# The Rule of Regulations



### Introduction

#### The Rule of Regulations

An Architecture Foundation exhibition at the Closet Gallery

29 August to 13 September 2008

Finn Williams is a planner based in London and Gothenburg. He studied architecture at the Mackintosh in Glasgow, FAUP in Porto, and the Royal College of Art where he was given the 2007 New London Architecture prize. Finn worked for Rem Koolhaas and General Public Agency. and collaborated with Newbetter and Muf before recently setting up his own practice. Finn teaches at Chalmers University in Sweden, and is a visiting critic at the Architecture Association. His work has been exhibited at the Venice Biennale, Architekturforum Oberosterreich, the Building Centre, and the Tate Modern. finnwilliams@hotmail.com

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The Architecture Foundation's Closet Gallery is a temporary pavilion conceived by artist Simon Fujiwara, designed and produced with architect Sam Causer. Launched during the London Festival of Architecture 2008, the Closet is hosting a series of exhibitions and events over the summer period.

www.architecturefoundation.org.uk

In the last two years, the UK housebuilding industry has been inundated with new codes, regulations, guidance and legislation. In addition to Building Regulations, an increasing proportion of new housing must follow the Code for Sustainable Homes, Lifetime Homes Standards, Secured by Design, Design and Quality Standards and Building for Life, not to mention specific standards and additional guidance set by Housing Associations. As a result, the estimated 3 million new homes needed within the next 12 years will be more sustainable, more accessible, and more regulated than ever before.

Why has this legislation come about? How is it influencing the design of new homes? And what might be the long-term consequences for Britain's housing stock?

Throughout history, legislation controlling the construction of buildings has quietly predetermined the shape of our homes. London's first building regulations in the early 13th Century, "Recommendations made by the council of reputable men... to protect against fires, with God's help", banned thatched roofs within the City. Following the Great Fire of London, the London Building Act 1667 set minimum street widths, regulated party wall heights and specified that all houses should be built in brick or stone - its legacy can still be seen today.

With the publication of guidance such as 'Accommodating Diversity', legislation now goes beyond its historical role of safeguarding health and safety to cover cultural sensitivities (allowing for different religious practices), psychological issues (like

placemaking), and global concerns (such as climate change).

Taken together, this new body of regulations could inadvertently influence the form of 21st century residential architecture as much, if not more than Loos or Le Corbusier's manifestos did at the beginning of the 20th century. With talk of exporting legislative tools including the Code for Sustainable Homes abroad, could we unwittingly be creating a new and more pernicious international style?

The Rule of Regulations pits Le Corbusier's famous five points against five pieces of current housing legislation; Lifetime Homes Standards, Design & Quality Standards, the Code for Sustainable Homes, Accommodating Diversity, and Secured by Design. Do today's regulations finally extinguish modernist house design? Or do they even prescribe a new vernacular of its own that will come to define early 21st century housing?

Le Corbusier developed the Maison Citrohan throughout the 1920s as a standardised house type for mass production - the name itself a pun on French car manufacturers Citroën. In Vers un Architecture he explained how the concept would replace "the old world house which made bad use of space" with its "incoherent grouping of a number of large rooms" in which "the space has been both cramped and wasted."

If Maison Citrohan was built today on a greenfield site in the Thames Gateway, what changes would be necessary to meet the highest standards? What would a compliant Citrohan look like? And would it work better?

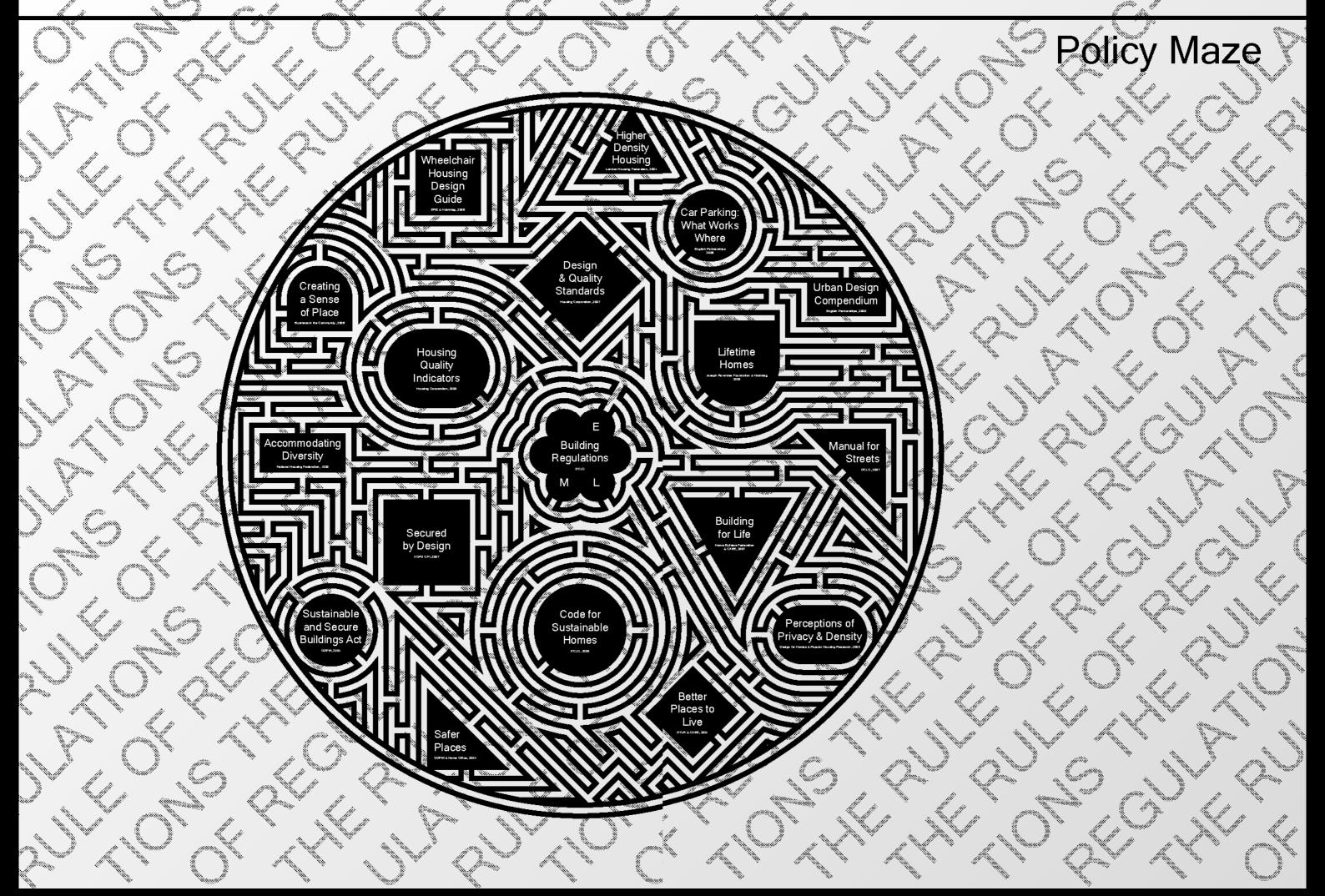








# Policy Maze



# Maison Citrohan

The Maison Citrohan was Le Corbusier's template for living. The house was not only the basis for many of Le Corbusier's later designs, it was also intended to be a standard house type that could be massproduced for everyone, everywhere.

Le Corbusier and Pierre Jeanneret developed the Maison Citrohan type throughout the 1920s. The first version in 1920 was essentially a streamlined shoe-box with large industrial windows, inspired by the interior of a Parisian diner. By 1922 the design was elevated from the ground on 'pilotis', with an external stair linking cascading terraces. The third and final version, shown here, became a direct expression of Le Corbusier's Five Points of a New Architecture, the formula behind his new brand of international modernism;

- Piloti; the building raised on stilts to free up the ground floor
- Plan Libre; a structural system that allows free planning of the interior
   Facade Libre; the same structure
- liberates the design of the facade
   Fenetre en Longeur; long,

horizontal, ribbon windows.

- Toit-Jardin; the use of the flat roof as a roof-garden

Only one Maison Citrohan was built, at the 1927 Weissenhof international housing exhibition in Stuttgart. But the house has continued to influence the debate over housing ever since through Le Corbusier's now infamous description;

"we must look upon the house as a machine for living in or as a tool."

