AJ

SPECIFICATION

04.07
FIRE ENGINEERING
BATHROOM DESIGN
TURNER CASTLE/
DUNNE AND RABY STUDIO

DOMINIK GIGLER

Fiona Raby and Anthony Dunne the week before their show Designing Critical Design opened at z33, Hasselt, Belgium (until 3 June)

MUCH OF OUR WORK EXPLORES THE HUMAN DIMENSION TO ELECTRONIC OBJECTS

Will Hunter Technological Dream Series: No. 1 Robot is a new project for your show at z33. What's it about?

Fiona Raby We made these pieces to challenge preconceptions about how a robot should look and behave. It's a bit strange for us to look at robots, as recently our work has been about high-tech things like bio- and nano-technology. But we think our psychological understanding of robots hasn't been explored enough.

Will Hunter How would you describe these preconceptions?

Fiona Raby We think technology drives political and economic value systems, but ignores the social or emotional because they don't make any money. Much of our work explores the human dimension to electronic objects. This project looks at the extent to which robots embody humanness. There is a scale of robot that emulates human appearance and functions and, at the opposite end, an infrastructural systems approach, like the automated Docklands railway.

1.

2.

1 & 2. The designers worked with film-maker Noam Toran to suggest how their robots might be used

Will Hunter Your objects conspicuously don't look like humans: where does the language come from?

Fiona Raby They borrow from the world of product and furniture design, though they're obviously not either. It's not about the systems organisation and it's not about the slave thing – having them do all your jobs for you. It's about how robots might exist with us on a day-to-day level at an intimate domestic scale.

Will Hunter What sort of future existence do your pieces describe?

Fiona Raby The black robot is paranoid and defensive. It becomes very jittery if approached and then starts almost screaming. You can use it to keep people away. The wooden one is about trust. It plays with the security aspects of retinal scanning and biometric data, which is a very efficient way of granting or denying access. We wanted to develop the idea of eye contact as an important part of human interaction. You cradle the piece in your lap, which is a very different kind of action to going up to a security screen. It reads your retinas with two eye holes that, depending on whether it *believes* it's you, will allow you access to something.

Will Hunter Do the pieces actually work?

Fiona Raby We'd have liked to make them work, but within the commission there wasn't enough time or money to develop the technology. Though we might work in an art kind of way all our designs are potentially for manufacture. The idea is that these visual prototypes are future products.

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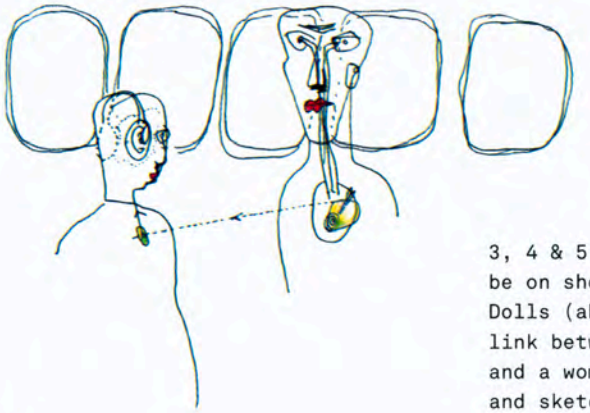

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3, 4 & 5. Earlier work will also be on show at z33, such as Evidence Dolls (above) – which explores the link between a man's genetic data and a woman's personal desires – and sketches from the book Hertzian Tales, Electronic Products (1999)

Will Hunter So how will the pieces occupy the exhibition space?

Fiona Raby Within the space there are three layers of information: the objects; a video projection of the objects; and the sounds of the objects. We shot a film yesterday with film-maker Noam Toran which explores but doesn't explain the human-object relationship. Projected on to one whole wall of the exhibition space will be this full-size female figure. She doesn't do very much, but every so often something happens with one of the objects. We also worked with sound designer Scanner, who has created some sounds between the human and the digital. They're quite odd actually – in a good way.

Will Hunter What are you aiming to provoke with the pieces?

