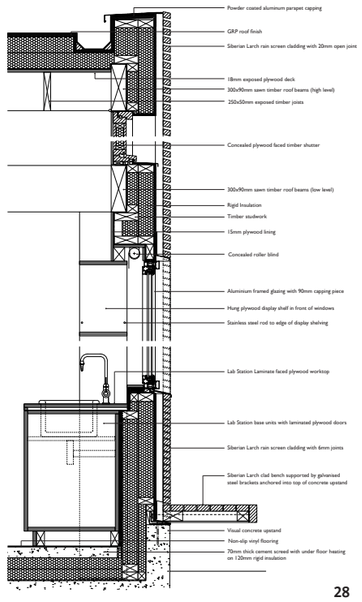

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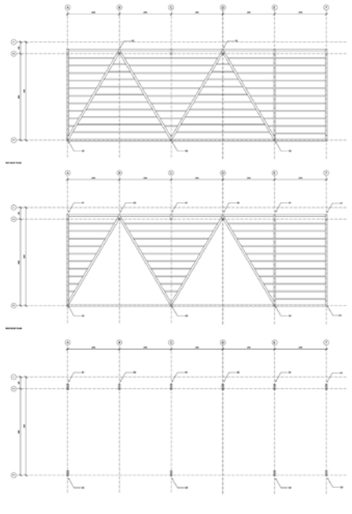

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Key Project Design Strategies: Eleanor Palmer Science Lab

The key project explored in this folio is Eleanor Palmer Science Laboratory which is believed to be the first instance of a science building designed for primary-age children, which exemplifies AY Architect's approach to school buildings, including the expressive use of construction as a teaching device so that children can understand the principles of building.

Environmental and Economical Design Strategies

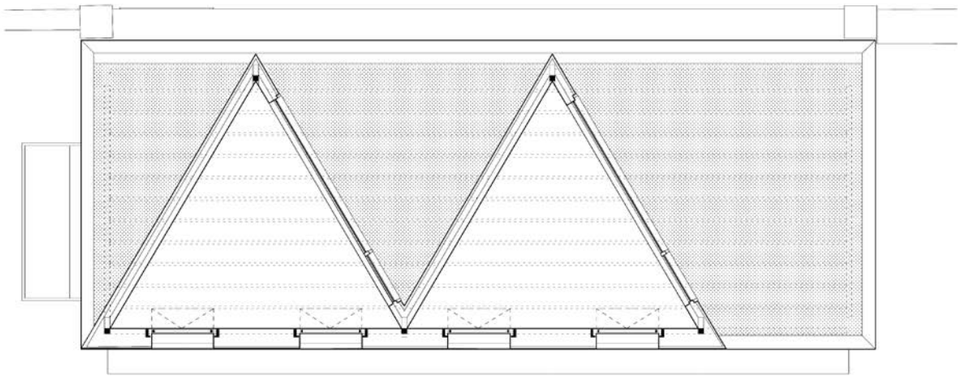
Eleanor Palmer Science Lab demonstrates a sustainable model of low cost timber construction. Timber was used as both primary and secondary structure, internal linings, built-in furniture and external cladding – all made up of FSC certified softwood; sawn spruce beams, columns and joists, spruce faced plywood for internal linings, natural- and laminate-faced birch plywood for built-in furniture. Structural elements are used in standard sawn sizes. The roof structure is designed to the maximum available lengths of sawn spruce beams, avoiding the use of composite timber components and connections.

The exterior of the building is protected by a hard-wearing Siberian larch rainscreen. The robust horizontal cladding profile is closely spaced at low level to ensure protection from playground impact and prevent small fingers from getting trapped. The spacing of the profiles increases at a higher level to give a lighter effect while facilitating natural air flow via concealed vents positioned behind the cladding and away from traffic noise.