Le Corbusier called for a house as

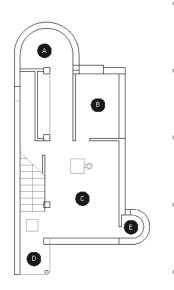
popular as the Citroen car, and "as serviceable as a typewriter". The phrase has since been dragged out of its context and into arguments beyond its original intentions. At its heart was a desire for affordable, healthy, and good quality housing. But that would require drastic simplification and centralisation of the building process, with the possible side effects of numbing uniformity, ill-fitting generalisation, and a denial of diversity.

In the first CIAM conference of 1928, Le Corbusier together with an elite of international architects proposed that a universal technical language should be taught throughout the world, with the various standard measurements for home equipment and appliances 'normalized' at an international convention. It could be argued that the inadvertent corollary was a swathe of unsuitable social housing built, and now demolished, across Europe. Could today's moves to export the UK's standards and guidelines abroad be making the same mistake?

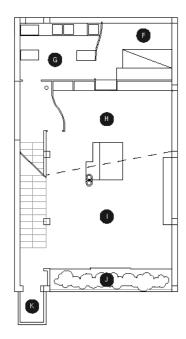
#### <u>Key</u>

- A Store/Cellar
- B Laundry
- C Lobby D Entrance
- E W.C.
- F Maid's room
- G Kitchen
- H Dining
- I Living J Patio
- K Balcony
- L Bathroom
- M Bedroom
- N Boudoir
- O Roof Garden

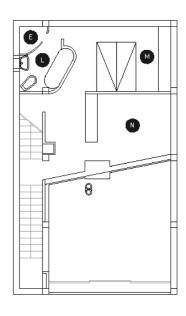
Original Design: Ground Floor Plan 1:150



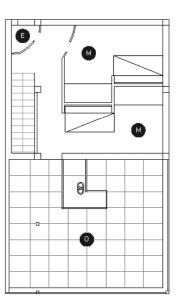
Original Design: First Floor Plan 1:150

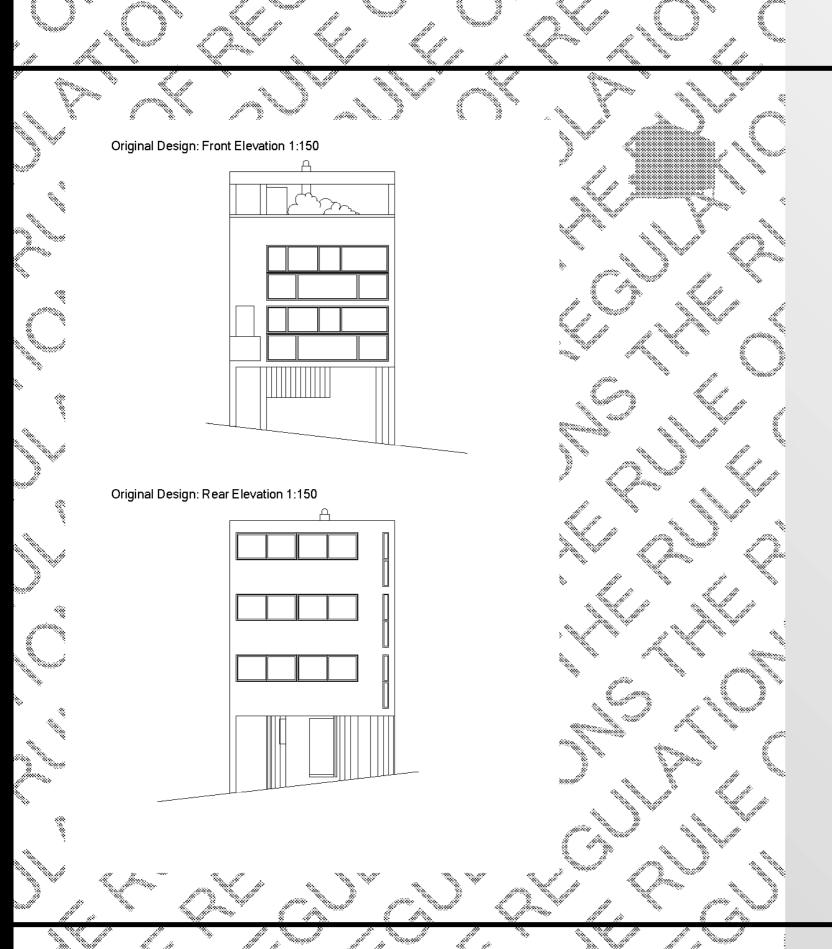


Original Design: Second Floor Plan 1:150



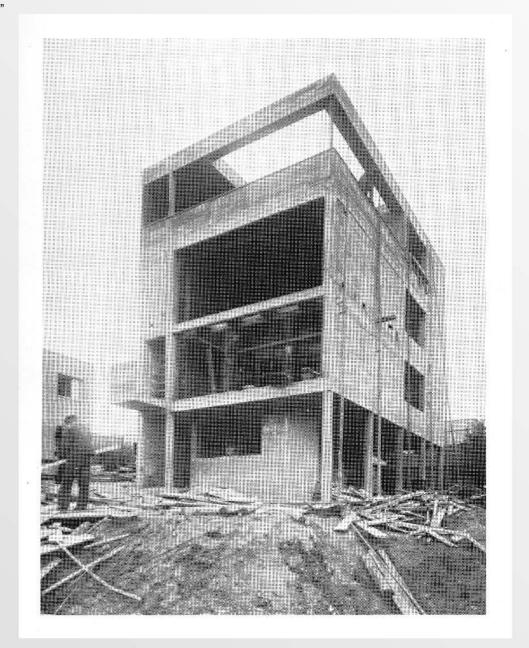
Original Design: Third Floor Plan 1:150





"I think I may say that this building does not really belong in Stuttgart. With elevations of this type, disproportionately large window areas, and flat roofs, I should be pleased if these houses had been designed for a more southerly climate."

A contemporary critic reviewing Maison Citrohan



"It is untrue that, as has been alleged, only a person of "bohemian" and well-nigh immoral habits could bear to spend ten days in such a house."

Corbusier's answer in L'Architecture Vivante to the question "How does one live in my Stuttgart house?"



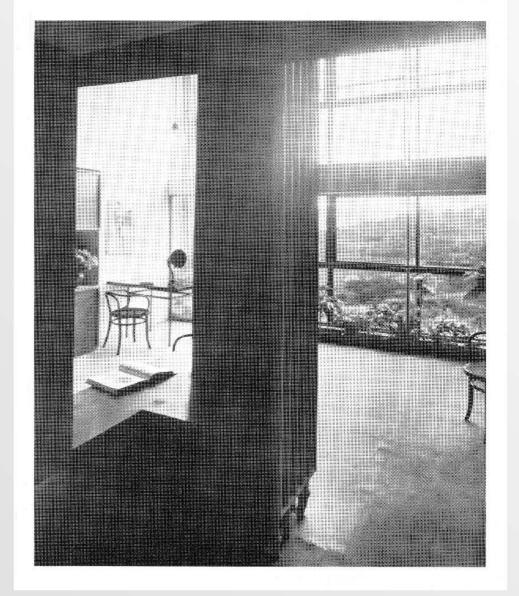
"What is furnishing?"

Answer: in a house one sleeps, one wakes, one acts, one works, one rests, one talks, one eats, and one goes to sleep.

Where is the logical connection between these functions and traditional items of furniture? Where do they agree? The bed remains, the table remains, the seats remain.

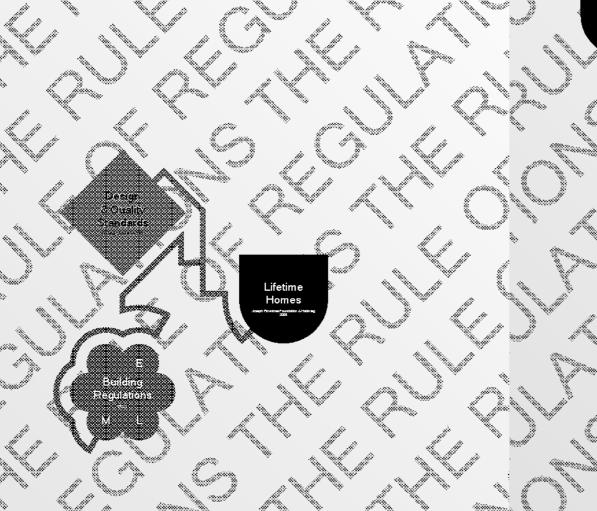
But the chests of all kinds...
are ill suited to these functions, cost a lot of money,
and take up a great deal of
space; they force the architect to design large and
expansive rooms, and those
large rooms are made small
by the furniture that is
installed in them."

