

## Highland Housing Fair

*The project comprises two new houses within a new masterplanned community on the edge of Inverness. The project seeks to establish innovation for social and family housing through an exploration of building form, spatial organisation and building materials. The project has been informed by earlier designs by the authors and is seen as a continuation and progression of themes explored over the last 15 years, the essence of the project is based around typological investigation.*

Submitted by Ian Alexander / Henry McKeown  
Output No. 4



# NARRATIVE

This piece work has been informed by our preoccupation in studying and observing typological (housing) precedents and a continuous fascination of rural building forms set against the line of the landscape.

The sketchbooks of the authors trace this particular preoccupation, which have been collected from many different cultural sources hold many examples drawn over the last 15 years. These sketchbooks are an important resource and act as a back catalogue, of observations and graphical recordings and thoughts that continue to help in driving forward a critical agenda in this subject we see these books as a store house of our thinking, and in a way a bespoke graphical narrative on the subject.



*Views of the Corner House & the Stealth Terrace*



**Title**  
Highland Housing Fair

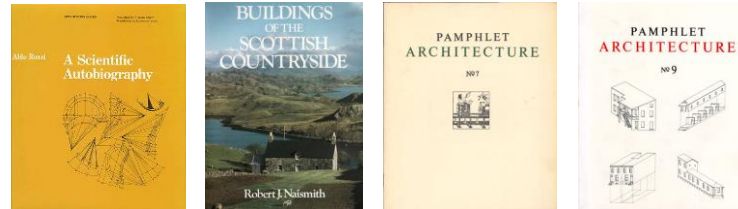
**Submission No.**  
04

**Authors/Creators**  
Ian Alexander / Henry McKeown

# NARRATIVE

We are interested in the symbolic notion of the house in the landscape both rural and urban. The basis of our thinking has been influenced and informed by a number of seminal texts, uppermost being Aldo Rossi's 'A Scientific Autobiography' 'this text explores the idea of collective memory and how this concept could be represented as reductive elemental distillation of built form, texts by Steven Holl, pamphlet architecture no's 7", "Bridge of houses, "and no.9," Rural and urban house types," had a fundamental influence in stimulating and aiding our own research and subsequent work.

This work explores 3 issues ; building form, materiality and space .In this instance our thinking has been informed by Robert J. Naismith's , 'Buildings of the Scottish Country side' (1985) this text involved Naismith carefully distilling and illustrating the outcome of visits to some 23,000 rural sites across Scotland.



*Seminal texts influencing the basis of our thinking and research*



*Early sketch model of the Stealth Terrace*

## NARRATIVE

In terms of built form this design proposal works with the orthodoxy of the pitched roof and the idea of solid/ void in external walls examined through many studies in the building section in relation to the consequent spatial and volumetric qualities of the internal space ,an exercise of translation and formal manipulation.

The commission was won in a national competition.

The work has been subject of a book ,magazine articles , a Housing Expo visited by more than 33,000 people in 4 weeks and an exhibition . The project has also informed the governments Sustainable Communities Strategy. The wider masterplan ,of which the projects form part has informed the Governments research on 'Designing for Streets ' which has since been published.



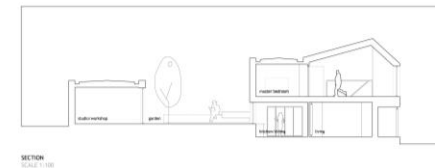
*Early sketch of the Corner House*

# RESEARCH QUESTIONS

How did the re-investigation of rural house typologies including a re investigation of the nature of roofs ,walls and materiality influence our design?

How were the study of building form ,internal spatial organisation and innovations in building materiality brought together to realise these new house types?

How do the interests of the authors link to ideas and innovation in their previous and future housing designs over the last 15 years?



*Model and elevational studies of the Corner House*

## CONTEXT

The context of this project is Scotland's Housing Expo in Milton of Leys .However the broader cultural context is the question of how do we build dwellings on the edge of towns and settlements and in the countryside that extend the existing, rich, legacy of indigenous (architectural)vernacular forms, in a way that is both polemic and contemporary, without resort to pastiche, and in a manner that sets up new and complimentary built form which is still sensitively connected to the Scottish landscape .a new housing model that is also sustainable, and affordable.

