

Estate Layout

Models for House Grouping



2.4 Models for House Grouping

The Issue

A well integrated framework of spaces and associated built edges to those spaces has the potential to give to a housing estate the desirable sense of place and connection. However this can be compromised by an unsatisfactory spacing or scale configuration to the housing units which form the edges to the public spaces.

This is unfortunately the case with many volume builder housing estates today where the layout is determined by 2 related aspirations for an idealised private home i.e.

- detachment from its neighbour
- distinctive from it in appearance

In the main, contemporary housing estates seek to implement this ideal while at the same time maximising the number of houses on the site. The result is that a minimum separation of standard detached houses dictates the density i.e. 1.0m. from the side boundary between houses and 18m. front and rear (determined by the minimum distance required between the windows to habitable rooms). Similarly visual distinction is sought by placing different house types next to each other on the street, sometimes only differentiated by nominal changes in features and finishes.

The problem with this grouping pattern is that houses appear too close together and can have a claustrophobic effect on the street. The elevational differences tend to create visual conflict rather than the attractive variety intended. The true character of the house, as illustrated on the marketing brochure is significantly diminished. Conversely the houses remain too far apart and poorly related to achieve an appropriate "town" streetscape or to mark a focal point.

Tried and tested grouping models:

To address the above concerns developers are encouraged to adopt one or both of the following models for house grouping i.e.

"URBAN" MODEL - Terrace/ Joined Form - enclosing space:

The elevation generally follows a continuous building line and the elevation is made up of repeating house designs or a differentiated but harmonious overall design.

"RURAL" MODEL - Arcadian/Detached Form - enclosed by space:

Houses are sufficiently well spaced to be potentially dominated by landscaping, allowing significant differences in the character and appearance of each plot.

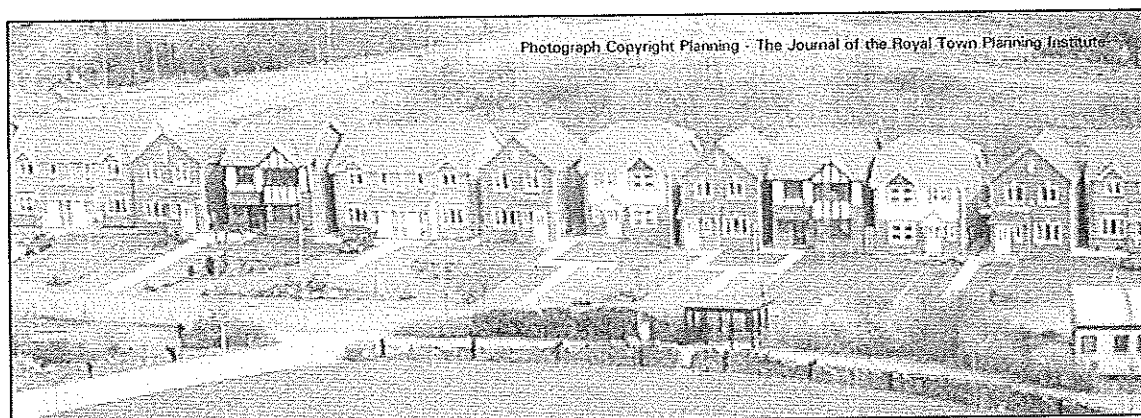


Figure 9 UNSATISFACTORY SUBURBAN HOUSE LAYOUT

Detachment and distinctiveness from one another but no "place"