Corbusier on the interiors of Maison Citrohan



## Lifetime Homes Standards

Joseph Rowntree Foundation, the Helen Hamlyn foundation, & Habinteg Housing Association



"...a flexible blue print for accessible and adaptable housing in any setting. The Lifetime Homes concept increases choice, independence and longevity of tenure, vital to individual and community well being."

#### Introduced

#### <u>Purpose</u>

More accessible housing for those with young children through to frail older people and those with temporary or permanent disabilities.

#### Status

All public sector funded housing to be built to Lifetime Homes Standards from 2011. All new homes to be built to Lifetime Homes Standards from 2013.

#### **Future**

Government review of the up-take of Lifetime Homes Standards across all sectors in 2010, with a view to potential inclusion of Lifetime Homes in Part M of the Building Regulations from 2013.

#### Example Measures

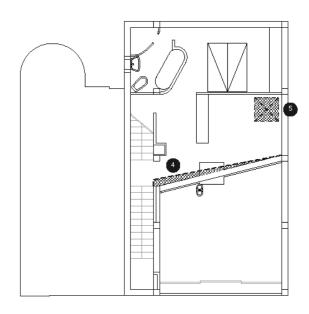
- 1. First floor lowered to ground level, and original ground floor rooms moved, as "the living room should be at entrance level" (LH8)
- 2. Accessible parking area, and "level or gently sloping" path & entrance added. (LH1,2,3)
- 3. Porch added to main entrance to provide "a covered main entrance" (LH4)
- 4. Doors, corridors, and staircases modified to minimum widths. (LH6)
- Suitable location found for the possible future installation of a vertical lift. (LH12)
- 6. Living room window mullions lowered, as "people should be able to see out of the window whilst seated." (LH15)
- 7. Space allowed for "turning a wheelchair in dining areas and living rooms." (LH7)
- 8. Room provided for a "wheelchair accessible entrance level WC." (LH10)

Mandatory Related Guidance

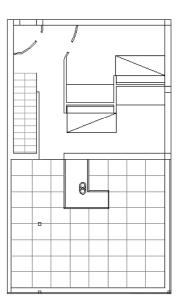
xxx Advisory Related Guidance

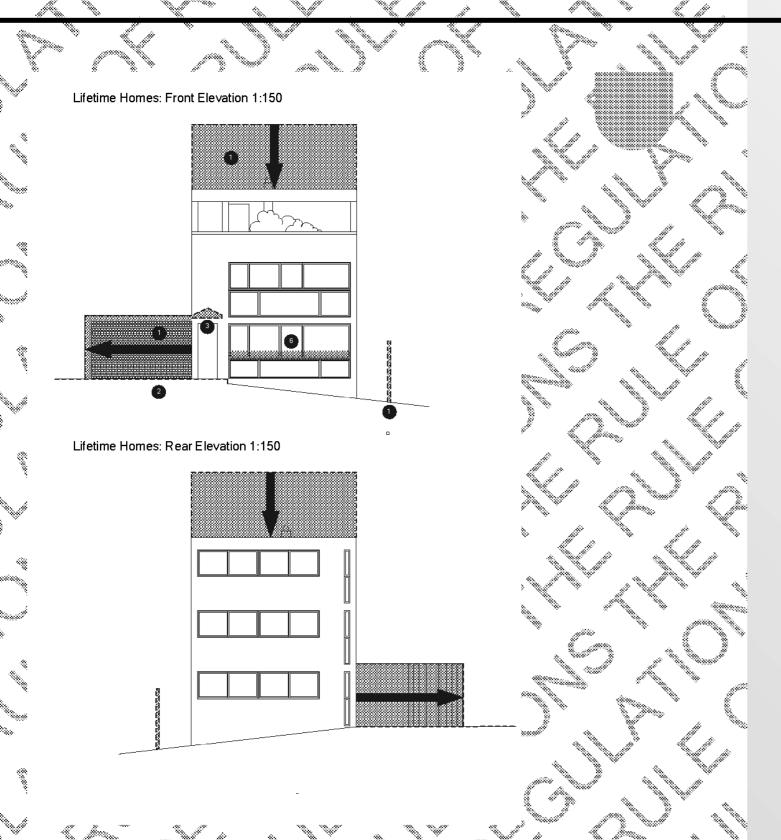
# Lifetime Homes: Ground Floor Plan 1:100

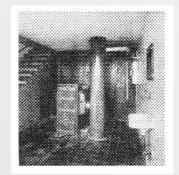
Lifetime Homes: First Floor Plan 1:150

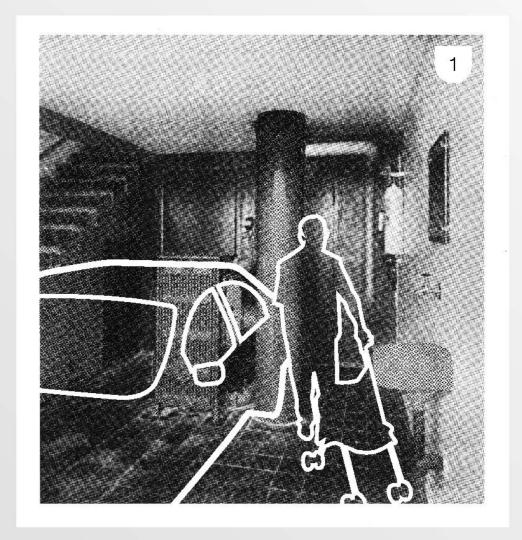


Lifetime Homes: Second Floor Plan 1:150



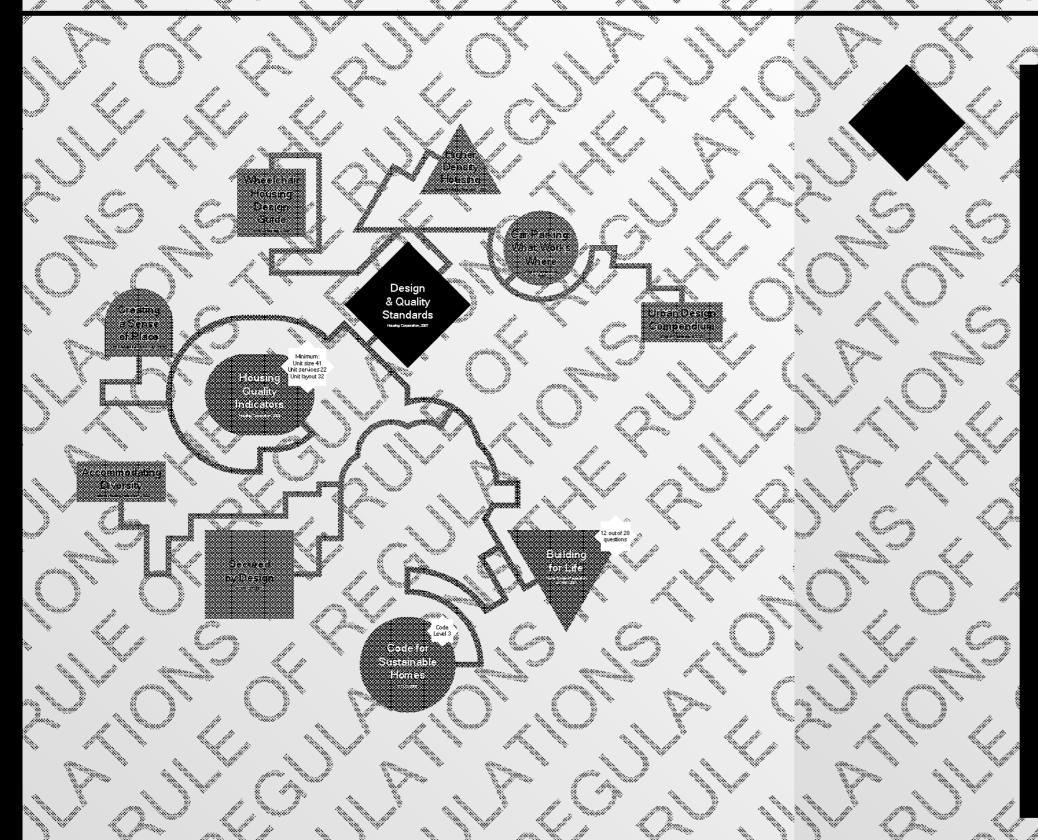






# Design & Quality Standards

Housing Corporation



The Design & Quality Standards set out the Housing Corporation's requirements and recommendations for all new homes which receive a Social Housing Grant. The Standards set minimum performance targets in three areas: Internal Environment measured using Housing Quality Indicators; Sustainability measured using the Code for Sustainable Homes, and External Environment measured using Building for Life.

