

Maryfield Housing

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Maryfield Housing

A development of 28 private sector homes where sustainability was incorporated from the beginning of the procurement and design process.

<< Detail of house within development

BACKGROUND

The site of the Maryfield housing development was on the edge of the town of Bo'ness, looking towards the Firth of Forth and the Ochil Hills, and with open views over parkland and countryside. The landowner Grange Estates wanted any development on this site to be sympathetic to this high quality environment, and to build in this aspiration as part of the sale process for the site. The landowner was extremely conscious of the poor quality and relentless nature of most of the development in Scotland's Central Belt (highlighted for example in David Page and Miles Glendinning's 1999 book 'Clone City') and wished to ensure that the development of this site would be carried out to a much higher standard.

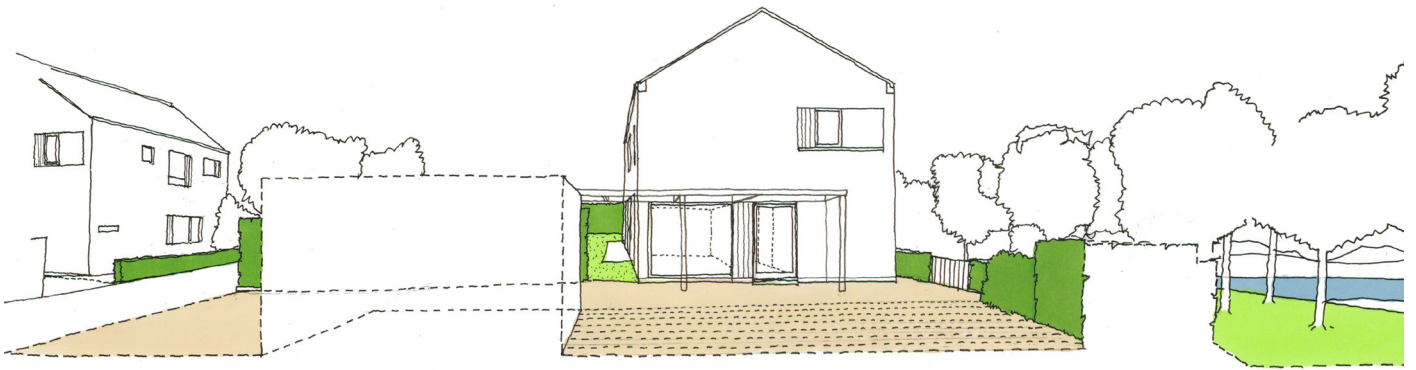
APPROACH

An initial masterplan to cover the 6-phase development of the total site was commissioned from Alan Jeffrey, and the first phase (completed by Mactaggart & Mickel) followed this plan. Prior to phase 2 (completed by Ogilvie Homes working with Vernon Monaghan Architects) the landowner commissioned Cadell² to complete a detailed urban design framework to supplement the masterplan. The plan drawn up included the establishment of a pedestrian route along the ridge of the site, the creation of planting zones and a sensitive approach to roads and car provision. The plan aimed to bring a sense of the city to a suburban development, and also consider urban design elements that would create a sense of community within the development.