Estate Layout

Models for House Grouping

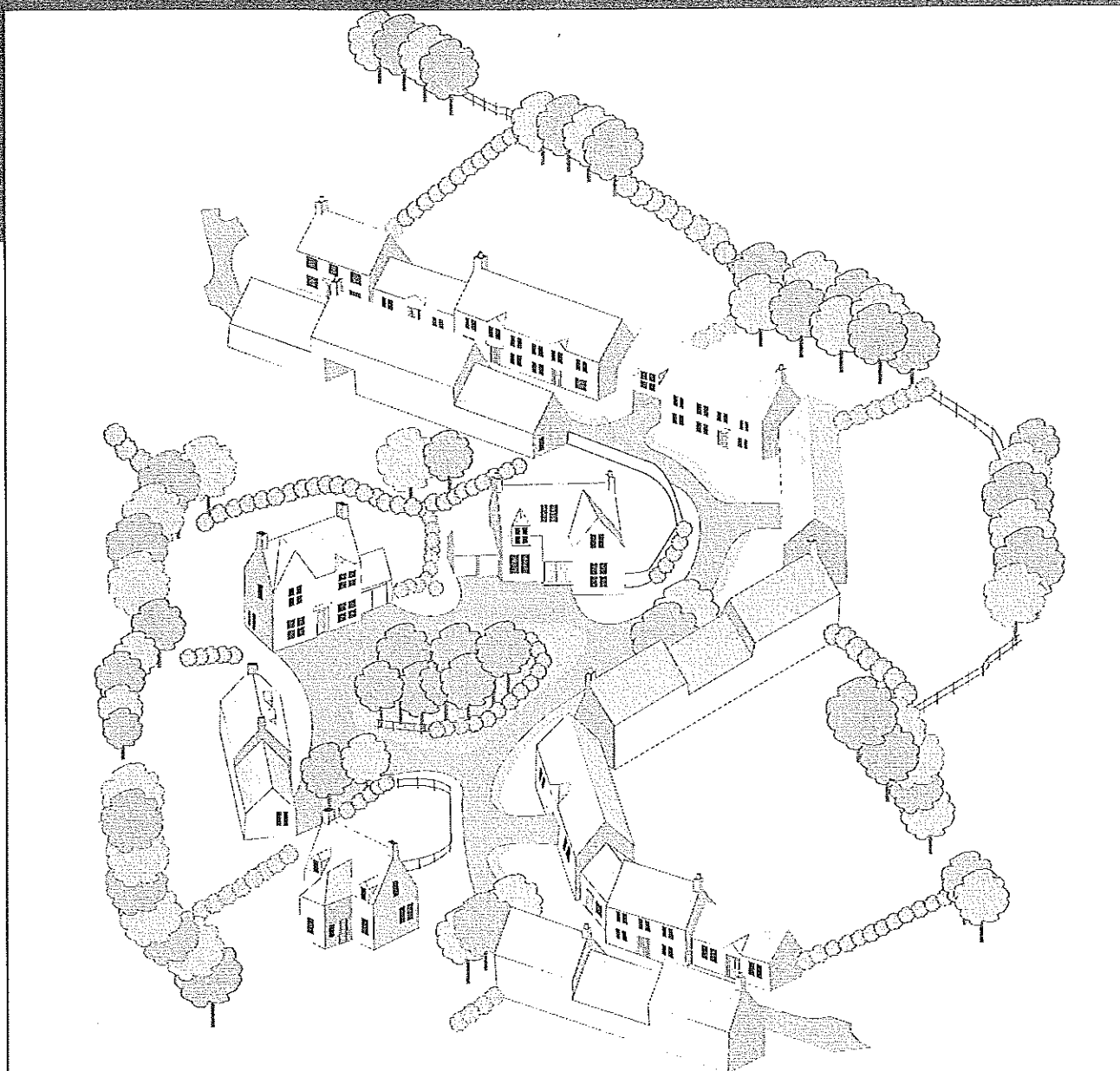


Figure 10 "URBAN" & "RURAL" HOUSE MODELS

Shown in appropriate relationship to each other and to location of open space.