Introduced 2007

#### Purpose

"Our aim is to invest in homes that create sustainable environments and we consider that one of the key elements of achieving this is through good house design. We want to create areas that are desirable, healthy, safe and better places for people of all ages to live and flourish."

#### <u>Status</u>

Mandatory requirements for all new homes which receive Social Housing Grants from the Housing Corporation.

#### <u>Future</u>

From April 2009 the new Homes and Communities Agency will bring together the Housing Corporation, English Partnerships, and delivery programmes from DCLG to form a single national agency for housing & regeneration. The standards set by each agency are expected to converge.

#### Example Measures

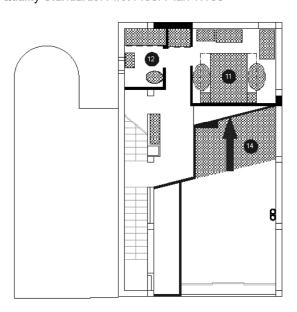
- 9. Clear boundaries added to front and back of the home. (HQI 3.1.2)
- 10. Prescribed furniture with specific dimensions shown in living spaces to ensure "ability to accommodate

- activity". This leads to further changes such as moving the boiler chimney, and replacing the original fitted side-board with a compliant version (HQI 6). Living room reduced in size and partitioned off so that it is "not an essential part of circulation." (HQI 6.2.1)
- 11. All bedrooms enlarged to fit prescribed furniture, with resulting changes to the windows and reduction in the size of the roof terrace. (HQI 6) The main bedroom is isolated by stud wall from living space to ensure "noise reduction". (HQI 7.1.2)
- 12. Bathroom and toilet provision changed to ensure "ability to accommodate activity." Second floor WC removed, (HQI 6) and allowance made for a hoist between main bedroom and main bathroom (LH13). The newly-compliant bathroom cannot now have a rear window as it would be above the bath space, making cleaning a safety hazard. (HQI 6)
- 13. Kitchen adapted to ensure "ability to accommodate activity", including providing reasonable routes from sink, cooker & fridge, and adequate storage. Changes to the size and proportion of windows to fit. (HQI 6)
- 14. Mezzanine-level 'boudoir' removed to bring the overall area of the home closer to prescribed and cost-effective minimums of 100-105m2. (HQI 5) With the removal of this room the home achieves approximately 117m2; considered reasonable as it is spread over 3 storeys.
- 15. The original roof terrace can potentially be enclosed to make new rooms, therefore already complying with the need to "allow for future roof space expansion." (HQI 7.5)

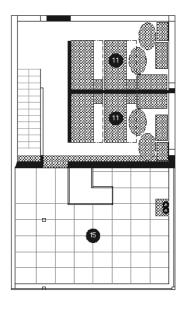
- Guidance in Focus
- Mandatory Related Guidance
- xxx Advisory Related Guidance

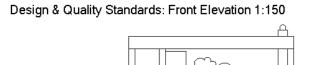
Design & Quality Standards: Ground Floor Plan 1:100 

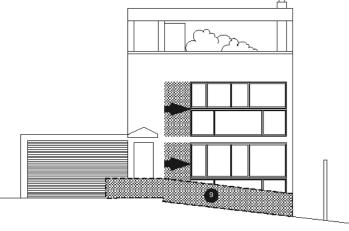
Design & Quality Standards: First Floor Plan 1:150



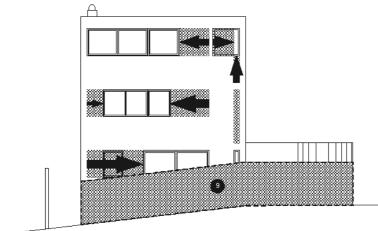
Design & Quality Standards: Second Floor Plan 1:150



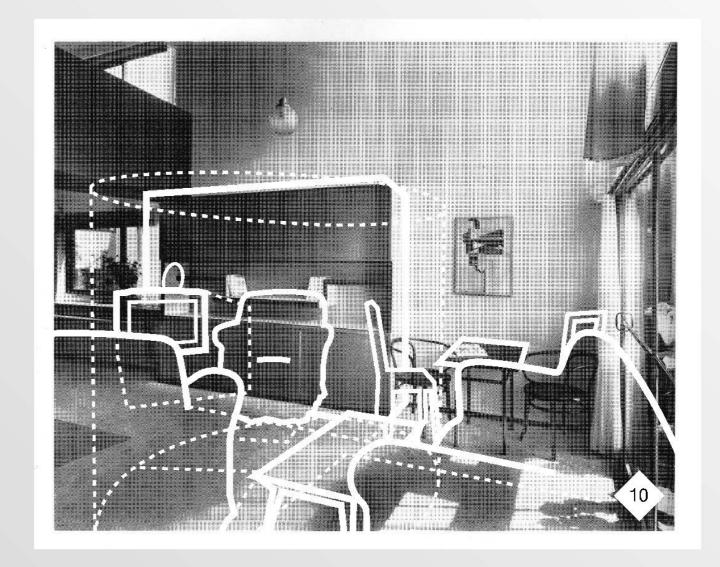




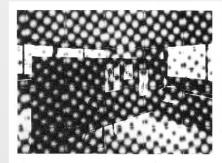
Design & Quality Standards: Rear Elevation 1:150

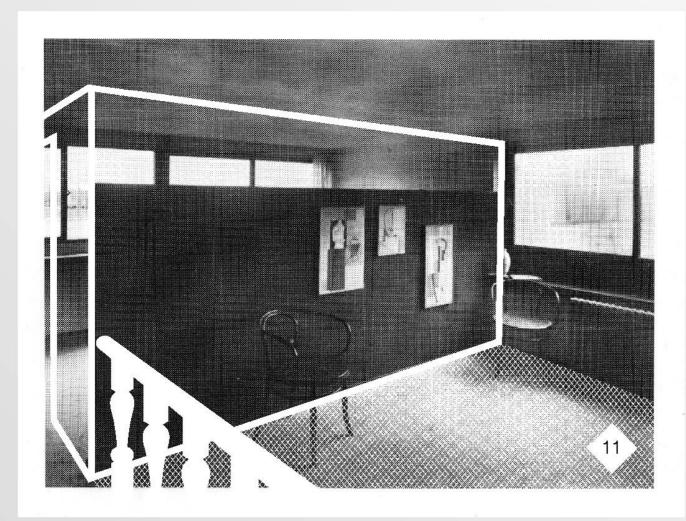


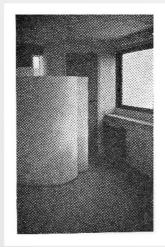


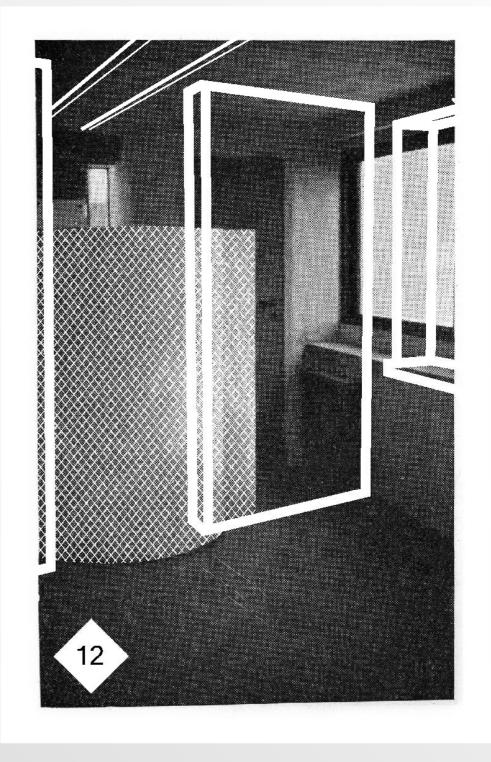


Prescribed furniture with specific dimensions shown in living spaces to ensure "ability to accommodate activity". This leads to further changes such as moving the boiler chimney, and replacing the original fitted sideboard with a compliant version (HQI 6). Living room reduced in size and partitioned off so that it is "not an essential part of circulation." (HQI 6.2.1)



