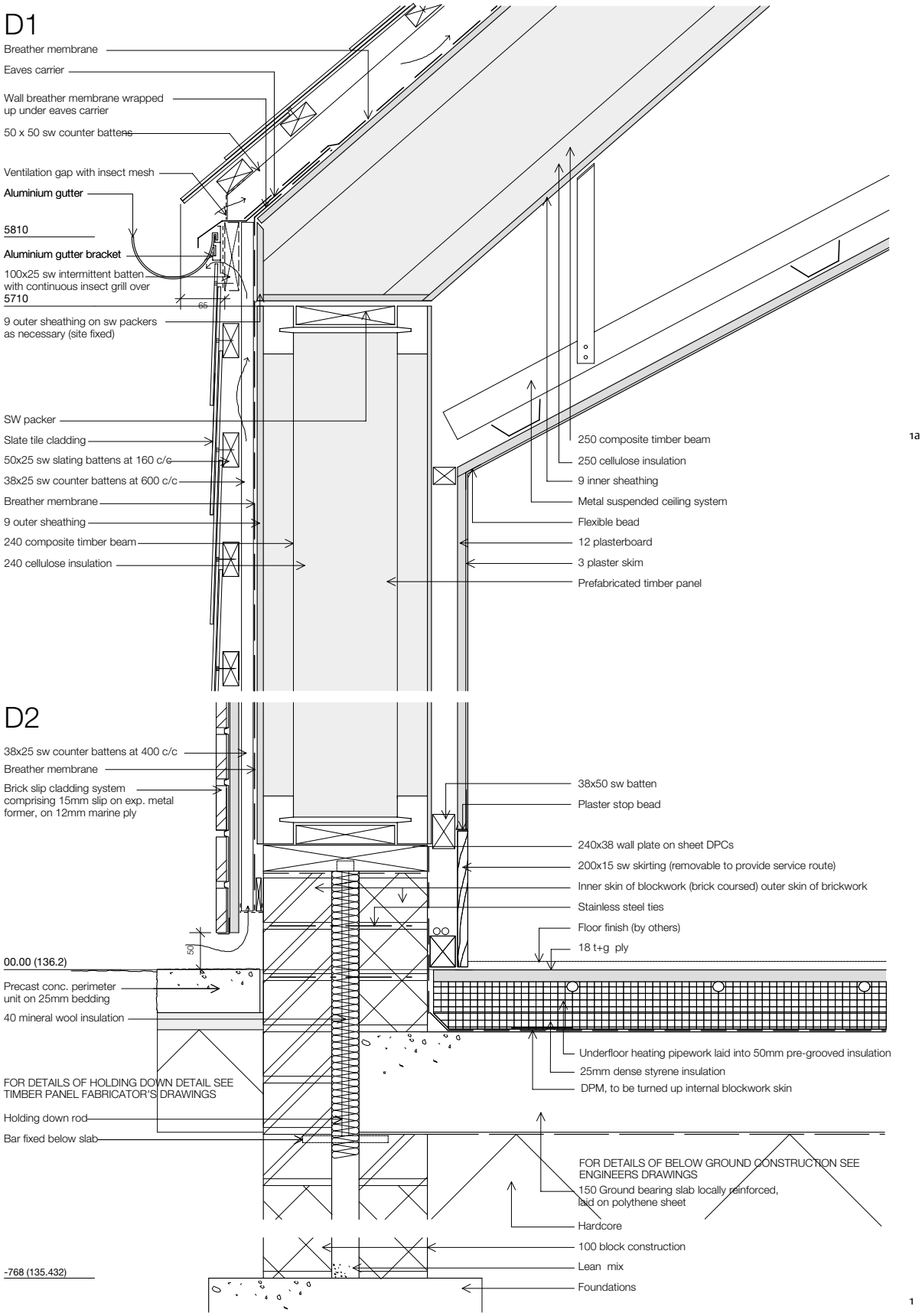


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A thoughtful reflection on the 'search' that lies within the word 'research', identifying twenty-one lessons from the practice of Sergison Bates, seeking interesting ways to use ordinary things.