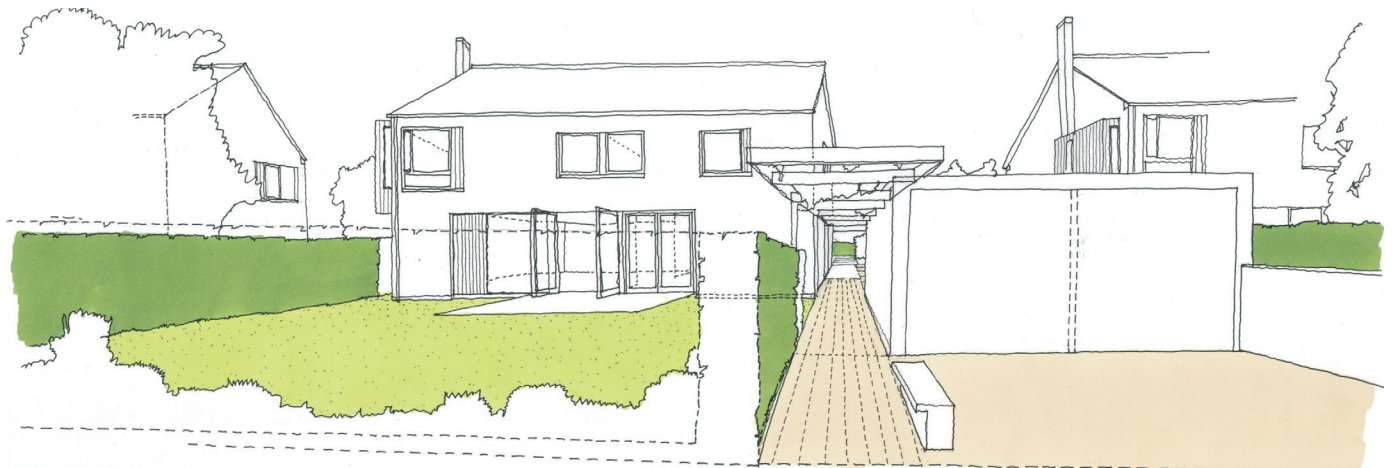
✓ Site Plan



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Sketch of side elevation



Sketch of front elevation



PROCESS

With the urban design framework in place, developers were invited to tender for the land, with the work divided into four initial main phases. Good financial return for the landowner was, naturally, a prime consideration, but for the third phase of the development (the Maryfield phase) developers were told that their bids would only be considered if they partnered with practices with a proven reputation for good design. The landowner provided developers tendering for the site with a list of nine architects and five landscape architects, enabling them to select an appropriate partner. The chosen developer/design team was Stewart Milne Homes working with Malcolm Fraser Architects and landscape architects Horner & Maclellan.

The Stewart Milne Homes/Malcolm Fraser Architects plan consisted of 28 four to five bedroom homes of varying configurations. The relationship between architect and developer was managed to highlight the particular strengths of each party. With Stewart Milne Homes also acting as the main contractor, the design and construction process could be made agreeably fluent and time-effective. In the spirit of the partnering process, Malcolm Fraser Architects were allowed greater design involvement than would normally be expected in such a development. This way of working encouraged a particularly high level of trust leading to joint development between developer/contractor and architect of key aspects of the building. The benefits of such close collaboration are particularly apparent in aspects such as the detailed design of the interfaces between the building interiors and exteriors.

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It was concluded early on that sustainability criteria alone would not provide a marketable benchmark for the houses and that standard cost considerations would still apply to the development. The developer did note, however, that the unit cost of building the Maryfield houses was going to be higher than average. The architect responded to this by producing a design that allowed increased expenditure on certain items by economising elsewhere. For instance the basic housing plan was a rectangle featuring the simplest form of pitched roof, and 'extras' such as bays, porches and dormers were avoided. Money was instead spent on high-quality finishes in specific areas – the use of engineering brick, slate roofing and large timber-frame windows, for example. Other benefits of these choices include a distinctive and pleasant aesthetic, and lower resource impacts, for example from not using uPVC windows.

From the beginning, both the designers and the developer knew that landscape and planting would be vital to the success of Maryfield, not least because of what had already been laid out in the masterplan. Stewart Milne Homes were however also aware that a well-considered landscape and gardens were an important factor in the homebuyers' market. This approach resulted in distinctive environmental features such as protected microclimate areas, in response to the fact that the site was particularly exposed in its ridge setting. Other environmental benefits of the planting included a reduction in housing exposure, and the addition of protective spaces around the buildings, allowing greater scope for outside community activity. This extra emphasis on landscaping did increase the cost of the development, but the developer justified this by the extra value that it added to the housing, which would be reflected in a higher sale price.

✓ Landscaping of communal square



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RESULT

The site was planned with the main consideration being the view and the maximisation of sunlight. Gardens are south facing, with the main living areas of the houses positioned to maximise solar gain. Cul-de-sacs and vehicle- turning circles were avoided to reduce the claustrophobic effects of such layouts. In keeping with the masterplan parkland was planned to the south, and a variety of pedestrian routes created between the houses. A small square was also incorporated as a focal point: it also added to the urban feel of the development.