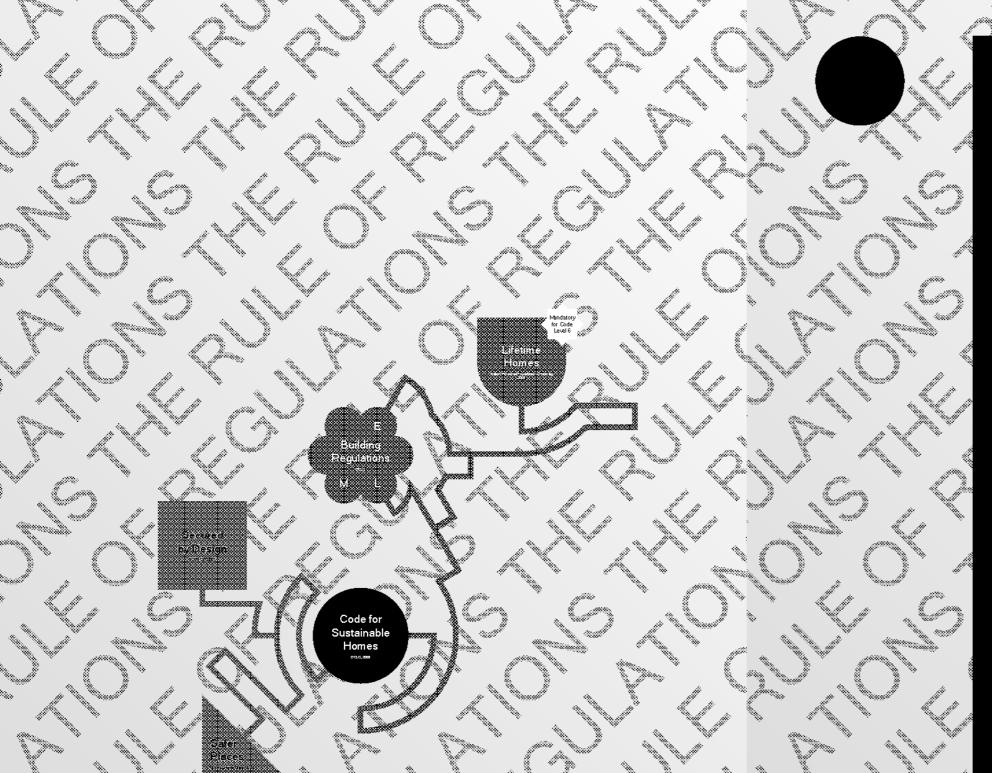






## The Code for Sustainable Homes

Department of Communities and Local Government & BRE



The Code for Sustainable Homes is the single national standard for the design and construction of sustainable homes. The Code measures the sustainability of a home against nine design categories: Energy and CO2 Emissions; Pollution; Water; Heath and Wellbeing; Materials; Management; Surface Water Run-off; Ecology; Waste. Accredited Code Assessors rate the 'whole home' as a complete package, and assign a 1 to 6 star rating to communicate its overall sustainability.

#### Introduced 2007

#### Purpose

"Homes account for around 27% of the UK's carbon emissions, a major cause of climate change".

#### Status

Mandatory rating against the code for all new homes since 1 May 2008 From April 2008, all new social housing must be built to a minimum of code level 3. This will apply to all new homes from 2010, and step up to code level 4 from 2013. From 2016 all new homes must be built to zero carbon standards (code level 6).

#### Future

Potential for exporting the code, and BREEAM assessment method (both developed by BRE - the Building Research Establishment) internationally giving UK architects "a marked advantage in overseas markets".

#### Example Measures

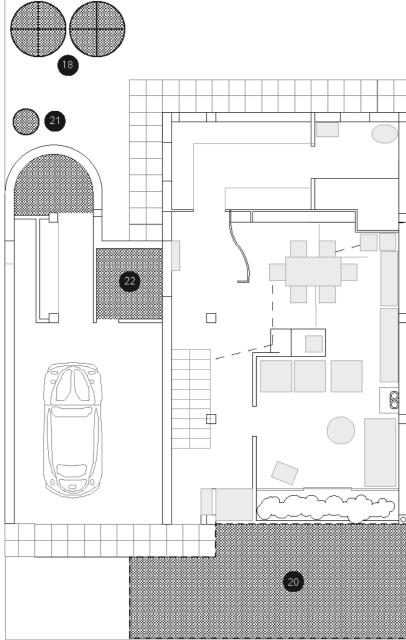
A strategic approach has been taken here as no rigid set of rules applies. A few key modifications are believed, without undergoing the full assessment procedure, to achieve Level 3 or

- 4 of the Code. These modifications are described below.
- 16. Solar panels and solar water heating added to the roof. Roof given a pitch to better support these "low carbon technologies", and to drain rainfall into a grey water collection tank on the roof terrace. (CfSH 1,2)
- 17. Ground source heat pump provided to give "low carbon" geothermal heating. (CfSH 1)
- 18. Two "secure" rotary washing lines added to the private outside space "to provide a reduced energy means of drying clothes." (CfSH 1)
- 19. Le Corbusier's design included a "home office" space on the mezzanine. This space was removed to comply with D&QS but the desk space next to the landing is retained. This home office, with necessary telecoms points, is intended "to reduce the need to commute to work by providing residents with the necessary space and services to be able to work from home."
- 20. Grass, with deep top-soil below, specified for the front garden. This should "avoid, reduce and delay the discharge of rainfall to public sewers and watercourses." (HQI 4).
- 21. Compost bin added to the back garden "reducing the amount of household waste sent to landfill", (CfSH 5)
- 22. A secure and waterpoof space for bicycles provided to encourage "the wider use of bicycles as transport by providing adequate and secure cycle storage facilitites, thus reducing the need for short car journeys." (CfSH 1)

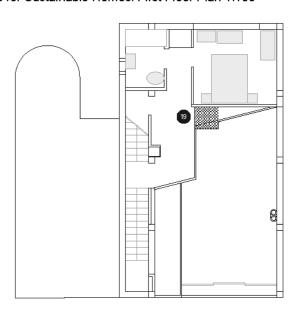
Mandatory Related Guidance

Advisory Related Guidance

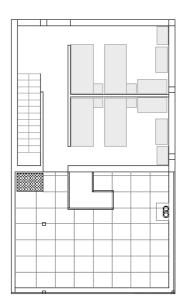
The Code for Sustainable Homes: Ground Floor Plan 1:100

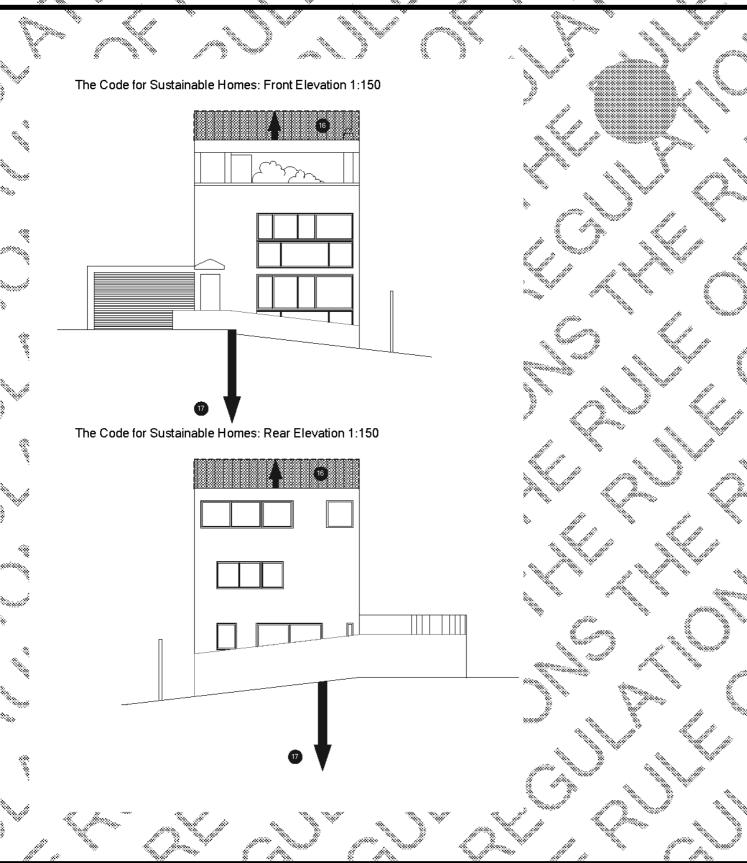


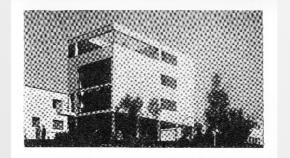
The Code for Sustainable Homes: First Floor Plan 1:150

