

Highland Housing Fair

The Scottish Housing Expo explores the evolving nature of rural housing typologies and family housing. Culture, building form and construction are central to this exploration. The project we see as a continuation and progression of themes and interests we have explored over the last 15 years.



PROJECT DESCRIPTION

In 2007 jmachitects entered a competition to build new designs for house types within a masterplan by masterplanners Cadell 2.

The final expo opened to the public in 2010.

We designed 3 entries for the competition and 2 were chosen and finally built in 2010.

Plot 01 Stealth Terrace

The Plot 1 terrace appealed to us as a practice as it is a typology that addresses frontage and is both at home in the city and the countryside.

We were intrigued by the linear strength of groups of farmworker's cottages, long low byres and sheds but also by the idea of a new vernacular language that is both familiar and contemporary.

A strong feature of many rural house types is that they are traditionally 1 ½ storeys and the roof volume becomes part of the occupied living space. This can lead to a massing which has an affinity with traditional low-eaved housing.



Views of the Corner House & the Stealth Terrace



Title
Highland Housing Fair

Submission No.
04

Authors/Creators
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PROJECT DESCRIPTION

With that in mind our project for the Stealth Terrace has an asymmetrical cross section with a 1 and ½ storey front and a slightly higher rear façade to ensure the floor area required to the upper floor bedrooms is achieved. The overall effect is to give a low eaves height to the front and a more sculpted gable form. The roof has been designed to give identity to both gables; one adjacent to the neighbouring housing development. The new terrace comprises of four 2-3 bedroom houses with flexible living spaces on the upper floors.

Each of the houses has a double height volumes link in the living room and hall spaces. These to other living study/ spaces where families can have degrees of privacy or the option to interact with each other. All living volumes are south facing to maximise daylight and solar gain potential. With its black rubber cladding and ivy clad walls, 'Stealth Terrace', aims to have a subtle presence in the landscape.



Early sketch model of the Stealth Terrace

PROJECT DESCRIPTION

Plot 5 The Corner House

Initially, the decision was made to look at Plot 5 as we felt that the position on site addressing the 'green' dealt with issues of privacy and formality on to this space.

The plot is also on a corner and the highly visible nature of the house as you turn off the approach road we felt to be a design challenge as all sides of the house are clearly visible.

In addition to the factors above, we also liked the idea of designing a house that was part of a wall that could then become a live-work unit, creating a strong presence within the overall master plan and would defining edges to create a protected and sheltered garden space.



Early sketch of the Corner House

PROJECT DESCRIPTION

The living space purposefully links the front of the house to the garden courtyard, giving both south and north light to the space. The living room is 'double height' with the study/ small lounge space looking down from above.

The kitchen and dining space are adjacent to but not within the living space and set a half level below the garden. The house gable draws back from the wall allowing light to fall down into the kitchen.

From the kitchen a path leads to the garden studio with niches in the wall allowing for the display of art and objects in the garden. The link wall between the house and studio acts as a wind break creating a micro climate for growing plants and vegetables on what is essentially a hillside location.



View of the Corner House within the Highland Housing Fair

RESEARCH QUESTIONS

1. How did a re-investigation of rural house typologies influence the development of the terrace and corner house? How ideas of surface and space through the application of technology and materials manifest itself in the houses as designed?

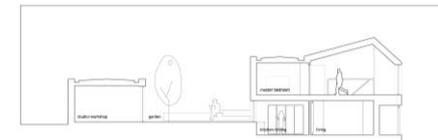
2. How do the terrace and corner house relate to the principles of dwelling in relation to the ongoing and previous exploration of housing typologies within the practice?



ELEVATION TO NEWS LANE
SCALE 1:100



ELEVATION TO GARDEN
SCALE 1:100



SECTION
SCALE 1:100



MODEL PHOTOS
NOTE: MODEL AT 1:10 SCALE & ON EXHIBITION AT THE LIGHTHOUSE IN GLASGOW UNTIL END OF AUGUST 2016



MODEL PHOTOS



MODEL PHOTOS



MODEL PHOTOS

Model and elevational studies of the Corner House

AIMS AND OBJECTIVES

How did a re-investigation of rural house typologies influence the development of the terrace and corner house? How did ideas of surface and space through the application of technology and materials manifest itself in the houses as designed?

How does an architect design housing in the landscape and how can the interiors, even in simple dwellings, relate to a sense of space within?

Our three aims in this regard for the Stealth Terrace, were to explore the issues of form, materiality and space.

On form, one of our aims was to explore the language of hips, gables and dormers which in many instances is often undervalued or utilised to 'dress up' standard developer house types. We feel that the role of these traditional elements from a formal, material and spatial perspective is worth exploration.

Materially, the terrace is wrapped in a black edpm (elastic damp-proof membrane) cladding to the south, east, and west facades. The north is clad in black stained larch cladding. Climbing ivy is planted along the south, east and west elevations which will grow and envelope the building transforming it into a living structure.