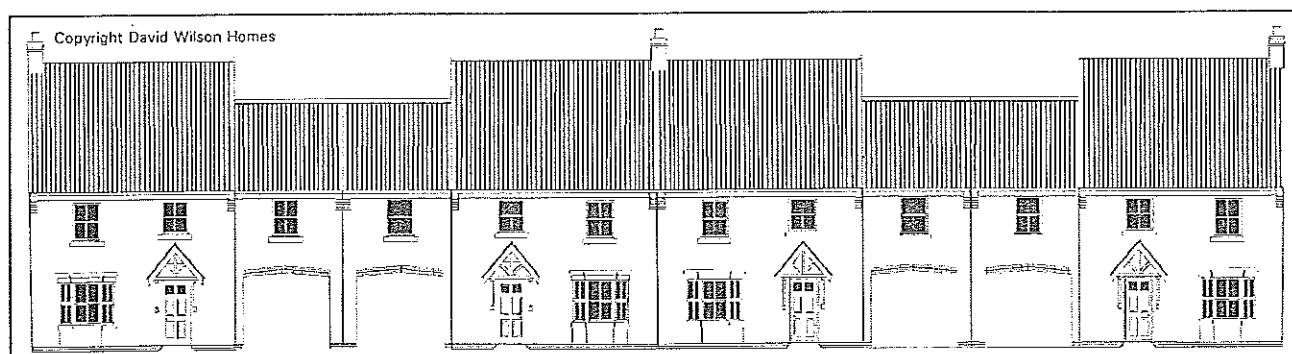


Figure 11 "URBAN" MODEL : TERRACE HOUSING

Pend access - potential for street narrowing concealing private cars and assisting individual identity.

Estate Layout

Models for House Grouping

The urban model would ideally be in a joined or terraced form, other benefits of which being higher density and energy efficiency. Pend accesses within a terrace will conceal car parking as well as providing a greater sense of detachment and allowing the development to be closer to the street.

However, the standard layout of minimally detached houses may also be made more acceptable where a more formal configuration is proposed to ensure the visual continuity of the street frontage. Grouping matching house types together in a symmetrical arrangement will assist this, especially where a single finished floor level is used throughout.

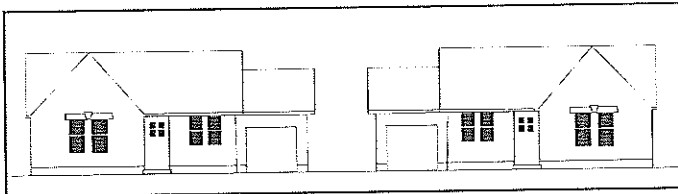


Figure 13 "URBAN" MODEL : DETACHED HOUSING

Twinning and visual linkage can give appearance of terrace.



Figure 12 "URBAN" MODEL : TERRACE HOUSING

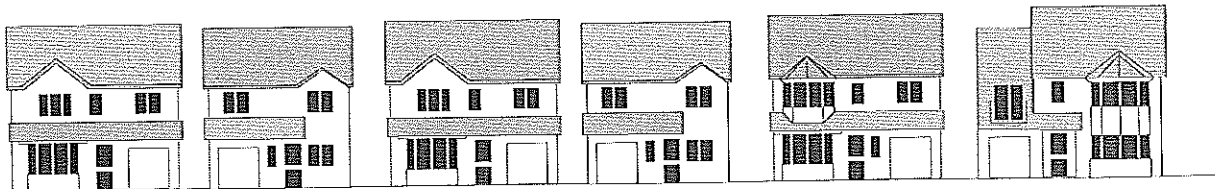
Illustration of built development

Consideration should be given to limiting the number of main gables on a street frontage to avoid a cluttered appearance.

Straight gabled buildings will always be necessary to achieve visual continuity and should not be mixed with hipped roofs on a street frontage except where houses are sufficiently widely spaced, following the rural model. Similarly the composition of roof and wall finishes should reinforce rather than disintegrate the formal street configuration.

For the widely spaced rural model plot sizes should be no less than 1/6th acre and the ratio of ground floor (minus garage) to overall plot should be between 1:5 and 1:6. Critically the dimension between the house and the side boundary should be no less than 3.5 m. which will allow a vehicle to pass alongside. A random scattering of detached houses would be appropriate at this density.

POOR



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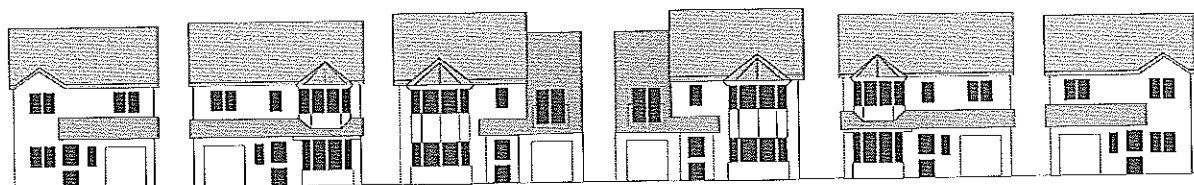


Figure 14 "URBAN" MODEL : MODIFYING SUBURBAN MODEL

reduce house types from 4 to 3, hand twin and group, structure material palette ; variety remains but focus and visual continuity is enhanced.