Fiona Raby Technology relies too heavily on a utopian vision of how it might be used: we want to examine how it could be used by real people. Technologists constantly espouse the idea that we're all perfect human beings who behave brilliantly, which we find naive. We're selfish, we're greedy, we're messy, we're lazy. We kill people and we behave appallingly. These human traits need to be integrated in to our utopian futures – and that's what our work explores.

NAME: Fiona Raby

EDUCATION:
RCA, MPhil computer-related design, 1995; RCA, MA architecture, 1988; Birmingham School of Architecture, BA (Hons) architecture, 1986

EMPLOYMENT HISTORY:
Unit tutor, RCA architecture department, 1995-2007; co-founder Dunne and Raby, London, 1994

NAME: Anthony Dunne

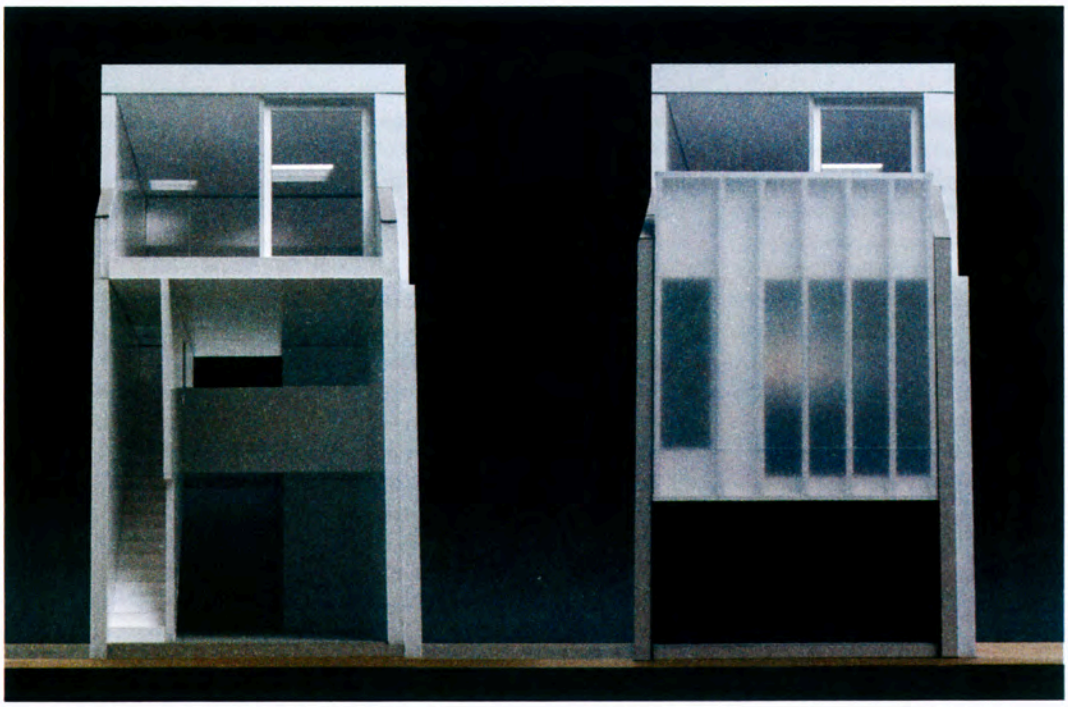
EDUCATION:
RCA, PhD computer-related design, 1997; RCA, MDes industrial design, 1988; National College of Art and Design, Dublin, BDes (Hons) industrial design, 1986

EMPLOYMENT HISTORY:
Professor and head of RCA interaction design department, 2005; visiting professor, Central Saint Martins College of Art, London, 2000-04; co-founder, Dunne and Raby, London, 1994; designer, Sony Design Centre, Tokyo, 1989-90

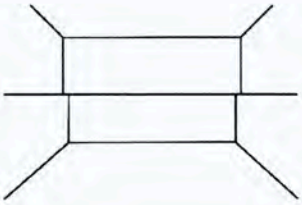
COMPANY: Dunne and Raby

KEY PROJECTS:
Technological Dream Series, 2007; Evidence Dolls, 2005; Is this Your Future?, 2004; Designs for Fragile Personalities in Anxious Times, ongoing from 2004; BIOLAND, ongoing from 2003

TURNER CASTLE / DUNNE AND RABY STUDIO



1. An entirely white interior is concealed behind the deliberately blank facade



2.