The cultural and architectural quality of current house building especially by mass house builders is debatable in terms of, form, materiality, format and totally fails to connect to the local architectural culture ,and the historic and physical context of the country, nor in the way that Rossi argues, i.e, the idea of distilling built form using classical( Euclidian) geometries into simple elemental components, that are at once both recognisable and familiar, yet of their time, and that add to the formal cultural development of architecture.



*View of the Corner House within the Highland Housing Fair*

# CONTEXT

What we have aimed to do is to demonstrate that the clear schism between the traditional dwelling(vernacular) and the bland commercial mass housing culture, which is neutralising our environment can be closed, using informed architectural technique, formal studies, spatial studies, historical analysis and meaningful research to create new housing models that add to our architectural culture that are sustainable, and that are commercially viable.

## General Description

The site is in Milton of Leys on the edge of Inverness in an upland landscape comprising moorland and watercourses that run in a north westerly direction .From the highest part of the site there are views to the Beauly Firth and the North Sea. To the south sits Drumossie Moor and to the north Balvonie Wood .

The lines of the ditches and watercourses established the grain for the masterplan and in turn establish the plots and their specific conditions .

Working with a corner and terrace allowed us to examine 2 typological conditions for an affordable terrace and family live /work dwelling.



*View of the Corner House*

## AIMS AND OBJECTIVES

Our interest in rural forms comes from a longstanding interest in typological nature of buildings and their association with landscape.

Ideas to do with roof form and the homogeneity of wall and roof are based on these observations. Reference points are derived from the observation of traditional built forms, texts and publications that we have an interest in.

The aim, however, is not to replicate rural typologies in a traditional sense but to use the observation of the qualities of these typologies as a creative vehicle for the investigation of new housing forms.

These new forms however do relate to a sense of tradition but are re-formed to embody the specifics of the individual project.

We are interested in the relationship of building form and its relationship to landscape and how can the interiors that evolve from these forms relate to a sense of space within.

Out of an interest in typology we have explored the language of hips, gables and dormers. These elements we see as the language of our typological investigations. They are elements that are often used to “dress up” developer house types. We see the role of these traditional elements from a formal, material and spatial perspective is worth exploration.

Reflecting on the continuity of form between wall and roof scape we took the decision to wrap the terrace in a continuous EPDM (rubber) membrane. The Corner House meanwhile works with a language of brick and blackened timber with an abstracted gable form addressing the importance of the corner site and neighbourhood green.