2.5 Distribution of House Grouping Models

All new housing developments should adopt combinations of the "urban" and "rural" housing grouping models identified above. Estates consisting entirely of minimally detached houses will not normally be acceptable.

It is important nevertheless that the models are not located arbitrarily or separately zoned but are related appropriately to the centre or edge of a town and to the framework of public routes, spaces, entrances and edges at the local site level.

Town

Denser "urban" forms are generally most appropriate in more traditional town centre areas and on former industrial sites within the town, at least where immediately adjacent to denser built up areas. However this model will also be appropriate in any new development where there is a need for an urban focus, perhaps adjoining a local centre which includes shopping and community facilities. Conversely, the more widely spaced "rural" model should not be precluded from the more historic urban areas e.g. within a site bounded by Victorian villas.

Site

The established lines and orientation of the built frontages to the Public Space Framework should provide a template for the distribution of the 2 housing grouping models identified.

The urban model can create the more formal visual impact appropriate to the more important, busier routes where it is also able to provide a noise barrier to more informal areas to the rear. Main gateway entrances to a site or to a minor cul-de-sac/ courtyard space as well as corners and other focal points are also appropriate locations for this model. Formal continuous built enclosure can sometimes be the preferred character for the frontage to an important public space or "village green". Flatted accommodation with limited private amenity space may benefit from such a location. Denser linked forms are also appropriate in discreet mews courtyard locations.

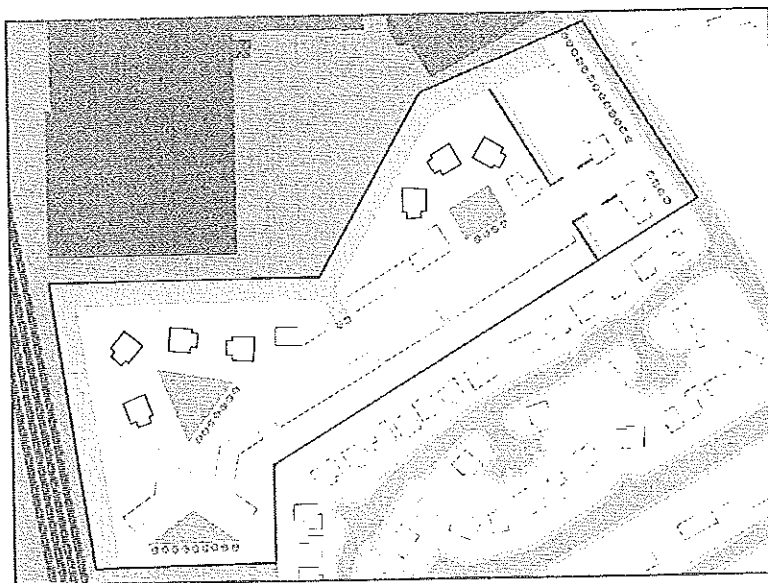


Figure 15 DISTRIBUTION OF HOUSE GROUPING MODELS

Flatted option along main road, internally site shape determines location of open space and, in turn differentiation of urban and rural house models.

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Distribution of House Grouping Models