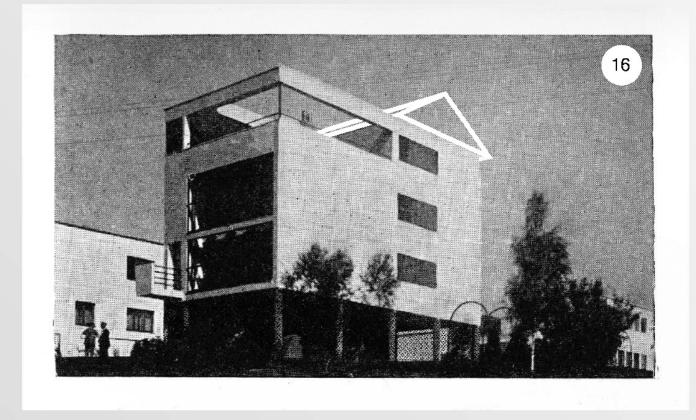


The Code for Sustainable Homes: Second Floor Plan 1:150



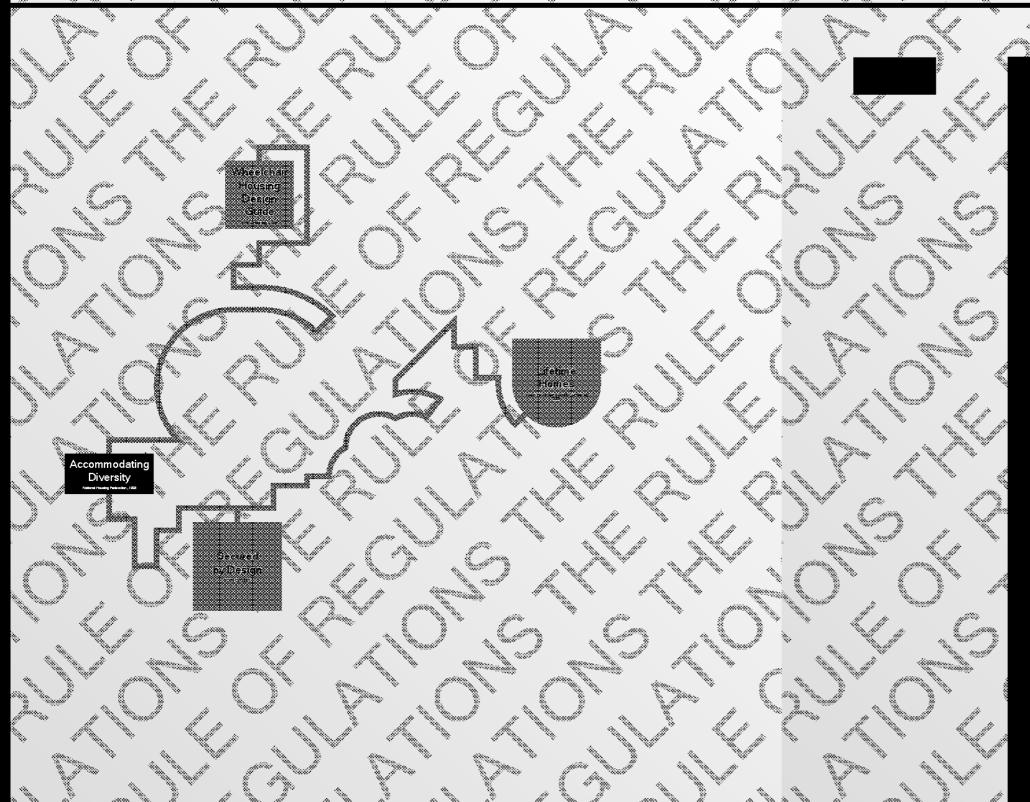






## Accommodating Diversity

National Housing Federation



"Guidance to designing homes that cater in a non-exclusive way for the needs of households from minority ethnic, religious and cultural groups... Accommodating Diversity provides a structured introduction to design features that have an impact on the home lives of black and ethnic minority people from various backgrounds and a checklist of possible design responses."

#### Introduced 1998

#### Purpose

"To eliminate all racial discrimination whether unlawful or unintended... To promote equal opportunities for all ethnic groups... To take positive action to address existing disadvantage and encourage a more inclusive society".

#### <u>Status</u>

Advisory guidance through the Housing Corporation's Design and Quality Standards. Mandatory under certain Housing Associations/ Registered Social Landlords, in specific areas.

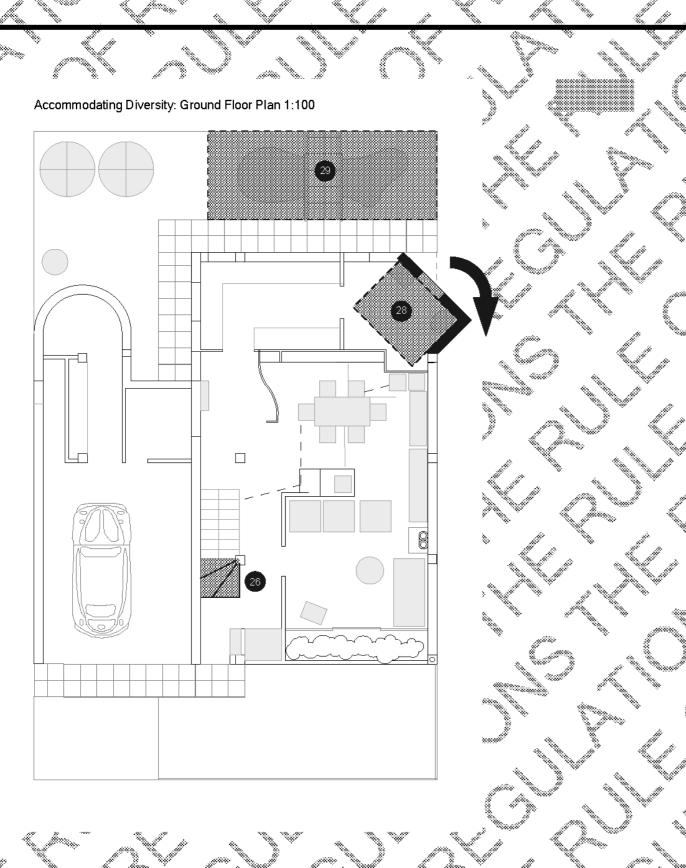
#### Example Measures

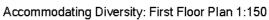
23. Garden shed added to roof terrace, "for storage or for hobbies or work" as "the spatial requirements of study, hobbies, DIY and sewing at home, whether as a hobby or as an economic activity, need to be borne in mind". (AD 2.5.2).

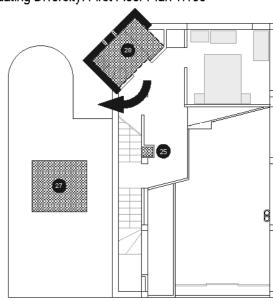
- 24. The original living room windows are perfect for those groups for whom sitting on the floor is a traditional aspect of living. Some ground floor windows given smaller panes as "some Chinese people object to rectangular 'coffin shaped' windows. Such openings, if used, may be better broken up with smaller panes." (AD 2.3.2)
- 25. Two "shrine spaces", in the form of niches in corridors, added. (AD 2.6.1)
- 26. One 'turn' added to the bottom of the staircase because "some Chinese people believe that stairs should not descend towards the front door." (AD 3.2.4)
- 27. Space allocated for a 'succoh' on the roof of the garage to accommodate Orthodox Jewish practice. A succoh is "a part of the living space which can be opened to the sky to enable men to sleep and eat under the open sky for eight days once a year." (AD 3.4.3)
- 28. Toilets and bathrooms rotated to avoid "the WC aligning with the direction of Mecca". (AD 3.5.11)
- 29. A water feature and pump, with accessible bridge over it, added to the back garden; "for some Vietnamese people a pond is an important symbolic element the ideal would be a running stream with a bridge." (AD 3.9.1)

Mandatory Related Guidance

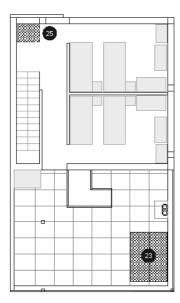
xxx Advisory Related Guidance



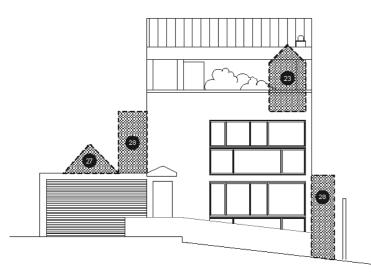




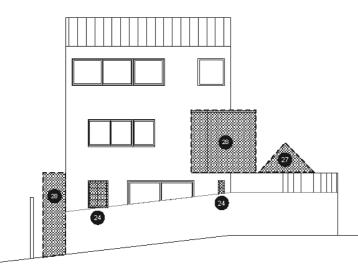
Accommodating Diversity: Second Floor Plan 1:150