Twenty-one lessons learnt

Jonathan Sergison

A number of years ago we were invited to take part in a competition for a housing project in North London. At some point in the competitive interview, I stated that every project we undertake is unique in the set of interests it investigates, and could be understood as a form of research. I still believe that this is true, although I would be cautious about making the same comment again in such circumstances. We did not win the competition and found out later that a number of members of the jury took issue with my statement. They misconstrued it, thinking that what we had in mind was some form of speculative enterprise with implicit risks and an uncertain outcome, which they would be funding. I now understand the difficulty the client had. Naturally, they wanted to be assured that we had the experience and competence to deliver a building that would serve their needs and be fit for purpose.

When we set up in practice – at about the same time as **arq** was launched – Stephen Bates and I had learnt some things about building from working for a number of established architects in practice. When we formally founded our own practice, we accepted a future of uncertainty, although this was countered by great optimism on our part. Looking back, it is clear that a series of events that were wholly out of our control have shaped the practice we now have. Many of the projects we worked on in the early years addressed issues for the first time, and this partly explains why it feels that we undertook more research then than we do now. I do, however, believe that we are constantly building upon a set of shared interests, and while the knowledge we have acquired through building is cumulative, our restless curiosity to explore new themes and ideas remains unchanged.

My contribution to this twenty-first anniversary issue of **arq** reflects on our own twenty-one years in practice and considers our relationship with research and practice. While this list is not exhaustive, for the purposes of this issue I have chosen twenty-one examples of what, for us, amounts to a form of research.

1. Breathing wall construction

In 1997 we won a national competition to design a contemporary version of the ubiquitous semi-detached house or double house *[1]*. This building type is associated with the suburban expansion of many towns and cities in the UK: approximately three million of them were built in the 1920s and 1930s, and today they are the most common housing type in the UK, accounting for 32% of housing stock.

One aspect of our reflection on this topic was to consider what form of construction could be employed in volume house building. We investigated thoroughly the possibilities of timber panel construction with the obvious benefits of prefabrication in speeding up site construction and for quality control. But we were also interested in exploring breathing wall construction and sought a form of building where air could pass from the inside to the outside of a house without compromising its thermal properties or water-tightness. It is widely known that pollution levels inside homes contribute to poor health. On completion, the project was monitored for a year, at the end of which the residents reported the houses to be easy to heat and air quality significantly better than in previous accommodation. One resident who suffered from asthma had had no attacks over the period. We have subsequently employed timber panel construction on a number of other projects.

2. A range of ironmongery

In 2005 we developed an ironmongery range for izé *[2]*. We wanted to find better versions of the elements and fittings we specify in our projects: window catches, trickle vents, sash locks, door and window handles, among others. The process of developing and prototyping was lengthy and we learnt that adjustments of less than a millimetre would affect the proportion and appearance of the elements we developed. This taught us a lot about the properties of materials and how they weather.

1 Detail: Prototype for suburban housing, Stevenage, Herts.

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2 Izé ironmongery.

3. Teaching and practice

I have been actively involved in teaching architecture for more than twenty-five years. The relationship between teaching and practice is an important one: teaching affords me the opportunity to explore themes and issues that relate to practice, but with greater freedom. Combining practice and teaching benefits both.

In my teaching, I tend to prioritise urban issues and housing projects. Over the coming semesters my students at the Accademia di Mendrisio will be working on a development plan for the city of Zurich *[3]*. This project will be undertaken over three years and in each semester, we will be working in different areas of the city to develop strategies for movement, public realm, work places, public buildings, housing, and to assess the status of buildings that are currently protected in some form. The urban planning and development department of the city of Zurich is a partner in this work and we will be working in collaboration with architects, critics, and urban thinkers. The city is currently committed to a programme of building in order to house a growing population within the existing urban territory. Every student is studying a neighbourhood or city block in detail to develop concrete proposals. The sum of our work over six semesters will offer concrete proposals for the city. As on many occasions in the past, the studio is engaging in a form of research that goes beyond coursework requirements.