Design Responses to Site Issues

During the initial stages of demolition, the project was brought to an abrupt halt when it was realised by the main contractor that the removal of the existing Victorian canopy structure on the location of the new building, would risk the collapse of the brick boundary wall. A long length of the old boundary wall was restrained in 2010 and the design took this into consideration, however the wall was being further restrained by the canopy structure itself. Separate works were carried out (on behalf of Camden Council) to replace the existing wall restraints and rebuild part of the wall with a timber-clad fence. The structural design of the new building was updated to further restrain the section of wall it abutted. Simultaneously it was discovered that the foundations needed to be deeper due to the nature of the made-up ground in front of the boundary wall. This amounted to a three-month delay to the construction programme.

Fig. 32
Eleanor Palmer Science Lab, at the start of the build showing scaffold supporting the boundary wall from collapse



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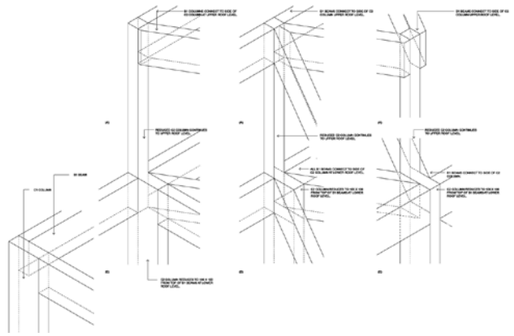

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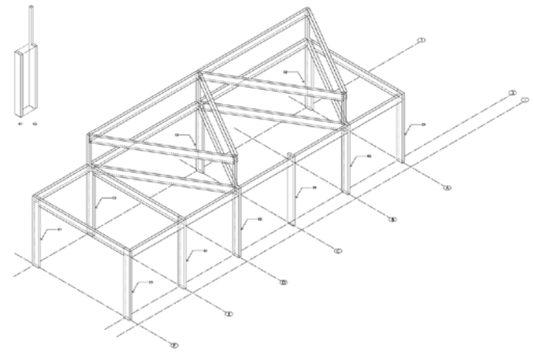

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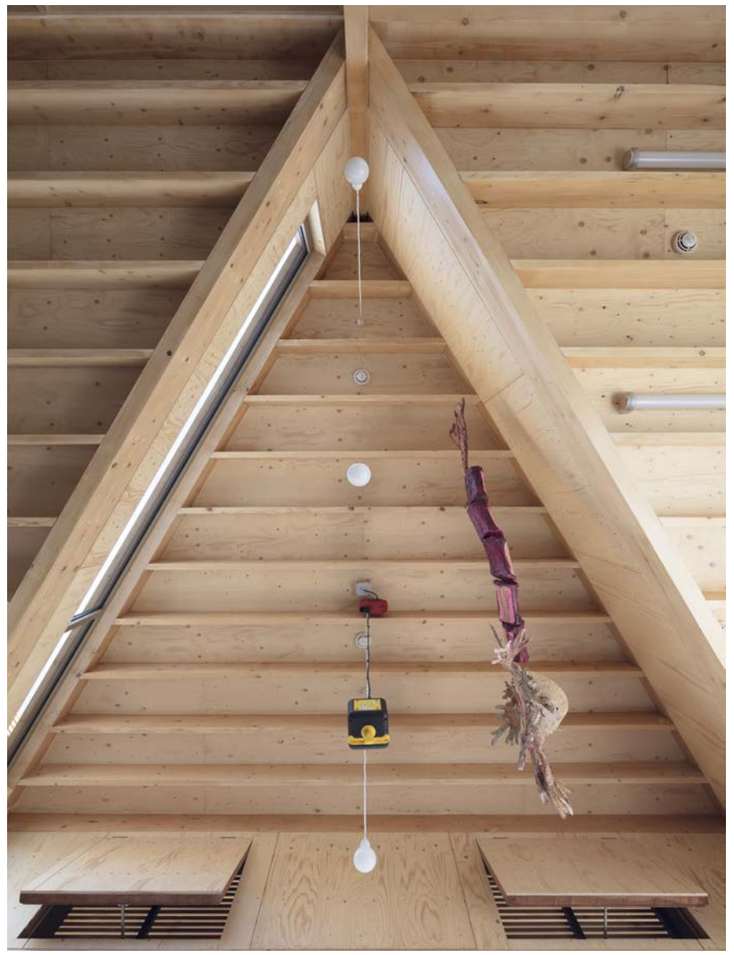