THE DYNAMIC COMES FROM BEING BOTH AN ARCHITECT WITH A VISION AND A BUILDER WITH A VAN

– Cassion Castle

3.

Turner Castle is a young practice which specialises in project-managing and building its own architectural designs. Here Sutherland Lyall talks to co-founder Cassion Castle about the practice's designs for a 50m² new-build studio on Voss Street, Bethnal Green, for the designer couple Dunne and Raby, this month's Designer Profile (pages 13-15).

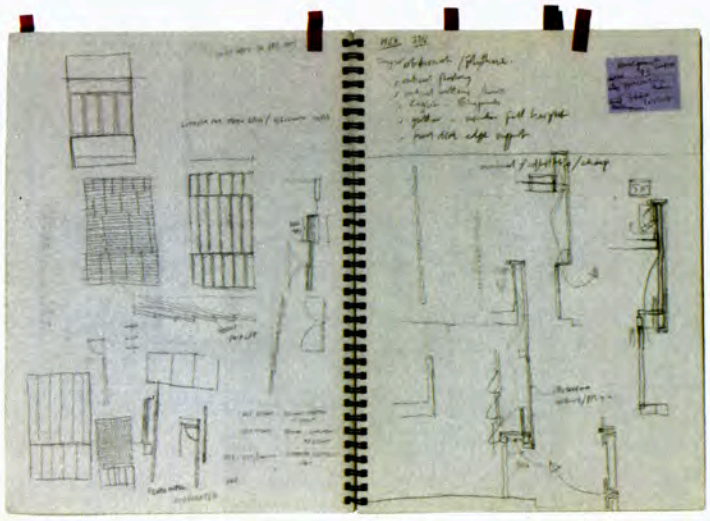
Voss Street is less a street, more a 3m-wide alleyway – so narrow the Readymix truck couldn't get down to the new studio site (the concrete for the ground-floor slab had to be pumped all the way from the street at the end). Anthony Dunne and Fiona Raby were thinking of refurbishing the two-storey light industrial building, which they had used as a home and workshop for several years. Architects Cassion Castle and Carl Turner persuaded them to do a new building. Castle says: 'By the time you have dealt with things, floors are still sloping and the roof needs to be rebuilt. You might as well start again. It also gives you more scope about ceiling heights and you can be much more three-dimensional about the whole thing. So it was a very long design process – two years. We did a series of study models and we went through a lot of design revisions.'

You might be excused for thinking this the beginning of yet another difficult backland commission for a young practice. That is partly correct; but this – perhaps the 40th such project in the last six years for Turner Castle – has not only been designed by them but is being built by the practice. Before the pompous huffing and puffing from the architectural elders starts, let it be said that although this is not a common way to run a practice, other architects are currently working this way. And, as short a time as 50 years ago, it was a very common practice in Scotland.

Castle says: 'It's really interesting working as a contractor and an architect. I firmly believe it is a valid way of working. It solves lots of problems, and raises some. People struggle with the idea that you can do both jobs. The contradiction is between being an architect, who people perceive as having a vision, and a builder, who drives around in a van and delivers things. We see ourselves primarily as architects, but we are both hands-on kinds of people. We help on site when the need arises. I'd like to see more people do what we do but the training drums in to you specifically not to do this. Architects need to think more widely about what they do.

The practice has established a network of subcontractors. Castle says: 'We have used the same electrical firm, plumbers and plasterers for the last five years. We subcontract as much as possible. I go to site every other day to make sure the subcontractors are doing it correctly. On this project, because it is at a crucial stage, it's every day. We issue information to the builders on site. You have to do it that way because builders tend not to look at drawings and there is a tendency for them to interpret. We have a site agent who looks after each project, who is more a site foreman than a clerk of works, because we do the paperwork. They order material directly and we tend to deal with costing and the client.'