*View of Stealth Terrace*



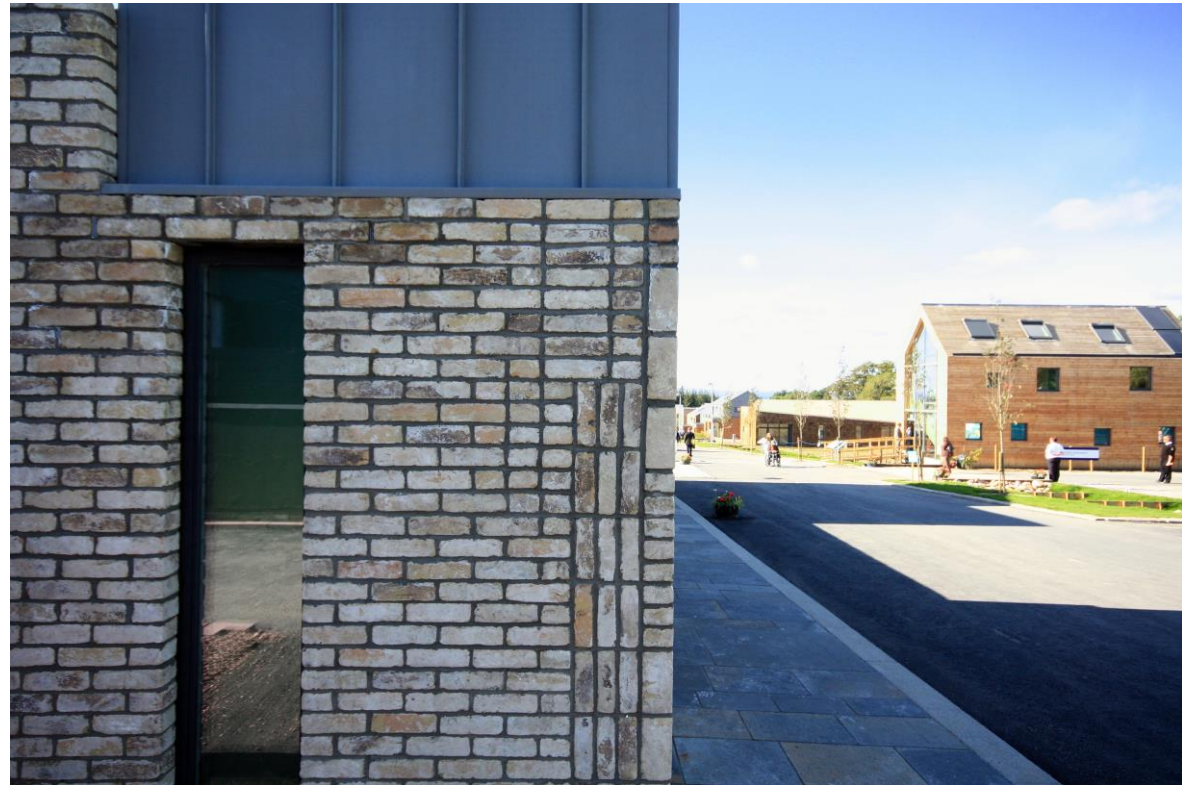
## AIMS AND OBJECTIVES

Another aim of the project derives directly from our exploration of roof form. This is the creation of a sense of space within and has led to a roof design that can contain both thermal value and structural integrity within the intended roof form.

An interest in occupying the roof form is explored allowing for lower eaves heights but adding volumetric interest in the sections over the upper floors and connected volumes within the two dwellings.

The roof on both terrace and corner have been folded like mini landscapes and respond formally to the different site conditions.

The roof form to both dwellings are generated from two different plan forms however in order to keep the form on the corner house simple the kitchen form is conceived as a simple supporting box to the main roof form .



*View of brickwork detail at the Corner House*

# AIMS AND OBJECTIVES

The aims of the project have emerged from 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 dwellings allied to the typological exploration of villa, terrace and apartment .

We have built in Scotland's previous housing expo at Homes for the Future where we previously explored the terrace typology with the exploration of form developed through the rhythm of the house types.

More recently we have developed a phase 3 design for our Graham Square project which develops some thinking around bringing the rural to the city.



*Views of Graham Square*



## AIMS AND OBJECTIVES

Currently we are on site at New Islington in Manchester where a new urban terrace and apartment that draws its inspiration from an industrial urban landscape .It is informed by the materiality and the typological roofscape of the factory forms of New Islington. We see this as an ongoing seam of enquiry that link landscape, typology and space.

Our aims and objectives were further underscored in our Exhibition 'Living and Learning 'which exhibited at the Lighthouse in Glasgow. This exhibition examined 3 of our housing projects (including the Housing Expo ) through the medium of three 1:12 models that were built to the same scale as a dolls house .The exhibition explored the spatial and physical nature of three housing typologies ( the terrace ,the corner house and the double villa) whilst reflecting on the essential elements of the dwelling we all recognise –doors ,windows, handles and staircases.



*Views of Living and Learning exhibition at the Lighthouse*



# AIMS AND OBJECTIVES

## *Conclusion*

The terrace and corner house are two dwellings that draw their design essences from an ongoing exploration into rural housing typologies. We have drawn on our interests developed from the typological research of Rossi , Pamphlet Architecture and Naismith's studies of Scottish rural housing types .

Our work over the last 12 years has developed our understanding through making of dwellings from the villa to the terrace to the apartment. Our interest in building form related to typology has been informed by our interest in the spatial quality of the dwelling and designing from the inside out and outside in.