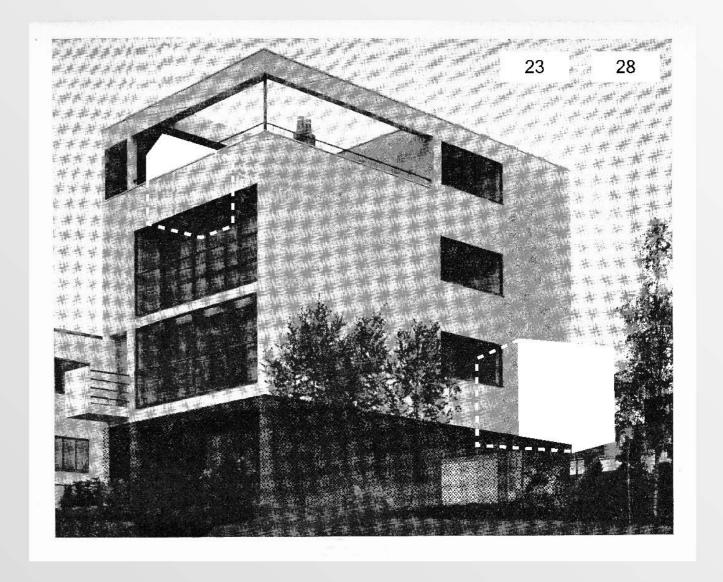
#### Accommodating Diversity: Front Elevation 1:150



#### Accommodating Diversity: Rear Elevation 1:150







# Secured by Design

Secured by Design

"Secured by Design is a police initiative to encourage the building industry to adopt crime prevention measures in the design of developments to assist in reducing the opportunity for crime and the fear of crime, creating a safer and more secure environment."

#### Introduced 1999

#### <u>Purpose</u>

"Incorporating sensible security measures during the construction of a new development or the refurbishment of buildings and estates has been shown to reduce levels of crime, fear of crime and disorder... The aim of the police service is to assist in the design process to achieve a safe and secure environment for residents and users of public space, without creating a fortress mentality".

#### Status

Section 2 of Secured by Design (New Homes) forms part of the Code for Sustainable Homes. However, full Secured by Design certification requires developments to meet all conditions within both Sections 1 & 2.

#### **Future**

Possible development of a new Building Regulations Part S on minimum standards of security, with additional levels of security determined by a risk assessment

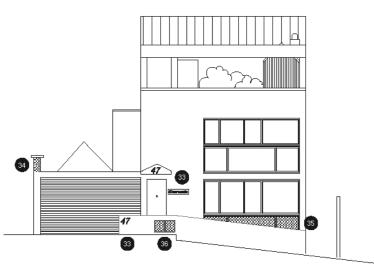
#### Example Measures

- 30. 'No plants higher than 1 metre' and 'no trees with foliage lower than 2 metres' to be planted in the front garden (20.4) to "avoid obstructing visibility of doors windows and access gates." (SbD 12.3)
- 31. Front garden changed to a patio to "reduce the likelihood of any planting growing to excess and obscuring vulnerable areas". (SbD 12.4) This contradicts the grass proposed previously to assist in reducing rainwater run-off.
- 32. Window added to the side wall of the garage to avoid "windowless elevations and blank walls adjacent to space to which the public have access." These walls "tend to attract graffiti and inappropriate loitering." (SbD14.1)
- 33. Clear house number and name added to the front porch and fence, "to assist residents, postal workers and the attendance of emergency services." (SbD 16.1)
- 34. Parapet added to garage "so as not to provide climbing aids to gain access into the property." (SbD 17.1)
- 35. Laminated 'safety' glass added to ground floor windows as they may be used for emergency exit. (SbD 30.8)
- 36. Meter cupboards, for gas and electricity, added to front boundary to "reduce the opportunities for theft by 'bogus officials". (SbD 34.1)

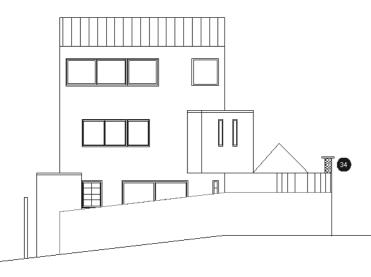
- Mandatory Related Guidance
- 🚃 Advisory Related Guidance

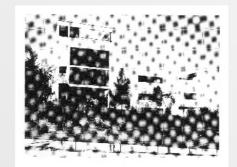
# Secured by Design: Ground Floor Plan 1:100 Secured by Design: First Floor Plan 1:150 Secured by Design: Second Floor Plan 1:150



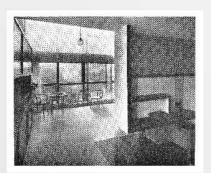


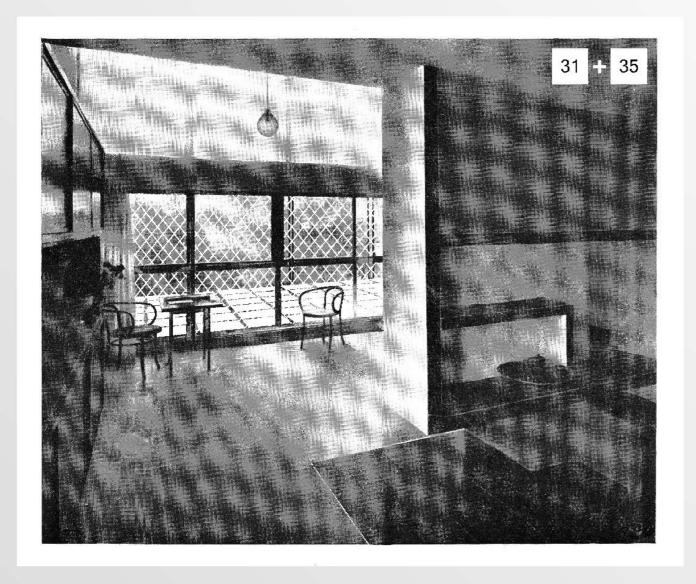
Secured by Design: Rear Elevation 1:150



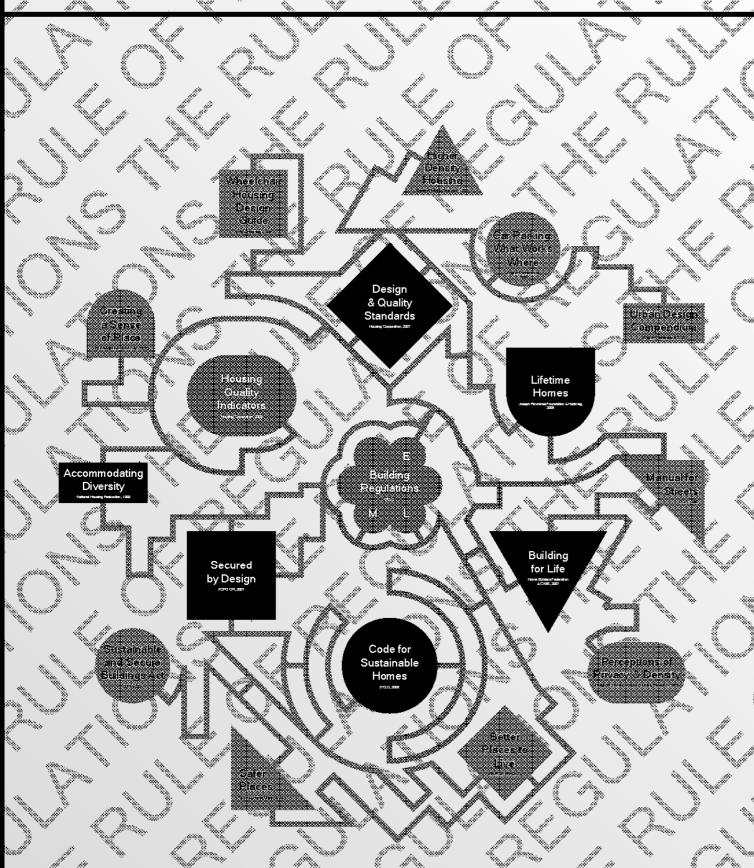








# The Legacy of Legislation



All attempts at protecting the user, today and tomorrow. Little or no consultation with the actual users.

Ensuring a bare minimum. But now the minimums are being used as the goals. With 'targets' like Code Level 6, ambition gets translated into compliance.

The curse of the pdf

The extinction of the garden?

The fattened footprint - and legislated sprawl. Urban scale?