Castle explains the legal detail: 'The design contract was a standard RIBA 99 form. For the building contract we looked



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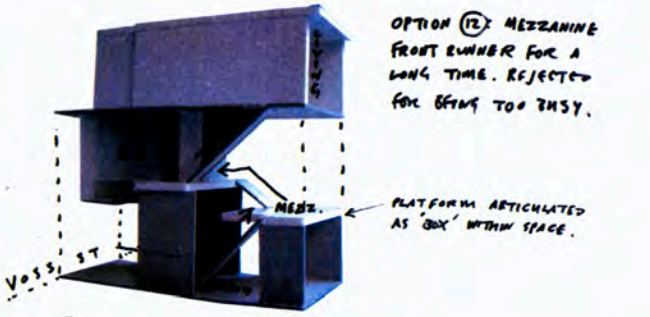

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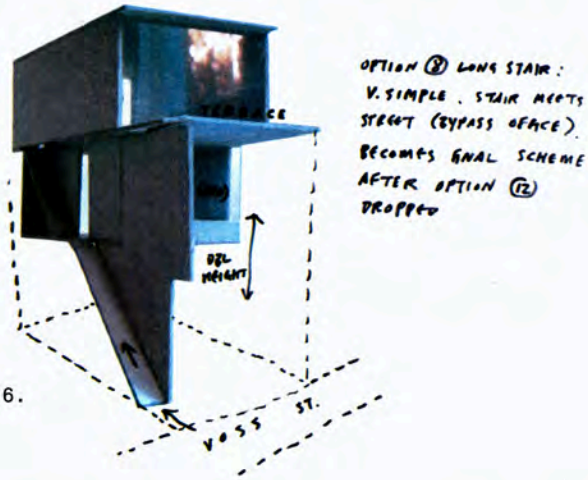


6.

2 & 3. The interiors reference Donald Judd
4. Castle's sketchbook
5 & 6. After many design revisions, the final scheme opted for a single dramatic staircase

into the standard JCT forms and reckoned they were overly complicated. So we developed our own simplified version, which covers the basic points and works fine, although we wouldn't use it if another builder was involved.' Does Castle not think the practice is supervising itself? 'Yes,' he says, 'but the whole way we work requires trust. And we like to offer flexibility so things can change. We have to be clear what is allowed for, so any changes can be costed and adjusted at that point. And it works fine.'

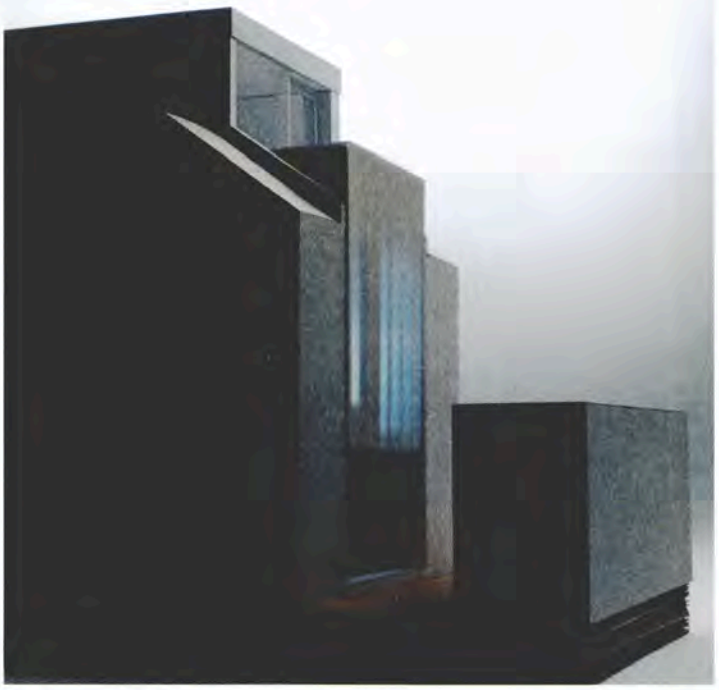
IN THE ALLEY

The studio is 4.5m wide and arranged over three floors: a ground-floor office and potential exhibition space; an open first-floor bedroom with a bathroom; and a top-floor living area with the kitchen bench across the back wall. This room has a 1.5m decked balcony at the front – a consequence of having to set back the top floor on planning grounds. There is a long, deliberately dramatic staircase from the front door up to this top floor. The front of the ground-floor studio is double-height and it has a narrow skylight across its back. At the back wall of the double-height studio is a door – halfway up the wall – which leads to storage space in an existing neighbouring building.