We feel we are developing an approach that is on-going in its development but allows us to mediate between the rural and the urban in exploring typological approaches to both landscape conditions.



*Internal view and exterior planting of Stealth Terrace*



# RESEARCH METHODS

## Methodology

The project examines the importance of the building section in both understanding how the built form of the dwellings will sit in the landscape. This examination is based on the research by Naismith but also our own visual research over the last 15 years.

The methodology is set in the context of an appreciation of farmworkers cottages, long low byres and sheds. Issues such as memory, the familiar and the contemporary become ways to measure our enquiry.

The extrusion of the building section allied to maximising the exploitation of the internal form is explored.

Ultimately our methodology comprises a careful examination of the conventions of the dwelling – the gable, hip and dormer. Often these elements become undervalued and lose the functional and visual potency often seen in traditional buildings.



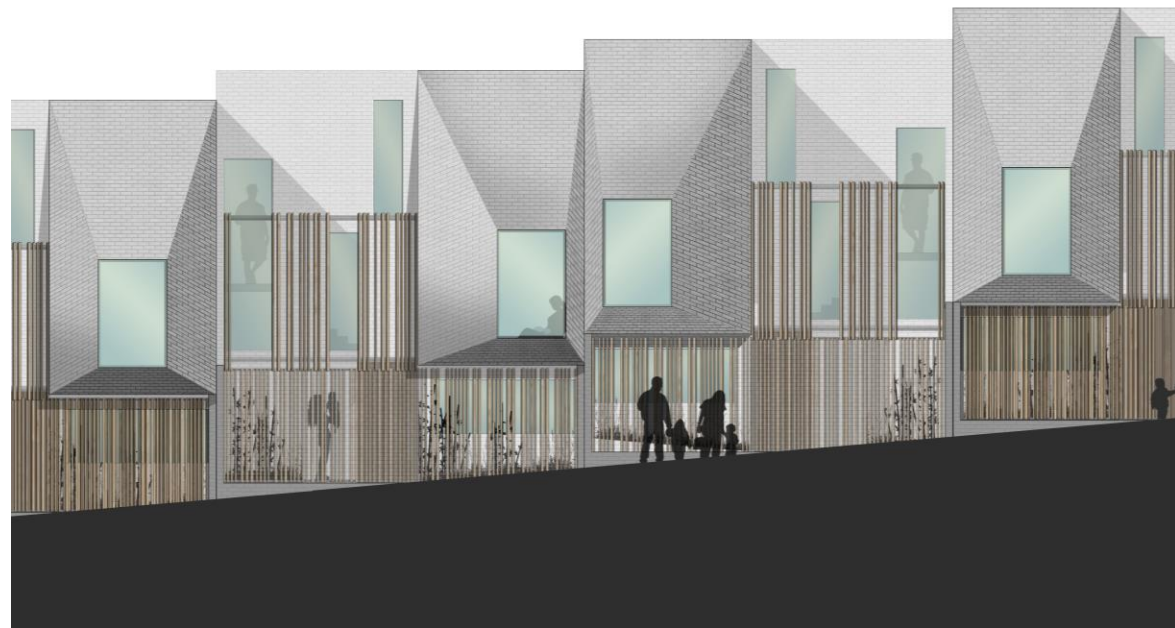
*View of bid for Graham Square Phase 3*

# RESEARCH METHODS

## Context and Research Methods.

In terms of context the topographical nature of the landscape around Milton of Leys was studied .This was combined with a workshop that was centred around the masterplan and its briefing notes .In order to bring cohesion to the whole ,building frontages were set out and ridge lines defined .throughout the process we liaised with the architects who were designing the houses on the adjacent plots. Cross sections were set up through the site in order to set up building profile studies .The physical characteristic and role of the plots in the masterplan helped to define the response of the different dwellings to their situation .The terrace had to respond to the notion of approach and frontage while the corner house had to deal with both a gable condition as a route to the heart of the site where it was to face onto a neighbourhood green. Due to the plot dimensions and layouts the massing and profile of each plot developed a different form of expression .

In making forms of housing we are always looking for a link to the site ,the broader cultural aspects of the place .