4. A door detail

When we first started visiting Switzerland, we came across a door hinge that was not known to us *[4]*. It enables a door to be detailed in a way that overlaps with the frame, and therefore enables one to place these two elements on the outer or inner face of a wall, rather than in between. Furthermore, this type of hinge can be adjusted to ensure that the door does not catch on the floor. This is one of countless examples of a simple and practical application of building construction techniques observed in Switzerland and adapted to our own projects in our Zürich studio. However, it is important to note that small differences in ways of building are not always transferable. A UK carpenter would not be familiar with this type of hinge and might struggle to fix it.

3 1:100 study model of Albisrieden and Altstetten, Zurich, Studio Sergison at the Accademia di Architettura, Mendrisio, Switzerland.



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4 Door detail, House in Monte, Ticino, Switzerland.

5. Papers

I have already acknowledged the importance of the relationship between practice and teaching, but writing is another form of practice that mediates between these two concerns. As a whole, these form overlapping and complementary disciplines. To date, Stephen Bates and I have published three collections of illustrated essays *[5]*. Many of these relate to the themes we are exploring with our students, or to invitations to lecture on specific subjects. While neither of us would claim that they are necessarily academic, our shared interests and commitment to writing stems from the fact that it helps us articulate and make sense of what we are working on, and from the desire to share these reflections with each other – and eventually with a wider readership.



5 Papers+ Papers2+ Papers3.

6. Concrete panel construction

Working in collaboration with Geneva-based architect Jean-Paul Jaccaud, we were able to learn from the wonderful precast concrete industry in the west of Switzerland for the project we won in competition in 2006. A number of concrete factories have been active in this part of the country since the 1950s and 1960s and have considerable experience in this form of construction. For the building that we realised on Rue du Cendrier, in an old inner-city quarter, we developed a system of L- and T-shaped elements that, when assembled, give the impression of a tectonic framed building *[6]*. The individual pieces have an inner structural concrete layer, a thick middle layer of insulation, and an outer layer of 'decorative' concrete. The elements were complex in terms of their geometries and were fabricated extremely accurately. The outer finish of the panels is intentionally different and explores four different colours as a way of evoking the subtle differences that exist in the local stone.



6 Positioning concrete panel, inner-city housing and crèche, Geneva, Switzerland.

7. Brickwork as a rain screen

For the Studio House in Bethnal Green in East London, we wanted a facade that would not explicitly have a 'house-like' appearance, as the house was also used as a place of work *[7]*. The intention was to create a series of horizontal elements in the facade, where the windows are stretched across the width of the street elevation with alternating brick layers. This was favoured over a brick surface with punched openings. The building is constructed from a lightweight timber