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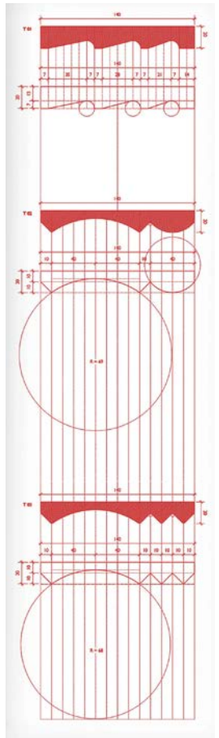
Figs 33-38
Eleanor Palmer Science lab (clockwise from top left): Roof plan, timber connection details, timber framing isometric, finished external timber cladding detail, internal roof apex and ventilation openings, street view



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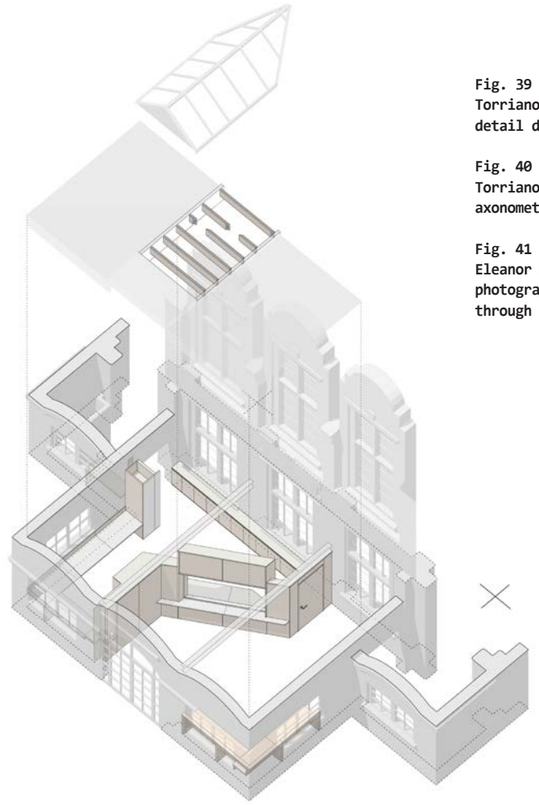

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Fig. 39
Torriano Primary School, ceramic flute detail drawing

Fig. 40
Torriano Primary School, exploded axonometric of phase 1 remoulding

Fig. 41
Eleanor Palmer Science lab, internal photograph showing timber roof details, through to playground beyond

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OUTPUTS AND FINDINGS

These projects build on the innovations in small specialist school building already developed by AY with Montpelier Nursery (REF 2014) and have been discussed as forming a collection of small projects embodying this new approach to school design works. Eleanor Palmer Science Lab is seen as the central component because it is both a completely new building and a new typology, and because of its level of peer acclaim and review which effectively share its innovations.

Torriano Junior School Entrance (2016)

Details of the design reflect the School's focus on green living and interest in craft. The façade of the small front extension (unbuilt) created a tactile ceramic-clad elevation of 'Flutes' derived from close studies of the Victorian mouldings and ceramics found in the main school building. It creates a new tile type exploring how variation, rhythm and light can enrich a repetitive configuration.

The front extension was put on hold due to budget constraints with the first phase of remodelling of the existing entrance building being completed in 2016. The design is conceived as built-in partitions and furniture made from birch plywood. It is a light construction that complements the specific features of the existing building. Special attention has been given to creating good quality daylight to accommodate staff needs and a welcoming environment for children and the school community.