Landscape design was vitally important not only in terms of protecting external spaces and buildings from exposure but also in creating a rich, varied transition from street to house. Shared hedgerow planting and garages were used as a separate element, linked to the houses with a timber pergola. This feature represented a move away from normal suburban models of isolated detached housing towards architecture centred on linked landscape elements.

Within the houses utility rooms, stairs and bathrooms are grouped around a service zone, while the main public rooms are generally south facing or have an east-west orientation. The main high-quality materials and components specified included slate roofing and larger than average south-facing timber windows (features usually associated with the higher end of the housing market). The inclusion of sizeable doors to the south meant that it would be relatively straightforward for owners to add conservatories later. In this respect, the timber frame of the housing units allows a less resource-intensive change over time compared to a masonry alternative. The result of such close attention to detail was the effective design of impressively sustainable houses that sit particularly well with their environment.

IN USE

Although marketing departments maintain that there is an on-going resistance to distinctive developments in peripheral areas, Maryfield's success in selling 'off plan' suggested that there is a market for more energy efficient, sustainable, carefully designed schemes in these sorts of locations.

The maintenance of the communal landscaped areas in Maryfield is part of the factoring agreement, ensuring the preservation of key environmental aspects of the development and their continued development beyond the completion of the project.

The layout of Maryfield successfully accommodated car use, although the planners' insistence on the inclusion of visitor-parking spaces in addition to a double driveway and garage for each house was detrimental to the overall design of the site. However, car use is vital for those who live outside city centres and so a balance needs to be found between accommodating transport choices, without the need to make the design of housing developments revolve exclusively around vehicular demand.