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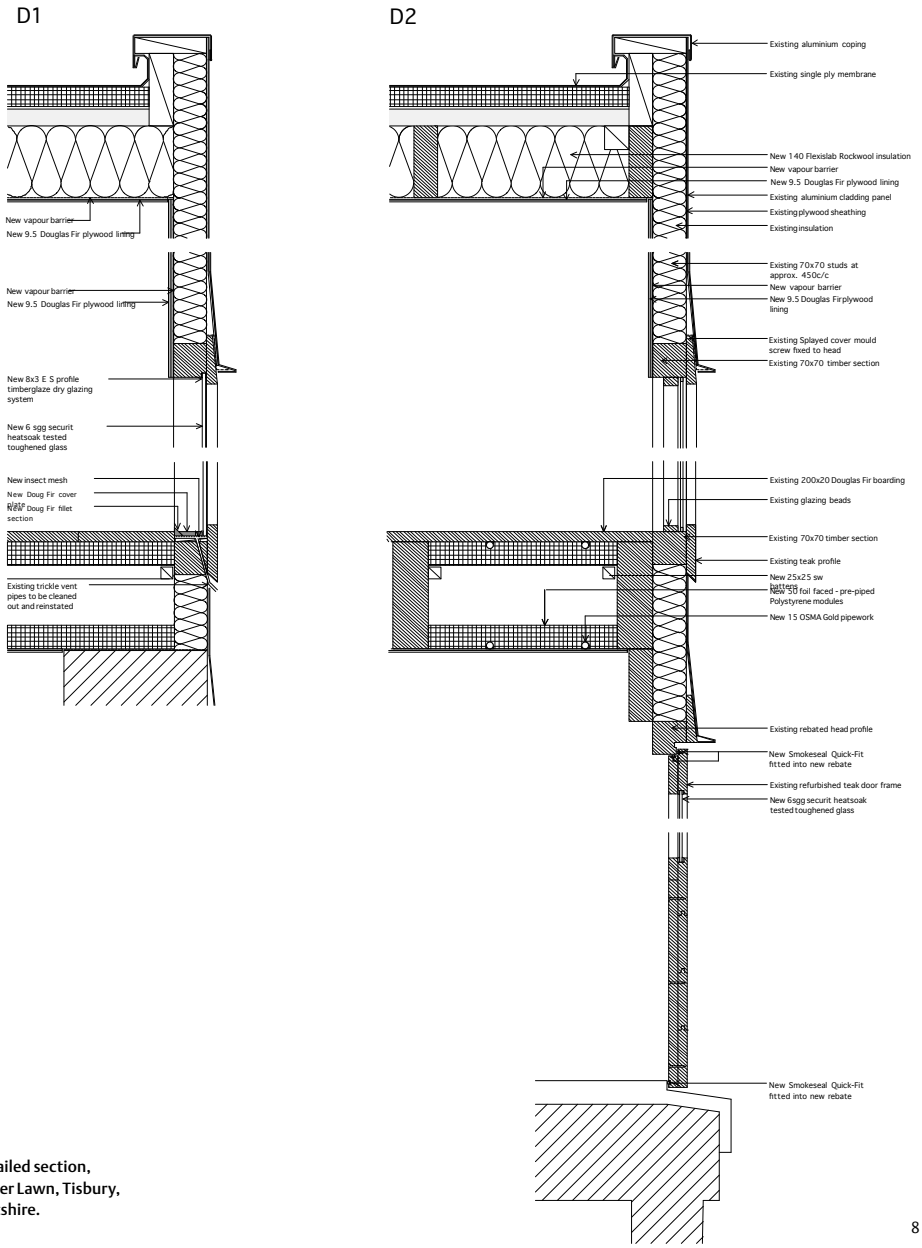


7 Studio house, Hackney, London.

frame and, to reduce the load imposed on the structure, we elected to use thin brick slips, which were pre-bonded onto cementitious boards, one brick course high. The panels interlock and the process of building was closer to carpentry then to brick construction. We did, however, point the joints and apply mortar slurry to the outer surface.

8. The restoration of Upper Lawn

One of the numerous invisible adjustments we made to this seminal house by Alison and Peter Smithson involved the introduction of underfloor heating *[8]*. Two layers of pipes were placed in the void between the ceiling of the ground floor and the floor above. Radiant heat is provided by hot water running in plastic pipes, which offers the building a degree of background heat and ensures a stable temperature in the winter months.



8 Detailed section, Upper Lawn, Tisbury, Wiltshire.

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9 Suburban housing, Bahnhaldenstrasse, Seebach, Zurich, Switzerland.

9

9. A brick building in Zürich

While it is not widely used as a building material in contemporary construction, in the nineteenth and early twentieth centuries much of the built fabric of Zurich employed brick as a masonry element that was subsequently covered in render. Where brickwork is on display in these older buildings, a light beige or red brick was used. In the two apartment buildings we are currently constructing in Zurich we are employing a system of vertically aligned brick slips *[9]*. We are drawing upon the experience we have acquired from building in the UK, and more recently in Belgium. The bricks we are using in this project are sourced in Belgium, where the widest choice of good quality bricks is available at economically advantageous prices.