The interior is to be entirely white – even the floors, except for the polished concrete ground floor. Castle says: 'It's white almost to an extreme point. Because it's so small, we wanted to maximise the sense of space and to keep the scheme very simple. Instead of a white interior with patches of colour, even the kitchen taps and sink will be white. It wouldn't work for everybody but when Tony and Fiona lived there, off their own bat they painted everything white. All the rooms are quite tall so the proportions are not as you would expect. The intention is to create a slightly uncanny feeling.'

Castle spent a lot of time on the design of the facade which was eventually drawn up using VectorWorks. The ground floor is set back 400mm and has four solid timber panels, faced with 3mm of steel (this is a tough area); one of the panels is fixed, two are the leaves of a double door to the studio, and the fourth is the entrance door. The two levels above, up to the balcony railing, are faced in Georgian wired glass fixed to channels and T-sections, which in turn are fixed to 170 x 50mm timber mullions. Castle says: 'Georgian wired glass is cast on to a textured surface and the back is smoothed off. We liked the mottled surface which has a kind of industrial connotation.'

Construction on such a limited site was not straightforward. Castle explains: 'The ground is backfilled. We took samples down to 3m and got nowhere, so we piled the foundations. There are 20 driven piles, 4.5m deep. The slab is reinforced concrete. What we did [to avoid underpinning] was to make hit-and-miss pockets in the party walls and extend the slab's reinforcement into the pockets. After the slab was poured the pockets were dry packed, so that the [loads of the] party walls are taken on the edges of the slab, and this allows the party walls to be used to support floors above.'



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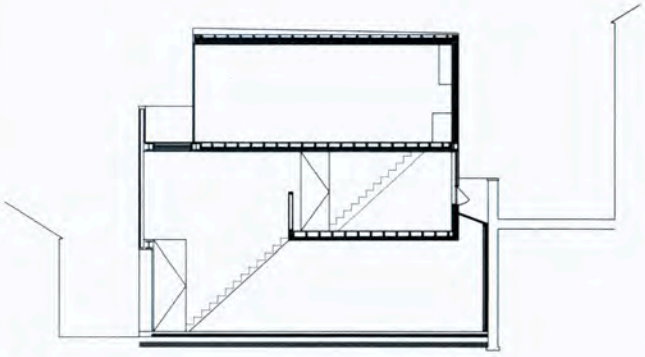

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7. The studio's only facade is of Pilkington's Georgian wired glass – specified for its industrial connotations and qualities of diffused light
8. Section through scheme
9. Three of four steel-faced solid timber panels open on to the street

The roof finish is Topseal GRP. Castle says: 'We very often use it. It's flexible in terms of what goes on to it and it's about as cheap as felt. You lay down sheets of the mesh and paint on this gloopy stuff, which is clear, and then a protective top coat in grey. Yes, its choice is budget-led. We've used it on the top roof and then as the base for the front balcony's decking. Because it's GRP it's very easy to repair – you just patch it.'

The ground-floor concrete screed is power-floated by Steysons. Castle says: 'Steysons did the White Cube gallery in Hoxton. One of the things our client wanted was to be able to use the ground floor as a gallery. They needed a durable material. They use a big helicopter power trowel. The result is grey and quite uneven in colour, which is nice.' The other floors are to have a white poured resin surface on a 25mm resin-bonded substrate. 'Originally we were going to use a tile by Dalsouple,' says Castle, 'but the client decided on the white resin. We're a bit concerned about discolouration because of direct sunlight on the top floor.'

Kitchen and kitchenette worktops are white ColorCore Formica. Internal doors, kitchen cupboards and cupboard doors are white spray finished using a two-pack polyurethane. Castle explains: 'The joinery is mostly made and fitted on site and then collected by the painter, Interior Spray Finishing, sprayed in the works and brought back. We once sprayed an interior but we're now against the idea because it's hard to touch up.'

