

Estate Layout

Sustainable Design

2.9 Sustainable Design

Sustainability is a broad concept which has to do with the good stewardship of the earth's physical and natural resources to ensure the continued health of its plant and animal life.

PAN 44 advises, that "... early attention should be paid to the orientation, siting, spacing and shape of individual buildings and group of buildings to exploit the available sun, arrange the greater protection from wind and to create an energy efficient envelope". SPP 3 expects developers to bring forward proposals which "... create a sheltered micro climate capable of making outdoor environments more habitable".

This Guidance Note can be seen to support the principles of sustainability in the following respects:

- **Conservation:** Retention of natural and man-made features on any site avoids further depletion of earth resources and reduces energy consumption in the production or erection of new structures and features.
- **Public space framework:** a well organised pattern of spaces and streets should ensure the right balance of green areas as well as creating meaningful, direct, linkages and encouraging a people and cycle friendly environment. An appropriately stimulating built environment will also assist with aspects of human psychology e.g. the restful qualities of the intimate enclosed space or, conversely, the long panoramic vista. This may assist in reducing some health costs.
- **Grouping Patterns:** denser and more carefully assembled house groupings are more energy efficient (although the negative effects of overshadowing from taller and conjoined buildings should be avoided).

In addition, the sustainable benefits of natural daylight and thermal insulation can be improved by appropriate orientation of the housing in association with the accompanying protective landscaping i.e.:

- Main living areas within a house, conservatories and rear gardens should be orientated to face south or south-west for daylight and solar energy benefits. Private, non habitable rooms (kitchens, bathrooms, stairs and utility rooms) and garages should therefore face north. However since rear gardens are generally considered less acceptable on road edges, innovative solutions may be required to compensate e.g. through and through living areas.
- Main entry points should, where possible, be located away from cold north winds and to a lesser extent, from prevailing southerly winds. However preference for main doors on the street frontage will be the critical factor in determining location for reasons of natural surveillance and legibility.
- Supplementary protection of the building envelopes from adverse climatic conditions and a more comfortable environment outside can be achieved by including planting and shelter belts, earth mounding and walls. Deciduous trees are better located to the south of the housing units to give summer shading and winter sunlight with evergreens to the north to give shelter from any occasional north winds.

The specific design and construction of houses also requires to be sustainable, e.g. achieving a balance between window openings and insulation, solar panels etc. to maximise energy efficiency. This is largely beyond the scope of this Guidance Note. (refer paras 1.1 and 1.5)

Architectural Form and Aesthetics

Basic Approaches and Design Advice

3.1 Basic Approach

Advice has already been provided on appropriate house grouping and street patterns to enclose and enhance a framework of public space. This is now complimented by guidance on housing shape and elevational treatment.

Most contemporary house designers, whether serving the volume builder or kit-manufacturer, still aspire to a classical or vernacular tradition of which the pitched roof, rectilinear planned house forms the basic element in any layout. However designs are often poor copies of the traditional house without proper understanding of the principles informing its design. The guidance aims to address this concern, especially to assist the less well qualified designer. More "modern" flat roofed or abstractly designed buildings will be assessed on their own merits.

3.2 Design Advice

Guidance based on the traditional house form, elevation and finishes is as follows:

- The main roof ridge should be parallel to the adjacent roadway.
- Roof pitches should create symmetrical gables and be no less than 45° on a street frontage
- The arrangement of openings should ensure that the gable geometry is reinforced rather than deformed i.e.
 - Main frontage gable absorbing necessarily larger windows in symmetrical arrangement around central axis.
 - Lesser side gable with fewer, smaller windows allowing a more informal, asymmetric arrangement. Wholly blank gables fronting a public street will generally not be permitted e.g. on a corner.
- Adjacent twinned gables will allow for a more asymmetrical pattern of openings.
- Hipped roofs are generally less favoured and never acceptable when mixed randomly with straight gables at close quarters. They may be given more sympathetic consideration in a more formal layout, on the same building line, or widely enough spaced so that the visual relationship with the neighbouring property is immaterial. They are also acceptable as a single storey extension to a straight gabled house and to the rear.