10. A poured rubber floor

In 2002, we were invited to refurbish an apartment on the thirty-fourth floor of one of the towers in the Barbican complex in the City of London *[10]*. One issue that preoccupied us was finding a floor finish that would seem appropriate for this Brutalist building. We considered linoleum, but were concerned about the joints and its general utilitarian feel. After a lengthy process of research, we contacted a company that specialises in poured rubber floors. We found this to be suitably abstract, and it was poured through all of the rooms in one single process. This floor finish is generally used in large factory floors and industrial facilities. After we published the project, we received numerous calls from architects requesting details of the company we used.

11. Open brick joints

The timber panel construction system we developed for the semi-detached housing project in Stevenage was also used in an urban housing project in North London that we won in competition in 1999 *[11]*. In this project, we were interested in giving expression



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10 Shakespeare Tower interior, The Barbican, London.



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11 End-of-terrace housing, Hackney, London.

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to the breathing wall aspect of the panels and elected to create a matrix of open vertical joints and regular intervals. We noticed people would stop in the street to look at the building and heard anecdotally that one interested party thought that these gaps were left by the removal of the scaffolding, as in mediaeval Italian buildings. While the reality is more prosaic, we were happy with the subtle grid it created on the facades and with the interest it aroused.

12. An internal corridor with open courtyards

In contemporary housing projects in the UK, developers often put pressure on architects to employ internal central corridors with apartments on either side. This is because a core can serve many dwellings and allows a deeper section, which ensures that the form is more efficient. In 1999, we were invited to add a floor of apartments to an existing three-storey former industrial building *[12]*. A part of this building was so deep in plan that we needed to consider an internal corridor, although in this instance we were able to arrange the apartments with an entrance yard that is open to the sky. Timber gates were constructed which met neither the floor nor the ceiling and allow light to be brought into the central circulation space. We were happy with the result of the set of decisions we took, but of course this solution is only applicable to top floors or single-storey buildings.



12

12 **Mixed-use development, Wandsworth, London.**

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13

13 Tower house, Nutley, Hampshire.

13. In-situ concrete

The fields surrounding this new house in Hampshire are strewn with large flints that are revealed when they are ploughed [13]. Flint is sometimes used as a facing material on the walls of buildings in this region: the cut face of the stone has a scale-like appearance, but the material is sharp and very durable. Through a lengthy process of testing we investigated ways of using flints as an aggregate in the construction of in-situ concrete walls. The cut face would be carefully placed in the shuttering and would then be revealed in the struck concrete. The process of casting needs to take account of the reach of an arm and therefore the process of building will be slow and determined by reach. On completion the outer concrete surface will be hammered to reveal the aggregate, creating a rough surface.

14. Tilt-up concrete panel construction

This form of construction is commonly used in the building of warehouse and industrial buildings in North America. One face of the panel is cast onto the concrete floor slab. It is a direct and rather pragmatic way of forming large panels of