You don't normally find neon tubes in residential settings. But, Castle says, 'it's a neat detail: a 20mm-diameter glass tube filled with a gas, with a cap over both ends and very simple cables at each end from Neon Circus. You can have a straight run of 2m. The client was a bit worried about the quality of light. But we have had one at home for five or so years, which we run off an old transformer.' In the bathroom the architect has used architectural tubes, essentially elongated filament lamps of 500cm and 1m lengths. Castle says: 'They are very delicate incandescent fittings with a kind of push fitting at each end. Visually they are a bit like a neon tube. I buy them from Sparks Electrical.'

The skylights in the roof were to be standard Velux fittings but the client agreed to skylights from Glazing Vision. Castle says: 'They are much nicer but they are more expensive. When you look up you see a hole in the ceiling so they have very subtle detailing.'

The practice was going to use low-lying radiators from Turnbull and Scott, but the client went for underfloor heating using plastic tubes filled with low-constant-temperature water. The bathroom has a big Japanese-style bath with high sides, the sort where you have a wash before getting in for a long hot soak. In a real sign of the times, the client found the product on the internet at www.omnitub.co.uk

9.

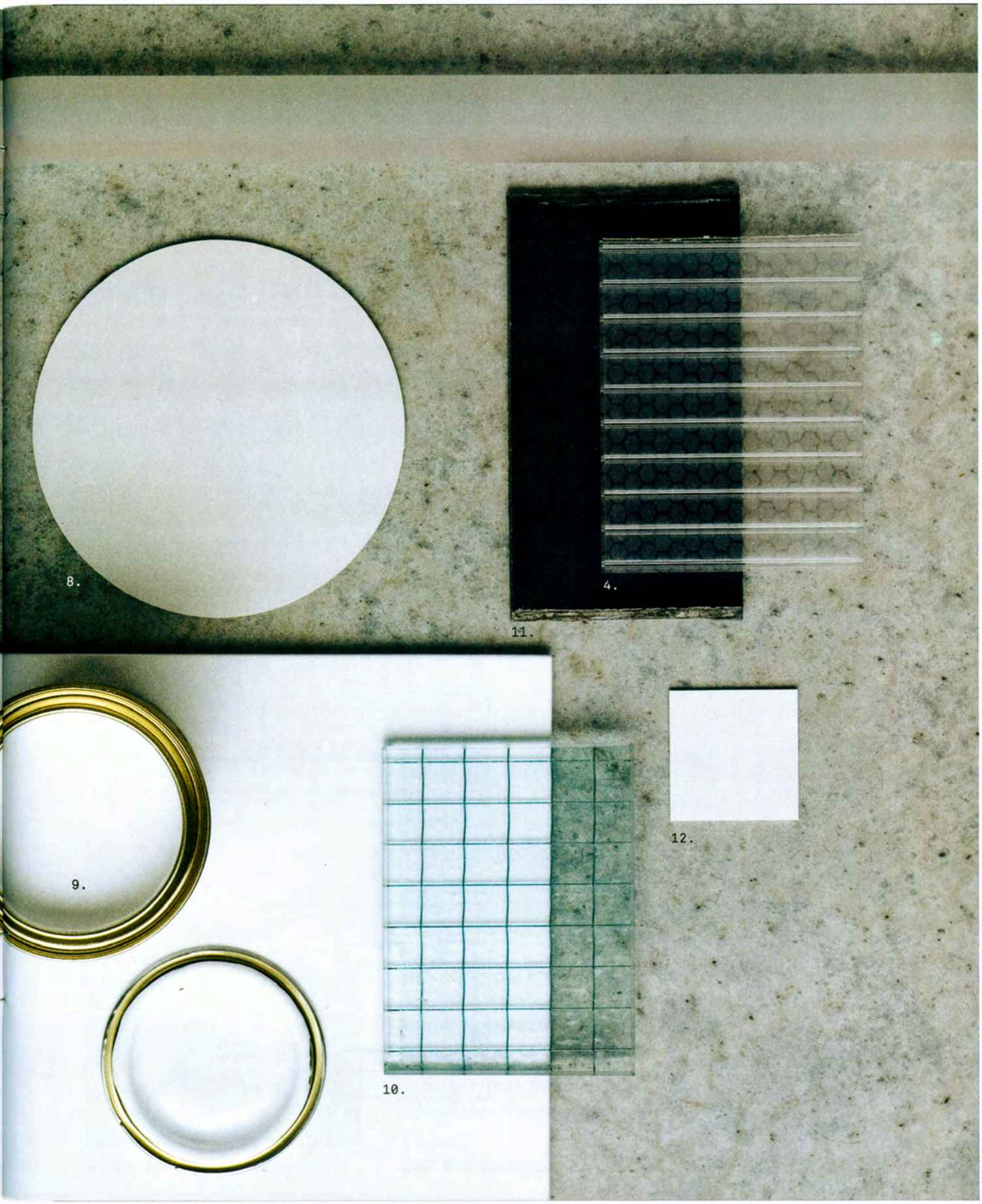
TURNER CASTLE: DUNNE AND RABY STUDIO SPECIFICATION SHEET

PRODUCT AND WHERE USED	MANUFACTURER	ALTERNATIVES CONSIDERED	REASONS FOR FINAL CHOICE
GRP roofing	Top Seal	None	Economy, flexibility of requirements for plywood deck, ease of repair
Power-floated concrete floor to ground floor	Steysons	None	Industrial appearance and durability
Underfloor heating on all floors	Nu Heat	Trench heating/low-lying finned-tube radiators	Eliminates visual impact
ColourCore Formica worktop	Formica	Corian	Simple hard-wearing white finish
White two-part Polyurethane sprayed finish to all internal doors and cupboards	Interior spray finishing	None	Cheaper and higher-quality finish on internal joinery than hand painting
Poured resin floor (on upper floors)	Altro	Dalsouple	Even clean appearance, durability