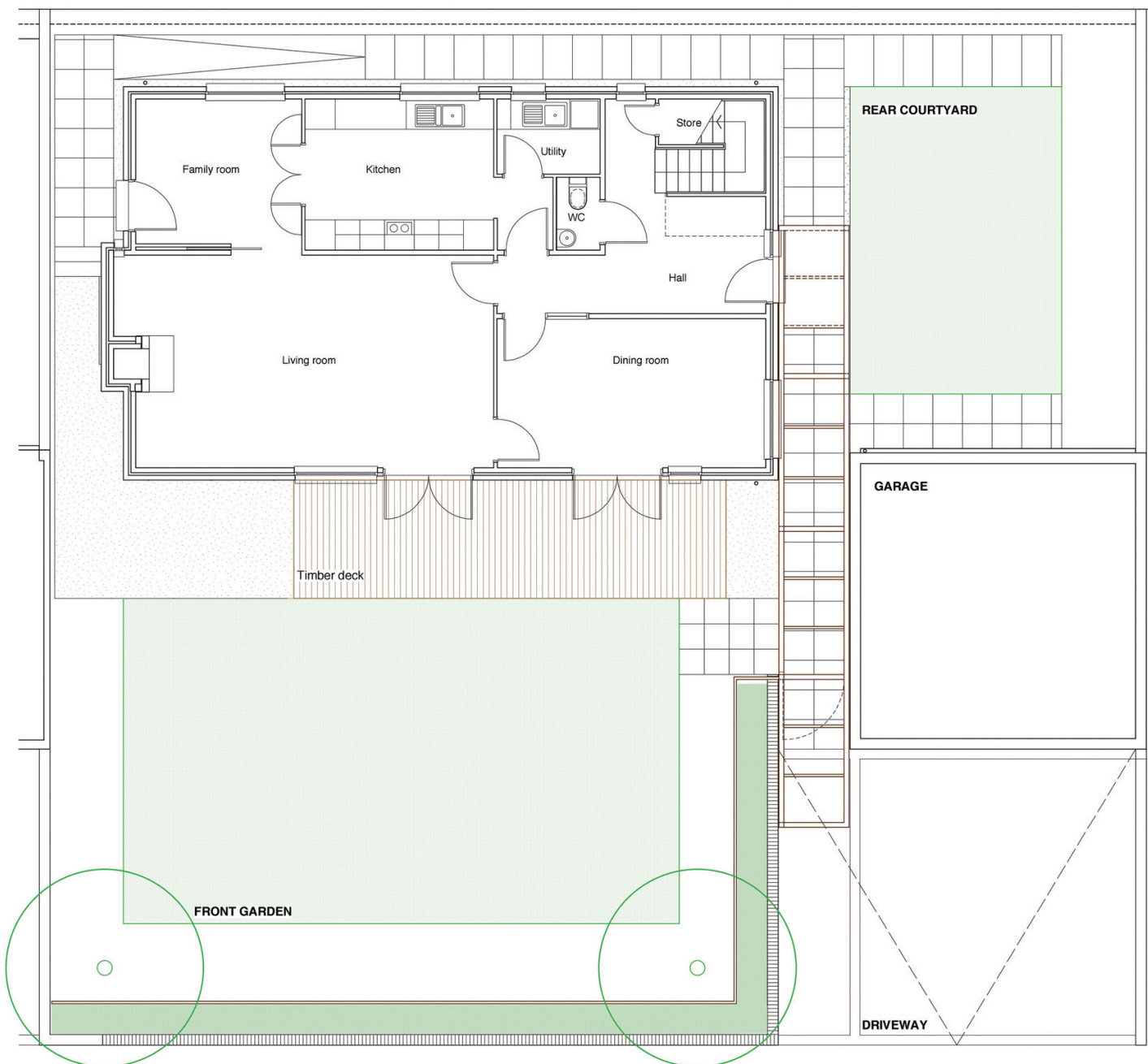


Timber pergola detail





UPPER LEVEL PLAN



PLAN - HOUSE TYPE D1

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KEY LESSONS

Sustainable architecture is often characterised as involving experimentation in design and construction; housing developments however depend on minimal outlay and the streamlining and accelerating of the building process. Standard construction techniques were employed in the construction of the houses at Maryfield but in a sensitive and environmentally responsive manner. A key challenge for sustainable design is to integrate benign building techniques and aim for standardisation of products and rationalisation of processes. Only then, many believe, will the market offer a wider variety and choice of housing.

Developers believe that in a highly competitive market private-sector sustainable housing is in danger of remaining limited to niche sectors in mainly urban areas. In the case of Maryfield, high design standards were set prior to the procurement process - a factor that undoubtedly helped make the scheme successful. Without such prescriptive design requirements it is unlikely that the resulting scheme would have been so boldly realised. The developer effectively offset a sizeable risk in building design by opting for a lower land-purchase price.



Typical house type in landscaped surroundings



The architects were able to show that good design is possible within the tight budgets and time-scales demanded of the private sector developer. Lack of expertise in the standardisation and streamlining of the design process means that the opportunity to produce more sustainable settlements is often lost. The appointment of Malcolm Fraser Architects and Stewart Milne Homes was a forward-thinking example in that it was not based on the traditional contractual relationship but instead recognised and considered the strengths of both parties throughout the entire building process.

If the trend in the area of food and clothing of perceiving natural materials as being 'better' translates to the housing market then the promotion of buildings featuring low-impact materials could have distinct marketing, as well as environmental, advantages.

The aspirations of the landowner for the development looked beyond the maximisation of profit, and the production of a well-defined urban-design framework was the key tool in ensuring a high quality end result. The developer believed that the bidding criteria based on design quality and price were critical elements in the viability of the project.



Rear elevation of house and views towards Firth of Forth ^

∨ Communal landscaped areas and shared surfaces within development



Project Information

Location:	Maryfield, Bo'ness, EH51 9DG
Client:	Steward Milne Homes
Date completed:	Autumn 2004
Architect:	Malcolm Fraser Architects
Structural Engineer:	David R. Murray & Associates
Quantity Surveyor:	Stewart Milne Homes
Landscape Architect:	Horner & Maclellan
Specialist Consultant:	Cadell ² (Initial Masterplanner)
Main contractor:	Stewart Milne Homes
Awards:	2004 Edinburgh Architectural Association Awards Silver Medal Winner
Image credits:	Malcolm Fraser Architects

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