14a

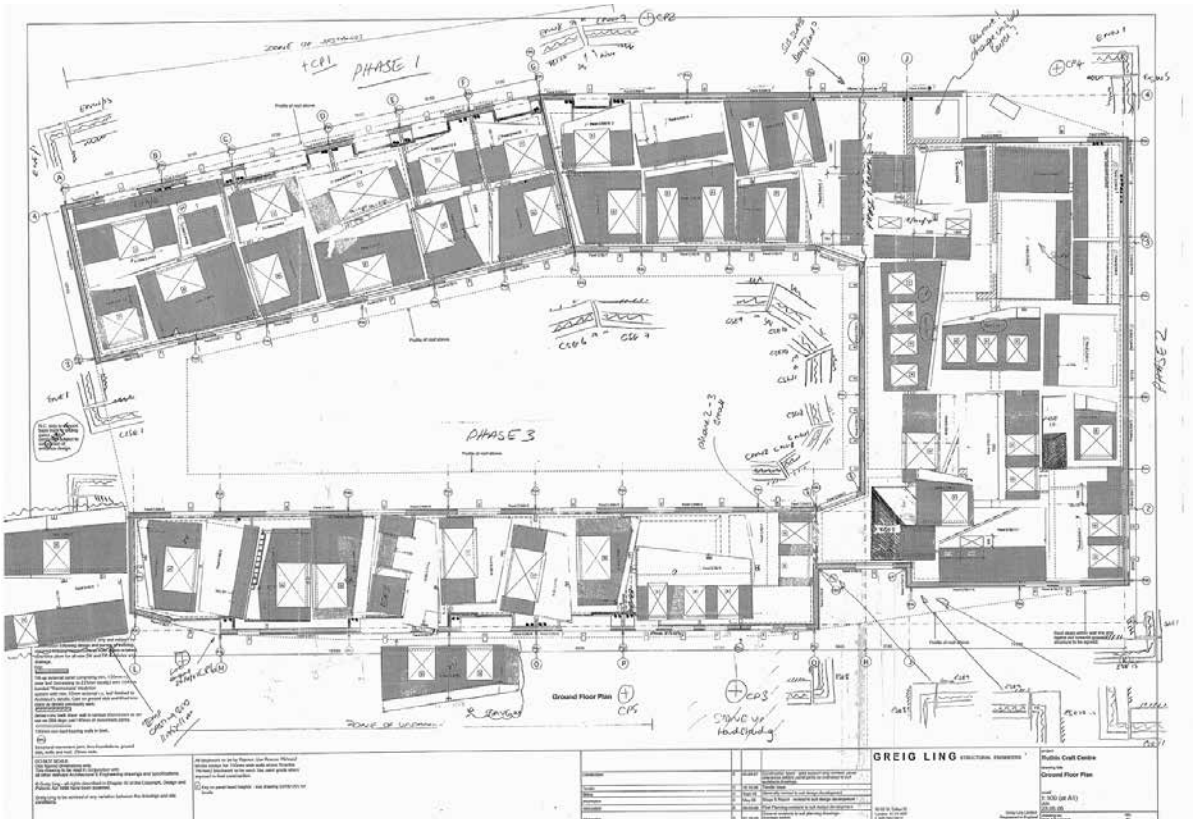


14b

14 *a* Concrete panels tilted into position, Centre for the Applied Arts, Ruthin, Wales.

14 *b* Concrete panels, Centre for the Applied Arts, Ruthin, Wales.

14 *c* Tilt-up wall construction plan, Centre for the Applied Arts, Ruthin, Wales.



14c

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concrete on site, so that they do not need to be transported from another location, but simply craned into position. We drew upon this form of construction for the wall panels of the applied art centre we built in north Wales *[14a–c]*. In this instance, the panels were formed from an inner structural layer of concrete cast on the slab, an inner layer of rigid insulation and an outer layer that is pigmented and combed vertically in predetermined areas. The panels were then lifted into position and propped until the roof secured them. At that moment, the building appeared like a stage set.

15. Tiles

We have found ourselves employing encaustic tiles on a number of projects in recent years. For a recent care home project in Belgium, we worked with Benoît van Innis, who created a range of hand-painted tiles that were applied as decorative elements around the windows *[15]*. The tiles create a subtle expression of domesticity, framing windows like curtains: their pattern combinations provide variety and lend a familiar character to the building, contributing to reduce the visual impact of its scale.

16. Colour

In a number of projects, we have experimented with bolder colours *[16]*. I am not sure that we have been totally satisfied with the results: we tend to favour colours that are earthy, muted, sometimes quite sober. Where it feels appropriate the colours of the materials we use are expressed or gently adjusted by applying stains and paint washes. We give considerable attention to the finishing of materials and often experiment to test different solutions. Finishing is the last process in building and it is wholly reliant on the skill of those on site.

17. A tiled corner

When we were working on the semi-detached housing project in Stevenage, we devoted a considerable amount of time to studying the setting out of the Eternit tiles, particularly the horizontal coursing *[17]*. Eventually Mark Tuff built a model at 1:5, which enabled us to understand this issue. Later the model was taken to site and left as a tangible indicator of what we wanted to achieve. Finding the right balance between being demanding with construction



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15 Care home, Wingene, Belgium.