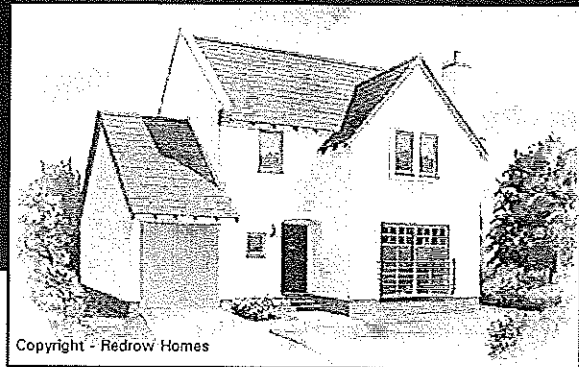


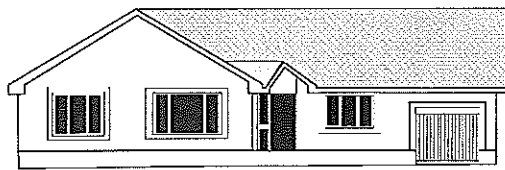
Figure 22 VOLUME BUILDER HOUSE TYPE

Well considered

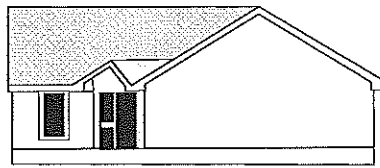
- All openings should have vertical proportions.
- Main entrance doors should create a focal point on the front elevation. Doors on a gable end generally appear less satisfactory but may be acceptable where formally located and in balance with the window arrangement.
- Forward projections i.e. porches, garages etc. will only be permitted where they are integrated into a continuous streetscape, avoiding an abrupt visual effect. Garages are best set to the side of the house, and behind the building line, rather than dominating the front façade of a detached house.
- High screen fences between houses and extending towards the road should terminate behind the building line.
- Dormer windows may project from the wallhead or roof but must be of traditional small scale proportions and mainly glazed.
- Over elaborate combinations of external wall finishes are to be avoided and any prominent gable ends should preferably be in a single material. A horizontal subdivision at first floor level should therefore be avoided. Render, stone (or a modern understated ashlar type block) should dominate, with brick restricted to base courses and for additional decoration. An all-masonry finish is more appropriate in tightly grouped urban housing.
- Window and door styles must demonstrate local authenticity, painted or stained timber being preferred. Fussy or UPVC "period" designs are to be avoided.
- Roofs should be finished in slate or a modern "look alike" equivalent with a shallow leading edge. Eaves and verge detailing should be as close to a simple line as possible. A skew or clipped convention is preferred to deep barge boarding.
- Chimneys or similar vertical roof features will be encouraged (e.g. for ventilation).

Building Form & Elevational Composition

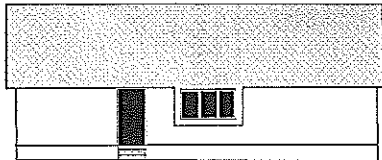
Examples of poor design improved through planning advice



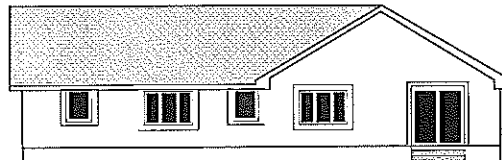
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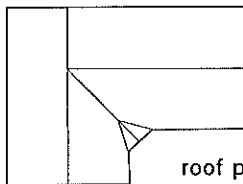
side 1



side 2

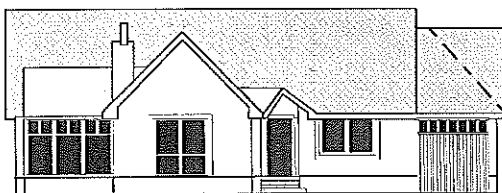


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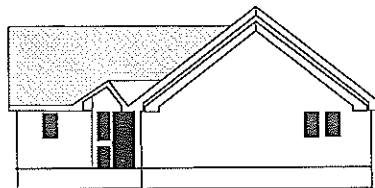