*View of Courtyard Dwellings*

## RESEARCH METHODS

How did we go about it? The process was iterative, and methodical, and subconsciously directed by previous and recurring debate on form and figure of building in the landscape. In order to establish a critical position for this particular work we deconstructed the key elements of the dwelling into a kit of parts, the roof, the wall, the gable the chimney, then using a range of techniques, freehand drawing cad drawing 2d, and 3d, virtual modelling, physical modelling we were able to gradually reassemble the parts and to create the building form, and to an extent the language of the buildings. Through studio reviews we were able to agree an architectural consensus in our design agenda for the buildings, this meant we could focus and streamline our efforts on critical aspects of the work, for example extensive collaboration on the structure and the sustainable science of the architecture, was developed in parallel with the more conceptual aspects of the final architectural arrangements in plan, section and the eventual 3 dimensional form of the dwellings. Studies into materiality were based on precedent, and research into visual quality of materials as well performance quality of materials, this was tested over and over in modelling exercises, so that there was a fusion of both form and material.



*View of Islington Phase 2*

## RESEARCH METHODS

We were influenced by the source material found in Naismith's book. We noted that Simon Condor had investigated the use of rubber as a building material in his house at Dungeness. This was a landscape we had discovered several years ago through the photographs of Howard Sooley. The rubber skin allows wall to link to the gutter and then the roof returning the house form to an almost abstracted form – a memory of traditional house forms.

Critical to achieving the spatial and massing characteristics was a structural investigation that allowed us to contain the structure within the building's external wall thickness and also achieve a super insulated skin on the building. This was followed up by an investigation in physical terms 1:100 models and large scale 1:12 models which contributed to our exhibition 'Living and Learning'. These models allowed us to explore the roof form and its relationship to internal space. Orientation and the penetration of light into these internal spaces has been informed by earlier housing projects such as those at Graham Square in Glasgow and this was studied through large scale models.



*View of Plot 1*



# RESEARCH METHODS

In making the work the two authors gather these thoughts and influences to create the project with an awareness that there are links to our previous and future work. We both contribute to making plans and sections often drawn individually and then fused into a cohesive whole.

Recently we designed the last piece of Graham Square that comprises 3 different blocks forming a new courtyard that has had an influence on our new Islington housing in Manchester .Essentially the exploration of roof forms and massing ,explored in Inverness, has been brought to the city in these two projects.



*View of Plot 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

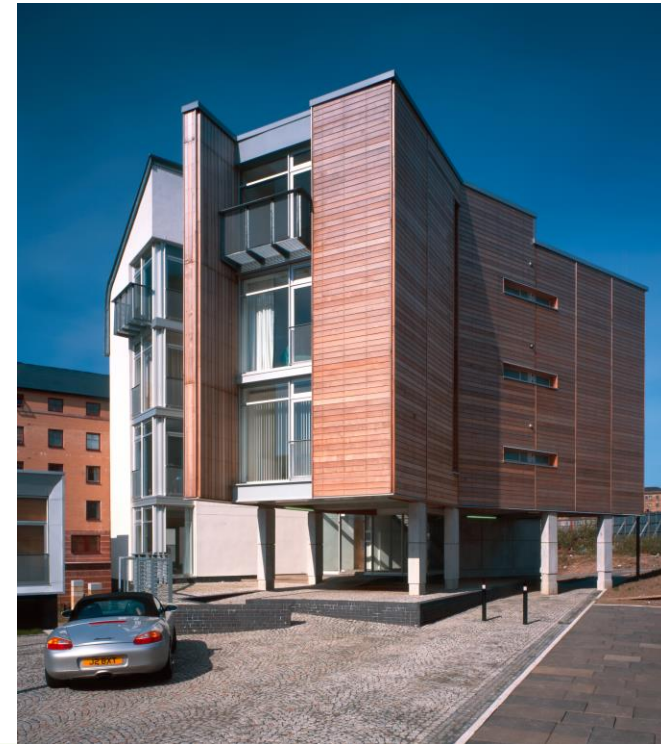
The building has been published nationally

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