Cold cathode tubes (on upper floors)	Neon Circus	T5 flourescent tubes/ architectural tubes	Relative economy and unusual appearance (not usually used in residential environments)
Architectural tubes (in bathrooms)	Osram	T5 flourescent tubes/neon tubes	Corresponds to lighting elsewhere, but gives lower-level lighting (despite poor durability)
Track lighting (on ground floor)	Linux	T5 flourescent tubes/neon tubes/architectural tubes	Specifically to allow occasional use of ground floor as gallery space
Double-glazed units including one layer of Pilkington Pyroshield Texture (Georgian wired glass)	Pilkington	White laminate, acid-edged and Reglit glazing	Achieves desired level of diffused light and has industrial connotations
12mm square-edge plasterboard on timber studs with 3mm skim coat hand-painted in matt emulsion on all internal linings and partitions	N/A	Tapered-edge plasterboard and filled joints	Easily available and gives smooth finish
Anodised-aluminium cappings, mullions and cladding to front elevation	N/A	None	Light, strong and gives crisp details
Rooflights	Glazing Vision	Coxdrome polyurethane rooflights/Velux rooflights	Reduced visual impact
Tri-wall polycarbonate in PPC steel frame as sliding partitions on ground floor	Lexan	Sprayed MDF doors	Lightweight and gives another type of diffused light
Japanese-style 'sit-in' bath	Omnitub	Short (1,400mm) standard space-saver bath	Fits space well while allowing complete immersion

TURNER CASTLE'S MATERIALS BOARD

1. Power-floated concrete floor to ground floor by Steysons
2. Cold cathode tube by Neon Circus
3. Osram 900mm architectural tube for bathroom
4. Lexan tri-wall polycarbonate for ground floor sliding doors
5. 16mm stainless-steel lever handle for internal door, by SDS
6. Ceramic wall tile for bathroom, from Chris Stevens
7. Two-part polyurethane spray painted MDF (polished to high gloss finish) by Interior Spray Finishing
8. Altroflow 3000 ICS poured resin floor
9. Dulux matt emulsion
10. Pilkington cast Georgian wired glass for external envelope
11. 3mm mild steel plate on ground-level external doors, from Hy-Ten
12. Formica ColorCore laminate for worktops