Eleanor Palmer Primary School Science Lab (2018)

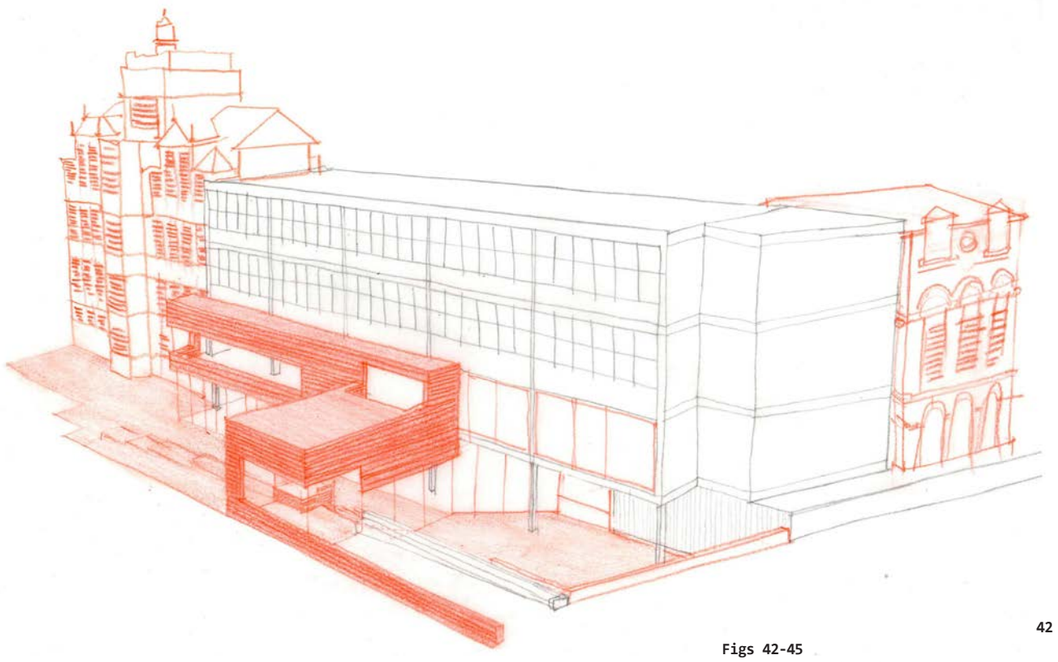
The objective of the building is to champion meaningful and engaging learning of the sciences to enable pupils' curiosity, experimentation, observation, making and taxonomy. The legible timber construction engages children with its structural and material logic; children are able to unpack and analyse the parts of the building intuitively. The building also works as a cabinet of curiosities; a repository for experiments and collected artefacts and includes an outdoor science garden by other designers. STEM activities are supported by links made with institutions, scientists and artists in residence.

The school community has been inspired by the completed building. The building has been recognised by the RIBA in winning a London Regional and National Awards and has won a Wood Awards High Commendation.

Camden School for Girls Main Building Extension (2019)

The two-storey extension creates a new entrance foyer connecting the school entrance at upper street level with a renovated entrance lobby below. The design successfully negotiates very challenging site and operational conditions, the existing 1950s infill building (with its own structural problems), daylight issues, complicated access, security and circulation requirements, the latter due in part to changes in existing levels from the street to the main school entrance below.

The project considers the master-planning of the main building quadrant being transformed from an existing staff car park space into a central open green space off the school's main entrance.



42

Figs 42-45
Camden School for Girls Entrance Building Extension, (clockwise from top) initial concept design, cladding construction, casting of panels, scheme proposal

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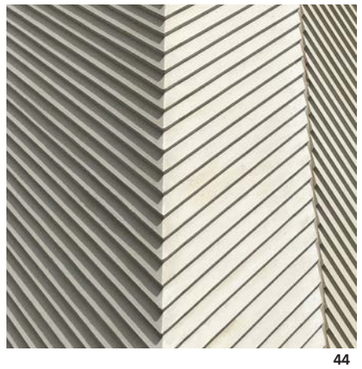

44

45

Architecturally, the solution focuses on the creation of a continuous stepped landscape drawn through the site from the street, responding to the different conditions fronting the existing building; this takes the form of a sequence of entrance ramps, a sunken courtyard, a secure internal entrance stair leading to the main reception area and exhibition space, and a communal external stepped seating area. The landscape seamlessly connects to the main building through uninterrupted glazing, allowing views to the outside and daylight to reach into the depths of the existing building.