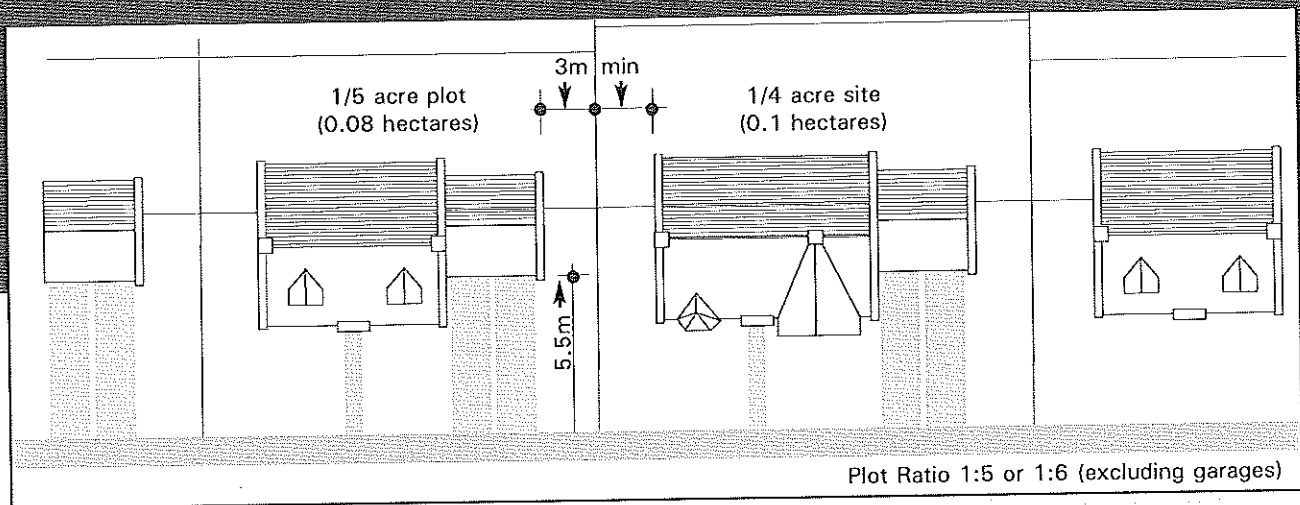


Figure 16: "RURAL" MODEL ARCADIAN / INDIVIDUAL PLOTS

Minimum dimensions - enhance visual differences

The rural model is most appropriately located within a discrete courtyard or cul-de sac and, indeed, it is in this context that large self-build type plots are best located, preferably the lesser component of any development site. On a general access road, fewer, more widely spaced, houses will result in a quieter, less trafficked street. This model would be equally acceptable to define the edge to a village green where it might continue the parkland character of the open space. In this circumstance the fewer but more prestigious houses may afford better control and foster a higher standard of maintenance for the enclosed green. This model can also provide an attractive main road frontage where a landscape character is sought.

Building Height

Options for greater height should naturally accompany the urban housing model. Where two storey housing predominates, primary edges, entrance points, and corner junctions offer the opportunity for combinations of 2½ or 3 storey buildings or, at inner town locations, even greater height. Increased storey height at focal points will assist in establishing a general sense and understanding of the place.

In the case of flatted development, storey height may be restricted according to the quality of the greenery in the enclosed court or associated car parking area.

Density

The Council's Local Plan provides indicative house numbers for certain identified sites. Otherwise housing densities will be subject to the general guidance provided in paras 2.4 and 2.5 in terms of :
public open space and roads, private garden ground, daylighting and privacy and house grouping models and the location of each type.

Estate Layout

Street Design and Roads Standards

2.6 Street Design and Road Standards

Road Hierarchy and Parking Standards

All roads, footpaths and car parking areas intended for adoption by Falkirk Council must conform to "Design Guidelines and Construction Standards for Roads in the Falkirk Area". This sets out standards for the road hierarchy of distributor road (individual direct vehicle access prohibited), general access road, minor access road and cul-de-sac (a shared surface permitted for max 20 units). Parking is required at the rate of one space for a house less than 3 bedrooms and 2 spaces for larger houses. Visitor parking is at the rate of 1 per 4 houses.

Street Widths

In addition to achieving more intimate spaces (see para. 2.3. **Built Edge**), narrowing the street width will encourage slower vehicle movements. This is more feasible where

- (i) car parking is to the rear, accessed to the side of the house or through a pend allowing the house frontage to move forward,
- (ii) there remains an acceptable distance between windows on either side of the street or
- (iii) habitable rooms are not directly opposite one another.

PEND ACCESS: Where this serves an approved parking provision to the rear, missives must ensure that the entrance remains open and is not enclosed as a garage.

WINDOW TO WINDOW DISTANCES: The general standard applied is that "habitable" rooms (living rooms, bedrooms) must be 18m. apart if directly opposite. Thus, in order to achieve the appropriately narrowed street, such openings must not be directly opposite but may be angled from each other.