roof plan

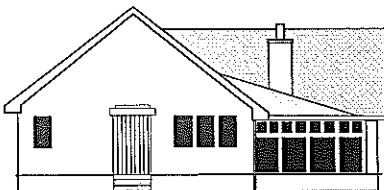
POOR



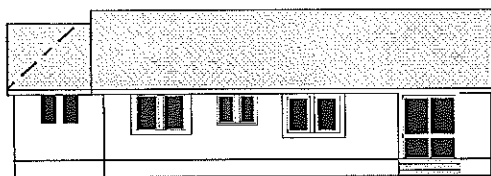
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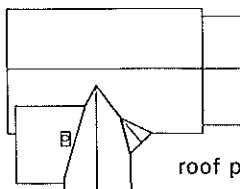
side 1



side 2



back



roof plan

IMPROVED

Figure 23 HOUSE DESIGN MODIFICATION A : BLAND ORIGINAL

Main ridge parallel with frontage and continuous, steeper roof pitch, formal gable contains primary front room, vertical proportion, tripartite elevation and set back garage "extension".

Building Form & Elevational Composition

Examples of poor design improved through planning advice



Figure 24 : HOUSE DESIGN MODIFICATION B : OVER FEATURED ORIGINAL

"Features" simplified, integrated and understated, consistent emphasis applied.

Further Information

Useful Contacts and Checklist

4.1 Useful Contacts

Information on Planning Permission, Building Warrants, Permitted Development, Listed Buildings and Conservation Area control, Tree Preservation Orders, Road Design/Warrants and Neighbour Notification can be obtained from:

Falkirk Council Development Services
Development Management Unit
 Abbotsford House
 David's Loan
 Falkirk FK2 7YZ
 Tel: 01324 504950

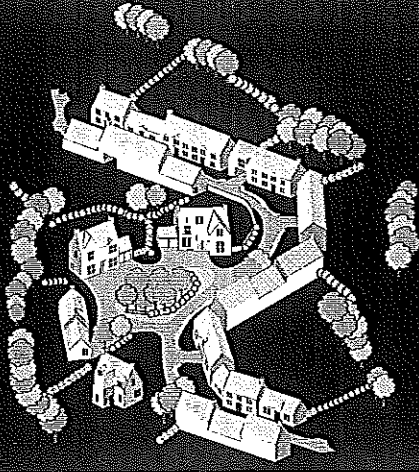
A list of architects can be obtained from:

RIAS
 (Royal Incorporation of Architects in Scotland)
 15 Rutland Square
 Edinburgh EH1 2BE
 Tel: 0131 229 7205
www.rias.org.uk

The RIAS offers a Client Advisory Service and maintains a list of Conservation Accredited Architects.

4.2 Checklist

- Does the proposal retain, locate and enhance the best elements of built and landscape heritage within the site?
- Does the new development reflect the unique character of the buildings, public spaces and landscaping found in the adjoining areas?
- Will the proposed pattern of routes and open spaces be adequately supervised and accessed from the housing edges within the site and be well connected to adjacent areas and to public transport and community facilities?
- Has special attention been paid to the design of the main edges, entrances, and focal points which form the development?
- Have the benefits of mixing community uses with the housing in a larger development been considered?
- Does the configuration of the housing density allow for a well composed streetscape pattern of terrace and semi terrace houses and, if required, widely spaced detached houses?
- Does the development contain appropriate public open space in meaningful civic locations?
- Are screen fences and side gables either designed out of public areas or, where occurring occasionally, are they given special design treatment?
- Are the enclosed public spaces designed to integrate the housing and roads layout in tidy formation?
- Is priority given to high quality and unique building architecture which respects traditional models but is sustainable and contemporary, avoiding fussy affectation?



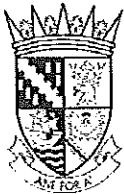
هذه الوثيقة متاحة عند الطلب
في اللغات الأخرى في المجتمع.

ਇਹ ਪਰਚਾ ਸਮਾਜ ਦੀਆਂ ਹੋਰ
ਭਾਸ਼ਾਵਾਂ ਵਿਚ ਪ੍ਰਿੰਟ ਕੀਤਾ ਜਾਵੇਗਾ।

此文件設有其他
語文，請向有關
方面索取。

یہ دستاویز دوسری کمیونٹی زبانوں میں مطالبے پر دستیاب ہے۔

If you would like a copy in community languages, braille, large print or audio tape
call Development Services, Falkirk Council on 01324 504715.



Falkirk Council
Development Services