Staff office space on first floor level and the double height entrance volumes float above the stepped landscape. These areas are wrapped by a playfully pleated façade made from glass reinforced concrete (GRC) panels, tying into the materiality of the 1950s pre-cast concrete panelled façade of the main building.

Camden School for Girls Sixth Form Building Extension (2019)

The two-storey extension is situated on the only location acceptable by planners to extend the existing red brick sixth form block built in the 1990s. The site, to the north-east of the existing building, is on an existing outdoor seating area close up against the school boundary to a neighbouring grade II listed detached house.

The existing common room is extended at ground level with glazing and benches on two sides, opening the space to the school and connecting it to new outdoor seating areas on both sides. A new classroom is created at first floor level with north facing openable clerestory windows and a large window to either side of the building.
The end walls have windows concealed behind perforated brick openings, allowing natural ventilation with screened views to the boundary. The split gable roof volume of the extension carefully sits within the gabled end profile of the existing building.

The materiality of the extension is a blue/brown brick, darker in tone than that of the existing building which gives the extension its own identity as an end piece to the overall building.

Fig. 46
Camden School for Girls Sixth Form Building Extension, unwrapped elevation drawing showing brickwork types and details for construction

Fig. 47
Urban Primary School Competition Dublin, 2015

CRITICAL SELF-APPRAISAL

Eleanor Palmer Science Lab, as a stand-alone facility for teaching sciences to primary school pupils, has generated a new school building typology. As an independent learning space with associated outdoor learning areas, the facility obtains a role as a kind of ‘curiosity cabinet and world of wonder’ for school children to enjoy detached from the rest of the school. The typology can be tuned for other schools to focus on more specific aspects of teaching science, such as ‘sky gazing’ (on sites with little light pollution) or energy creation, recycling or other themes particular to the school teaching or curriculum focus. The typology results from a new emphasis on the teaching of the sciences, adopting the national curriculum and government funding to improve the teaching of science across the country.

The intentions of AY Architects by initially working on Montpelier Community Nursery in 2009 on a pro bono basis, was to invest in developing a portfolio of educational projects in order to compete for larger projects as part of the BSF or Primary Capital programmes. However, the political and economic circumstances soon shifted with the global financial crisis and introduction of austerity.

These small projects have become one specialisation of AY Architects over the past decade. Initiated with research in early years education (Montpelier Community Nursery), this has evolved over the following years to include primary education (Torriano and Eleanor Palmer), secondary and sixth form education (Camden School for Girls). As parents (with collaborator Yeoryia Manolopoulou) of three children attending these schools (excluding Eleanor Palmer Primary), each project has grown in scope and challenge, consistently addressing the need for improved learning provision in their local community on challenging sites with tight budgets.

Working directly with schools, as opposed via local authority procurement bodies, through competitive tendering processes or as part of a framework, has contributed to the projects’ success. All the projects were directly managed by head teachers and governing bodies with clear visions and a requirement for quality, innovation and environmentally conscious design.

As a micro-practice with a team of between three and six staff during this period, AY Architects has dedicated a great deal of attention to each project, and in all cases helping the schools cultivate a strategic brief from the early stages of development. The commitment to these projects reflects the interrelation of Boulanger and Manolopoulou’s architectural practice, and individual teaching and research. Each commissioned school project is seen as an opportunity to develop an associated research project, with each research initiative informing future commissions, whether this involves community engagement, different pedagogical models, passive environmental design principles, interrogation and experimentation of materials and techniques or methods of representation.

This form of practice, with small projects generating modest professional fees, has at times been financially challenging and the investment of time is rarely compensated financially. This may be said to be typical of practices where academic teaching and research directly interact with design practice, allowing for the development of projects which would not otherwise be feasible.

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