Turning Heads/Visitor Spaces

Road geometry should fit tidily with the housing layout and avoid a turning head leg or end-on visitor parking bay intruding into a front garden. The "Y" turning head and lay-by parking are preferred.

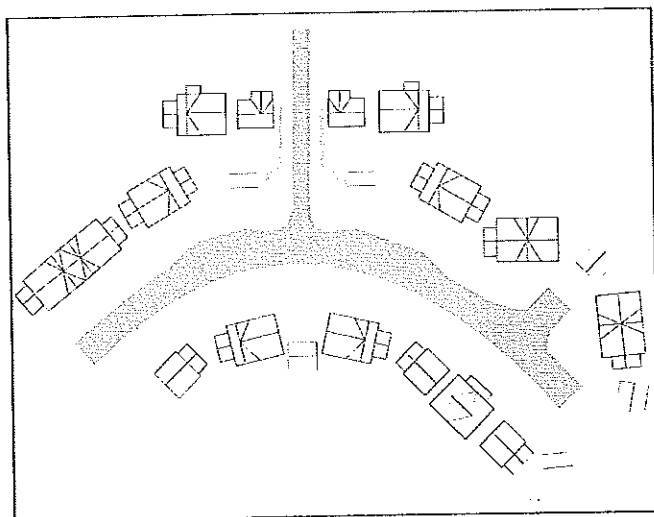


Figure 17 HOUSING LAYOUT & ROAD COMPOSITION
Geometrical harmony and symmetry are the important design tools.

Estate Layout

Street Design and Roads Standards

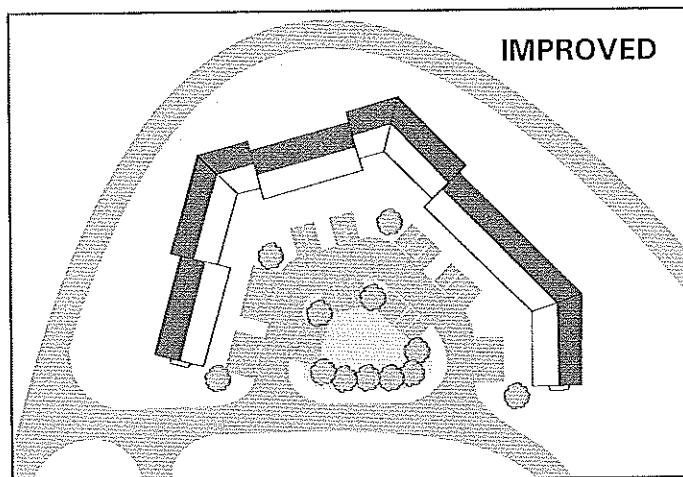
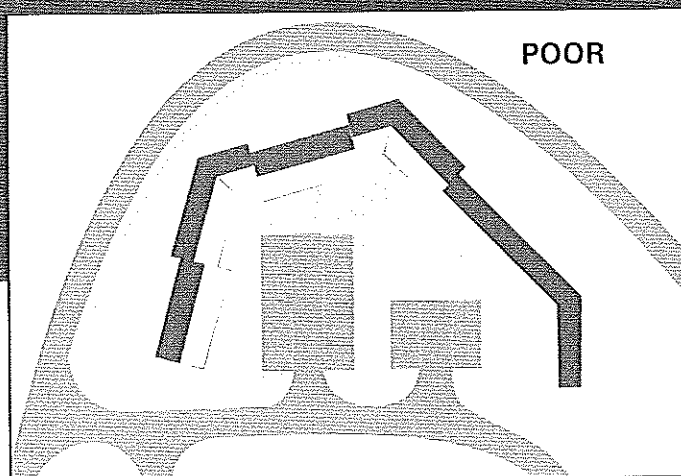


Figure 18 GROUPED PARKING SPACES (e.g. for flats)
Civic place not parking lot.

Grouped Parking Spaces

These should take the form of a traditional courtyard or square, not a parking lot, and should look attractive when empty and be easily supervised from the adjacent housing, street or courtyard.

Refuse Collection

Housing developers should be aware of the current 3-bin collection system and allow flexibility of design for future adaptations of the system.