16

16 Samples, SBa studio, London.

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17 **Gutter detail, prototype for suburban housing, Stevenage, Herts.**

18 **Soeder stool.**

and taking time to make the right decision is very important. A willingness to engage with this process on the part of the subcontractors on site is also necessary, but increasingly rare.

18. Furniture

For many years we have been interested in designing furniture. The first items we designed predate the time we established our practice. I have a great interest in furniture and the relationship between comfort, proportion, and the assembly of elements. We are currently developing a range of furniture for Soeder, a Zurich-based company, and unlike the bespoke items we developed in the past, this range is intended for mass production and a wider market *[18]*.

19. Bespoke doors and windows

In many of our early projects, we were dissatisfied with the door and window systems we found in the building industry and, where possible,



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19 Interior, mixed-use development, Wandsworth, London.

preferred to produce bespoke elements to control the proportions of the elements and sightlines. In the Wandsworth project I described above, the apartments were sold on the open market *[19]*. This meant that, to meet the mortgage requirements of future owners, the doors and windows needed to conform to rigorous standards of air- and water-tightness. The main contractor also had a joinery workshop and our client was willing to support our ambition to develop special windows for this project. I remember our associate frequently having to visit a test centre to propose various refinements, until the windows satisfied the standards. This happened a long time ago and, on reflection, it seems rather self-indulgent on our part. Since then we have used existing, widely available window systems and worked with the constraints they impose.



20 Studio interior, Clerkenwell, London.

20. Recessed lighting tubes

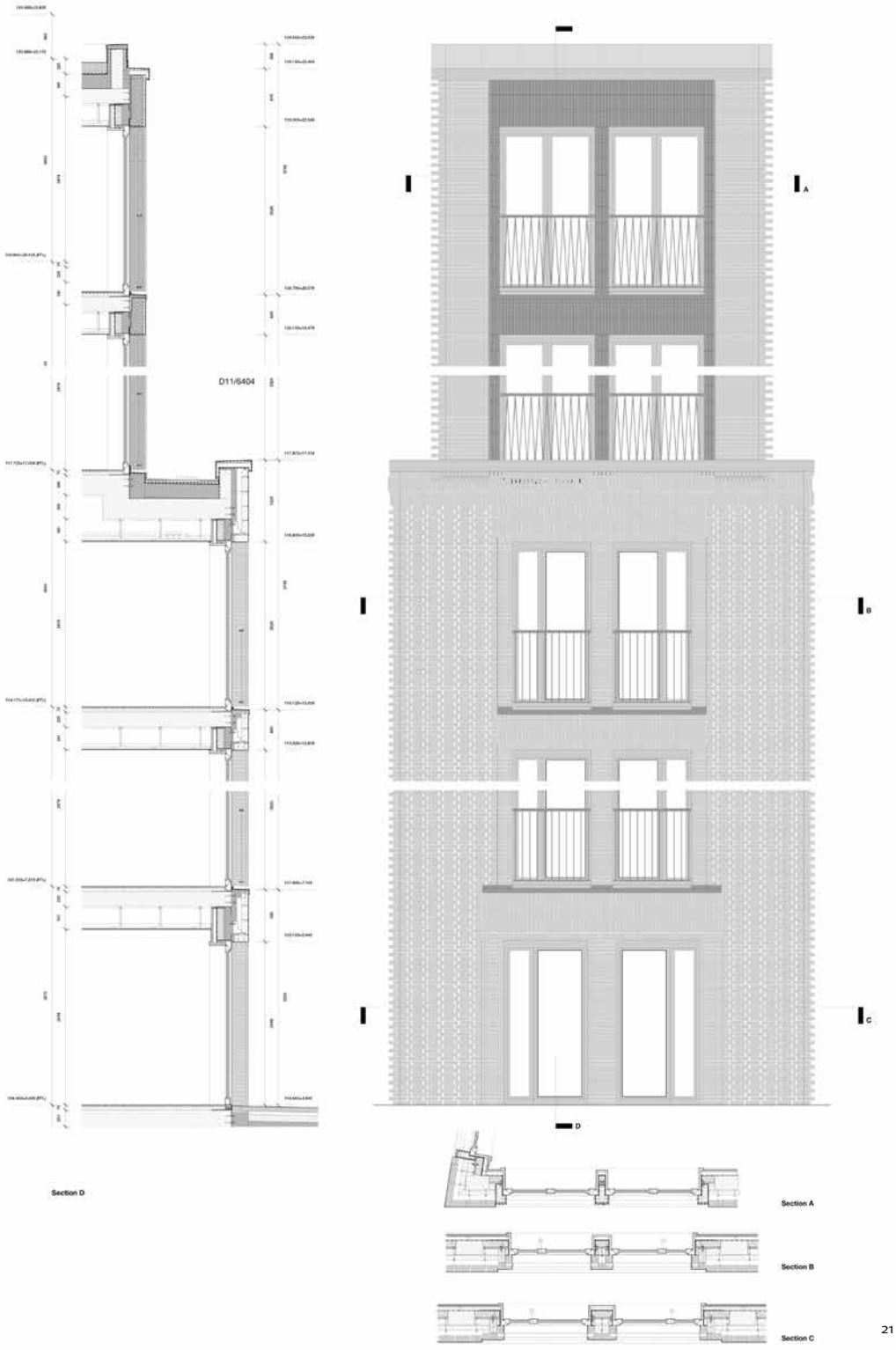
One of our earliest projects involved the remodelling and refurbishment of a former pub into the studio of our long-standing friends and collaborators, graphic designers Cartlidge Levene *[20]*. Many aspects of this project involved developing a way of building that we had no previous experience of. One decision that comes to mind was the recessing of the metal box of fluorescent light fittings to reveal only the lighting elements. While it was a little fiddly for the contractor to neatly build a series of pockets in the plasterboard walls and ceilings, I still enjoy the result: it transforms an ordinary element, the ubiquitous fluorescent light fitting, into something more refined.