Cultural conditioning.

Litigation is the architect Risk reduction

Architects job is to reconcile criteria - shifting the pieces of the jigsaw, rather than deciding what the picture of the jigsaw should be. Trevor Wright, Redrow Homes "The designer is there to... ensure this jigsaw fits together properly."

Desire to design homes "universal" in their appeal. In doing so denying the diversity of provision that allows peopl,e to move house when their situation changes.

Mass move to sedenterise the popu-

"Belt and braces"

Overlap, circular references

Today's house is a precaution/ lowest common denominator/ insurance for living in.

As DR identified... the inevitable  $\ensuremath{\mathsf{L}}$ 

"CABE's Building for Life checklist for

good housing is a recipe for mediocrity" Caruso St John

Mark Brinkley: The Code for Sustainable Homes is "a graveyard of good intentions"

CABE publiucation: Design Review "In particular, those making judgements need to bear in mind the distinction between 'do I like it?' (which is not the point) and 'is it any good?' (which may be quite a different thing)."

thing)."
Full circle, try using that apprach to sell cars, 'you won't like it, but it's good".

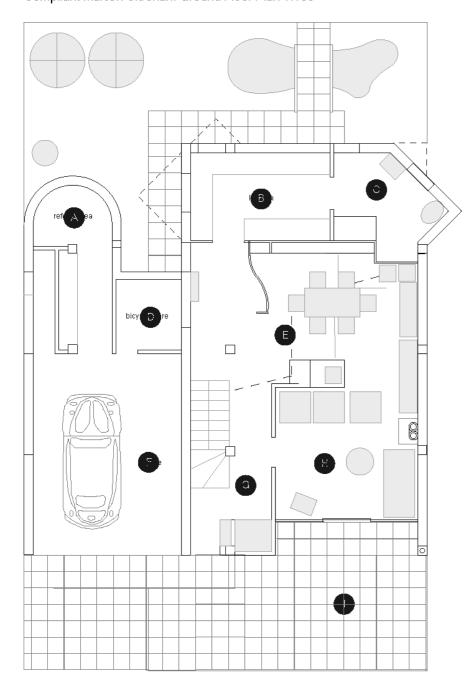
How has it improved the house?

Guidance in Focus

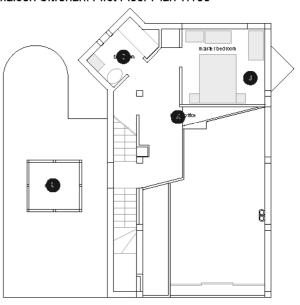
Mandatory Related Guidance

Advisory Related Guidance

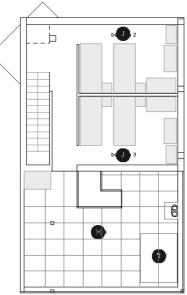
#### Compliant Maison Citrohan: Ground Floor Plan 1:100

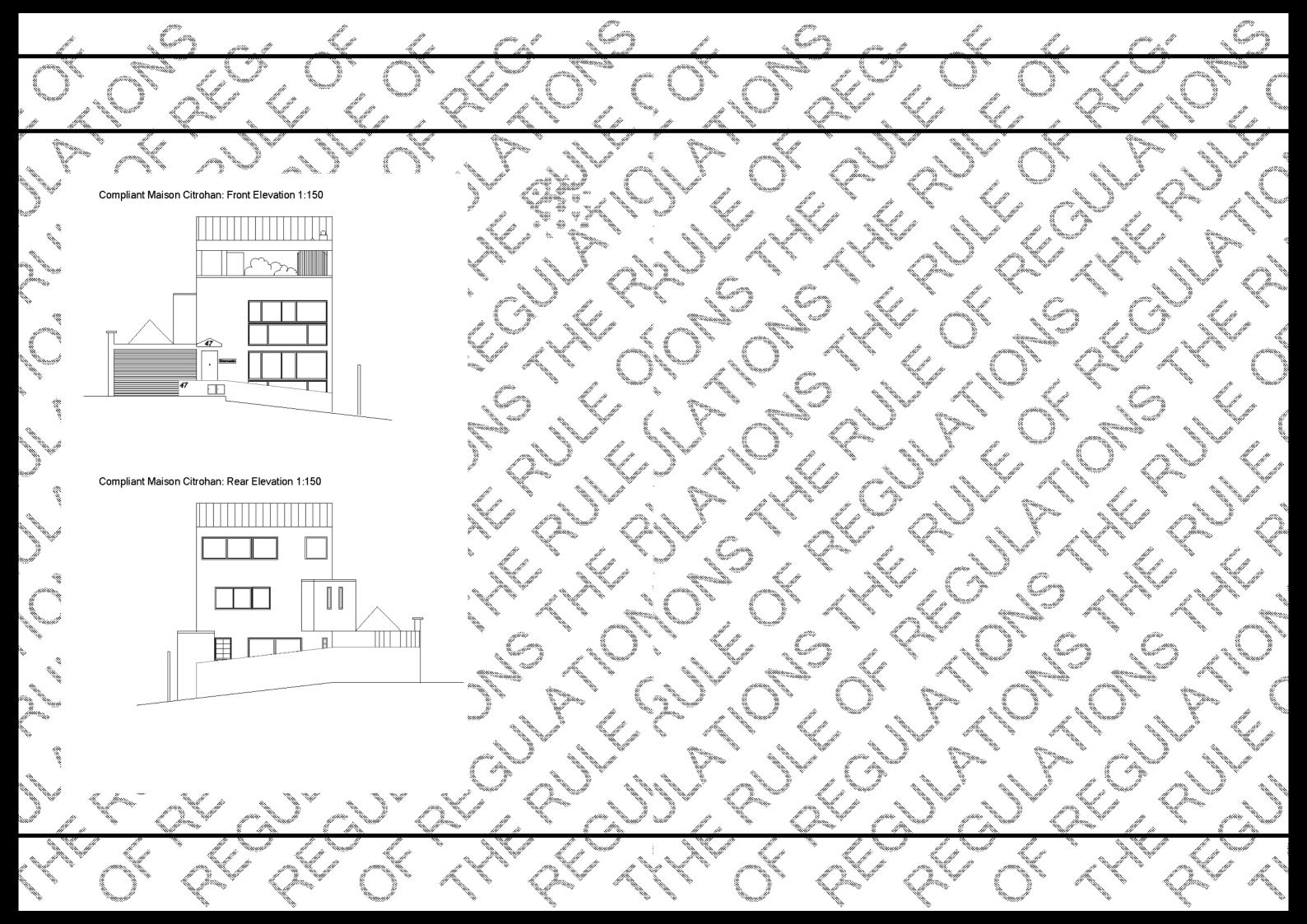


#### Compliant Maison Citrohan: First Floor Plan 1:150



Compliant Maison Citrohan: Second Floor Plan 1:150





#### Lifetime Homes

Lifetime Homes: 21st Century Living Joseph Rowntree Foundation & Habinteg www.lifetimehomes.org.uk

Lifetime Homes, Lifetime Neighbourhoods: A National Strategy for Housing in an Ageing Society DCLG, 2008 www.communities.gov.uk/housing/

Design & Quality Standards (including HQIs and Building for Life)

Design and Quality Strategy Housing Corporation, 2007 www.housingcorp.gov.uk

Design and Quality Standards Housing Corporation, 2007 www.housingcorp.gov.uk

Housing Quality Indicators Form Version 4 Housing Corporation, April 2008 www.housingcorp.gov.uk

Building for Life: Delivering Great Places to Live CABE, 2007 www.buildingforlife.org

Building for Life: Evaluating Housing Proposals Step by Step CABE, 2008 www.buildingforlife.org

#### Code for Sustainable Homes

Code for Sustainable Homes: Technical guide DCLG, April 2008 www.communities.gov.uk/housing/

The Code for Sustainable Homes: Setting the standard in sustainability for new homes DCLG, February 2008 www.communities.gov.uk/housing/

#### Accommodating Diversity

Accommodating diversity: housing design in a multicultural society National Housing Federation, 1998 www.housing.org.uk

Meeting the Needs of Black and Minority Ethnic Communities Housing Corporation, 2001 www.housingcorp.gov.uk

#### Secured by Design

Securing The Nation: The case for safer homes Association of British Insurers, 2006 www.abi.org.uk

Secured by Design: New Homes ACPO CPI, 2007 www.securedbydesign.com

Secured by Design Principles ACPO CPI, 2004 www.securedbydesign.com

Safer Places: The Planning System and Crime Prevention ODPM, 2004 www.communities.gov.uk

\*as of August 2008