SUDS Ponds

Sustainable Urban Drainage Systems (SUDS) require ponds whose purpose is to retain rainwater from a developed and hard surfaced area so that it can be dispersed into the drainage system at a rate no greater than would be required if the land had remained a greenfield. Para 2.1 **Site Characteristics and Constraints** notes that these and any other water courses and features should be designed integrally with the open space framework within any housing development. This should determine the location of any SUDS pond to achieve its potential as public amenity and focal point, i.e. at the front of houses for best surveillance, safety and maintenance. In general they should be positioned adjacent to, but not be part of, any water course on the site.



Figure 19 HOUSING AS PART OF LOCAL CENTRE

Contemporary, traditional patterns, 24 hour life.

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Other Planning Considerations

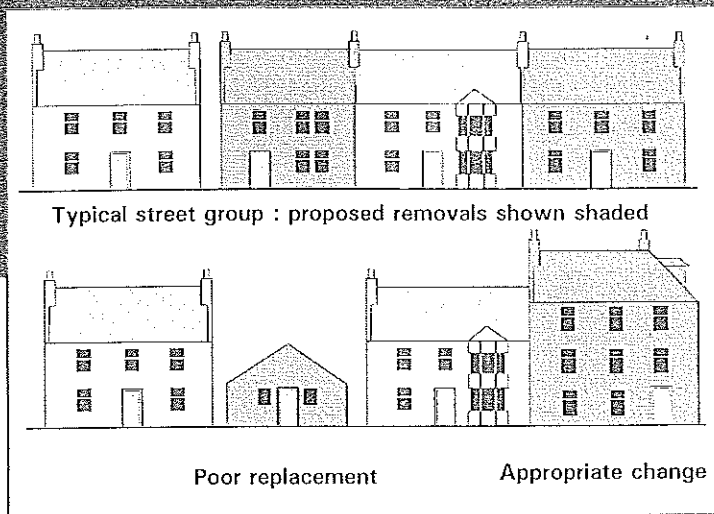


Figure 2.1 INFILL DEVELOPMENT
Replacing buildings in street

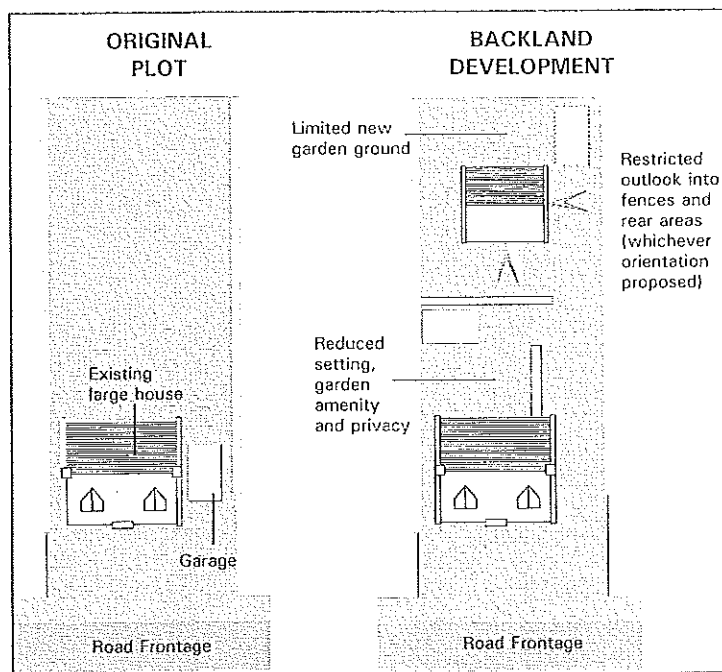


Figure 2.2 BACKLAND DEVELOPMENT LIMITATIONS
NB. Development may be given consideration where designed in mews or minor outbuilding form with

2.7 Other Planning Considerations

Infill Development

Where there is a gap site, whether in an urban terrace or within a looser group of buildings, it is important to achieve a harmonious "fit" of new with existing. This should pay attention to the adjacent building line, height, scale, window and other door arrangements, proportions and detailed decoration and materials.