21. Ornamental brickwork

Over the years, working increasingly farther afield, we find ourselves returning time and time again to the possibilities of one of the most primitive building materials: the simple brick. While we would never impose brick construction on a local building industry that has no experience of using it, for one reason or another we tend to work in places where there is a long-standing tradition of brickwork. For our soon-to-be-completed housing project in Hampstead, North London, we were fascinated with the fine neighbouring Arts and Crafts buildings from the end of the nineteenth century and their ornamental brickwork *[21]*. While the circumstances in which these older buildings were realised are far removed from today's, we would argue that it is possible, within the constraints of contemporary construction, to build in brick in a way that is more than merely expedient or functional.

While the points I have made about our various projects are anecdotal and none of what we have built would exist without the lessons and inspiration we have found in the work of others, this account documents a continuous search for a way of building that serves conceptual ambitions. Sometimes answers are found in surprising places, and the journey any project follows from inception to completion is always uncertain. The idea of research is often overstated in architecture, but I do like the 'search' that lies within the word 'research'. Searching for interesting ways of using ordinary things is a large part of what we do.

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21 Detailed elevation, Mansion block, Hampstead, London.

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Jonathan Sergison is a Partner in Sergison Bates Architects, responsible for the leadership and creative formation of the Swiss studio. He has taught at a number of schools of architecture, including the University of North London, the Architectural Association in London, was Visiting Professor at the Swiss Federal Institute of Technology (ETH) in Zurich, the Ecole Polytechnique Fédérale in Lausanne (EPFL), the Oslo School of Architecture and Design, and the Harvard University Graduate School of Design. Since 2008 he has been Professor of Design and Construction at the Accademia di Mendrio, Switzerland. He is particularly interested in urban questions and the changing conditions of the contemporary European city.

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