JAMES BOLTON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11.
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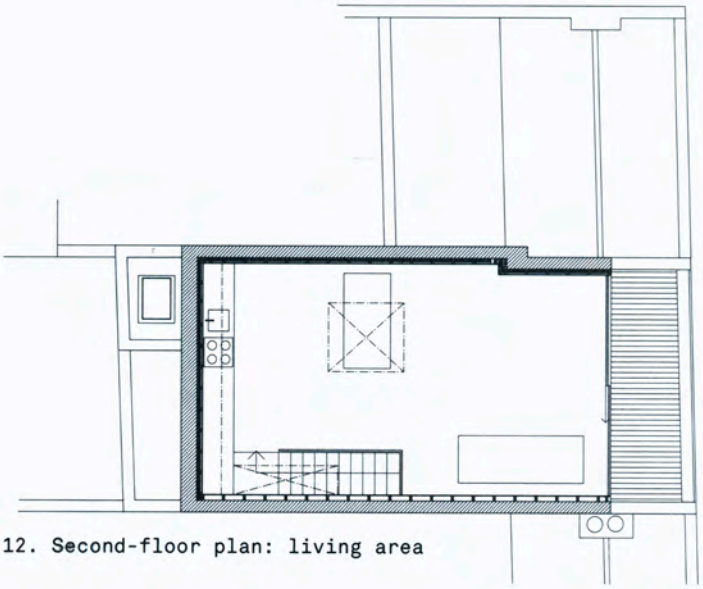
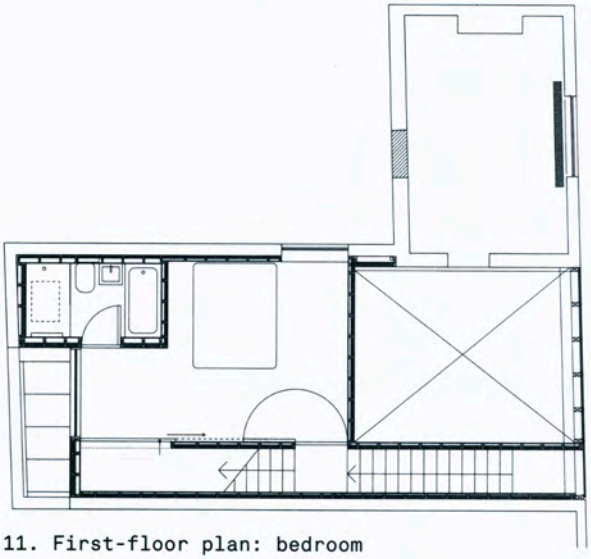
12.

Credits

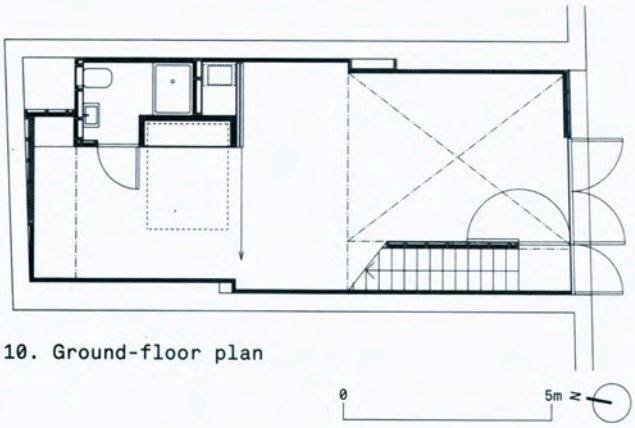
Client
Dunne and Raby
Architect
Turner Castle: Cassion Castle, Carl Turner, Anna Tenow, Alicja Borkowska, Sean MacMahon, Antonia Bromhead
Main contractor
Turner Castle
Quantity surveyor
Puneet Bhawan
Structural engineer
Andrew Lucas at Wright Consultancy Group
Design contract
Standard RIBA 99 form
Building Contract
Special
Gross internal floor area
50m²
Total cost
Confidential
Start on site
October 2006
Completion on site
June 2007



12. Second-floor plan: living area



11. First-floor plan: bedroom



10. Ground-floor plan

READER ENQUIRIES

ALL MANUFACTURERS	1400
ALTRO	1401
DULUX	1402
FORMICA	1403
GLAZING VISION	1404
HY-TEN	1405
INTERIOR SPRAY FINISHING	1406
LEXAN	1407
LINUX	1408
NEON CIRCUS	1409
NU HEAT	1410
OMNITUB	1411
OSRAM	1412
PILKINGTON	1413
SDS	1414
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