The building is constructed in locally produced JJI joist timber frame: a wall and roof construction that offers the opportunity to create interior volumes in the roof space. This construction system allowed for the superstructure and envelope to be completed in 4 weeks.

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View of Stealth Terrace

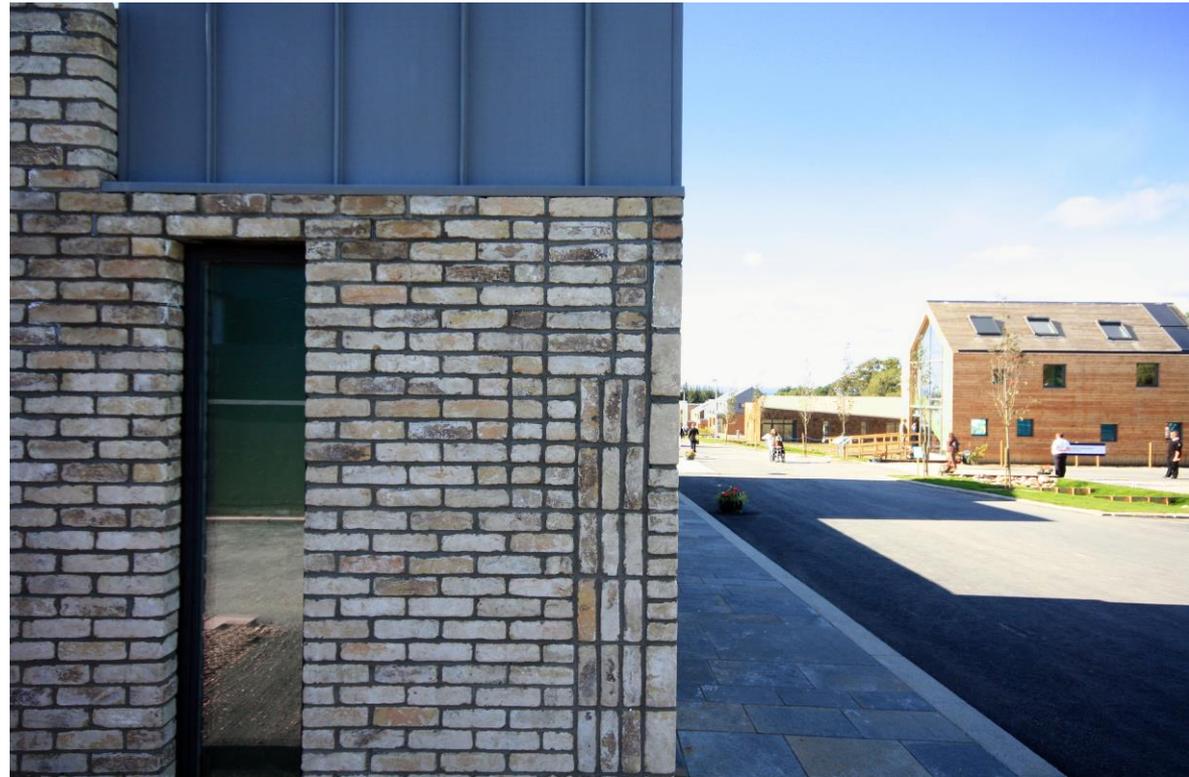
AIMS AND OBJECTIVES

Our interest in rural forms continues in the corner house both with the realisation that the house needs to respond to different viewpoints and perspectives within the site. An interest in occupying the roof volume is explored allowing for lower eaves heights but adding volumetric interest in the sections.

Materially, the lower half of the house is built from handmade rustic bricks which have been laid in a variety of bonds to add further texture and visual interest to the wall.

The house is constructed from timber and bricks set on a highly insulated JJI timber frame construction. This allowed us to fold the roof like a mini landscape and to respond to the different site approaches.

The roof is clad in epdm (elastic damp-proof membrane) which allows us to achieve the unusual geometry. Using this system shortened the time of the construction and helped to meet the tight Expo timescales.



View of brickwork detail at the Corner House

AIMS AND OBJECTIVES

How do the terrace and corner house relate to the principles of dwelling in relation to the ongoing and previous exploration of housing typologies within the practice.

Having built a number of housing projects over the last 12 years we see the critical aspects as being the spatial qualities of the dwelling allied to the response to context and brief .

We have built in Scotlands previous housing expo at homes for the future and have clients in both the public and private sectors .

We are interested in the examination of existing typological solutions and their adaptation for contemporary living

The rural and the urban we see as informing each other.



Views of Graham Square

AIMS AND OBJECTIVES

Our exhibition 'Living and Learning' examined 3 of our housing projects (including the Scottish Expo) through the medium of 3 1:12 models that were built to the same scale as a dolls house. The exhibition explores the spatial and physical nature of these types whilst reflecting on the nature of the house through the essential elements we all recognise –doors ,windows, handles....

Currently we are on site in Manchester at New Islington where our interest in the urban terrace has been extended to look at the shared space between the buildings and the relationship to a canal and listed cottage .

We would propose to reflect and examine the principles of the terrace and corner house within our practice.



Views of Living and Learning exhibition at the Lighthouse



AIMS AND OBJECTIVES

Some of the key lessons learned from the Stealth Terrace and the Corner House are;

- An exploration of tradition in a contemporary manner
- The importance of the roof form in rural housing
- Internal spatial innovation in living spaces
- Cost effective, sustainable yet contemporary materials
- Fast construction
- Low running costs
- An exploration of a corner villa form
- The importance of internal space and roof form
- The flow of space from green to garden
- Top light to kitchen space
- The positive feeling of mixed north and south light
- The courtyard garden
- Volume in living space
- A home with identity

These lessons learned from the Stealth Terrace and the Corner House have informed principles of dwelling in relation to the ongoing exploration of housing typologies within the practice.



Internal view and exterior planting of Stealth Terrace



CONTEXT

The context for this project is the semi rural edge of Inverness .Project and Masterplan stand in contrast to the predominant standard developer house types.

The site is on high ground with expansive views towards Inverness and the Moray Firth . Through the competition we were allocated 2 plots -1 and 5.

Plot 1 addresses the main approach to the site and sits adjacent a terrace proposal by Nord Architects.

As well as the wider issues of sun ,wind and views we were interested in the adjacency issues with other architects on neighbouring plots and collaborated with them.

The concept of the masterplan was contextually based .the plan was influenced by water courses, field lines and existing features such as trees and hedge-rows.

The grain of the masterplan responded directly to the changes in level and historic field patterns on the site



View of the Corner House

RESEARCH METHODS

The office operates a studio culture which means the projects are collectively developed in the context of the analysis of space ,function, precedent and ideas.

Initially we visited the site and carried out an analysis of the Cadell 2 masterplan.A work shop was held to bring the different teams together and the principles of the plan were explained

We undertook an analysis of site levels and orientation which led an understanding on the positioning of rooms on the plots.

Research was undertaken into a method of timber construction that could support the use of the roof space and achieve the required thermal performance.

An analysis of the terrace and corner site briefs led us to investigate the flexibility of internal living space and volumes within the dwellings .

The overall massing and roof profile and construction was analysed through computer modelling.



View of bid for Graham Square Phase 3

DISSEMINATION

Publications

Architecture Today, Rubber Soul, November 2010

Macmag, Interview, 2011

Scotland Housing Expo ,The Scottish Government, 2012

Exhibition

2007, Inverness, 2010 .

2009, 'Living and learning' The Lighthouse Glasgow

2009 Scottish Sustainable Communities Exhibition, The Lighthouse Glasgow.



Image of Islington housing in Manchester; it is currently on site.

ESTEEM INDICATORS

The project was won in an in a national competition

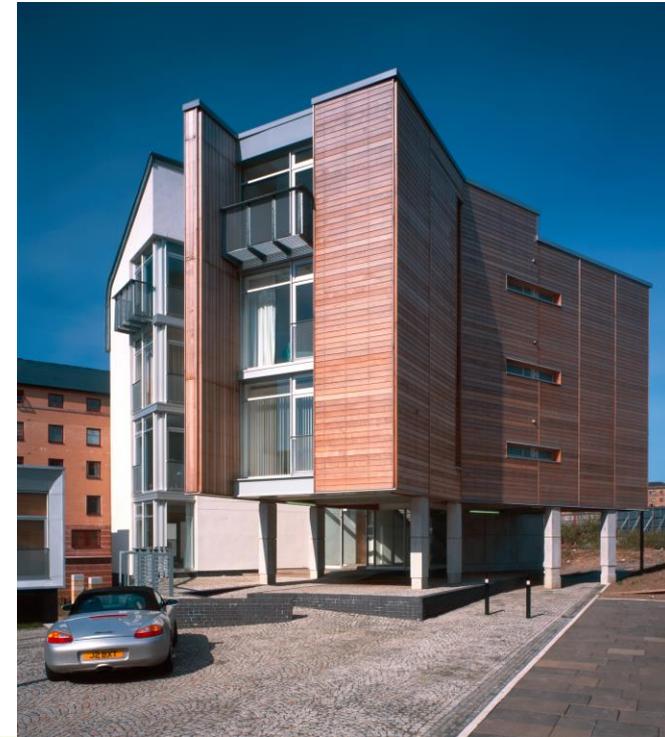
The building has been published nationally

It has been covered by the BBC on the news.

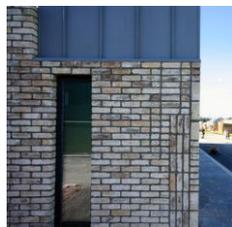
The project is one of the Scottish governments Sustainable Communities



Views of Homes for the Future



MATRIX



DWELLING