Tandem and Backland Development

Tandem development is a form of infill development where one or more houses are proposed within a large garden to the side of a house fronting a road. Backland development is, similarly, located within a large garden but to the rear, with no road frontage.

There will be a general presumption against both of these types of development within large gardens where the concerns are as follows:

- The visual setting and continued dominance of the original house.
- The amenity and size of the resulting private gardens (min. 9 m. length must remain)
- The front outlook from the resulting houses (a particular problem for backland development where the plot may be entirely enclosed with fencing)

The following development forms may be given some consideration:

- Tandem: where the existing garden creates an inappropriate gap which the new development will sympathetically fill
- Backland: a small scale mews type development to the rear with a shared vehicle entrance from the street (preferred to one or more houses plots with separate accesses)

NB Separate plot development in a front garden to an existing house will generally be presumed against.

Estate Layout

Other Planning Considerations



Sloping Ground

Buildings should integrate with the slope and major underbuilding which creates extensive areas of blank walls will not be acceptable. Housing may be placed parallel with the contours but care should be taken to avoid too regimented an effect from a distance. Consideration should also be given to split-level houses. If the sloped arrangement reveals gable ends, window openings should be added where no conflict of privacy exists.

Rear gardens designed to be as level as is possible on a sloping site may result in steeper slopes linking one level area to the next. In pure landscaping terms it may seem more attractive to create a continuous planted strip across the sloping area, fenced off from the private gardens. However such an arrangement will require to resolve potential problems relating to public maintenance, fly-tipping (adjoining properties included) and social nuisance. It may therefore be preferable to include these steeper slopes as extensions to the private gardens rather than as public or community land. A developer may consider stabilising and planting these slopes even if they are intended to be in private ownership.

Roofscape is an important consideration on a steeply sloping site.

Overshadowing

In order to minimise the possibility of a shadow being cast across the window of an adjacent house or garden, any extension should not project from the rear building line beyond either:

- a line drawn at a 45° angle from the midpoint of the nearest ground floor window of the adjoining house, on the rear building line or
- a maximum of 3.5 metres from the rear building line of the house.

Open Space Standards

The consultation draft **Scottish Planning Policy 11: Physical Activity and Open Space** sets out minimum standards for new residential developments. Essentially, for developments with over 10 units, public open space should be provided as follows (in addition to any private garden ground):

60m² total open space per household to include:

40m² divided between parks, sports areas, allotments, green corridors, semi-natural space and civic space, as set out in the development plan.

20m² of informal play/ recreation space and equipped play areas.

The purpose designed open space activity areas or facilities referred to in para 2.2 **Public Space Framework** will generally be required in larger new housing areas. However some such facilities, e.g. sports pitches, athletics tracks or even a fully equipped play facility, have certain critical dimensions which may not be appropriate for certain smaller housing developments of over 10 units. In this case a developer may be required to contribute to their provision off-site by way of a planning agreement.

Estate Layout

Security for Properties and Public Places

2.8 Security for Properties and Public Places

The Guidance Note seeks to apply the principles of "Safe by Design". Whilst acknowledging the need for individual houses to be adequately secured, the greater concern is to ensure that public streets and spaces are as safe as can be. This is to be achieved as follows:

- clearly defining and differentiating public, semi-public and private space by the design of appropriate boundaries and entrances.
- maximising opportunities for surveillance from the houses.
- arranging the framework of public routes and spaces to encourage greater use by the general public thus reducing opportunities for nuisance activities.

The following is a compilation of the specific measures identified in the Guidance Note which should foster the desired "defensible" environment:

- public areas fronted by buildings (with doors and windows) rather than by high screen fences
- the prohibition of footpath linkages to the rear of houses which can be threatening to legitimate users, conceal criminal activity and provide unsupervised escape routes
- the creation of "permeable" through routes for pedestrian and vehicular traffic to encourage greater usage and thereby better protect the housing environment
- the provision, off the main routes, of smaller culs-de-sac/courtyards, with "gateway" entrances which will maximise potential communal surveillance opportunities and discourage trespass.
- a structure of focal point buildings which makes the area more "legible" (or easily comprehended), enhances civic status, signals a robust, defensible environment and securely absorbs non-housing neighbourhood uses, e.g. shops.



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)

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.

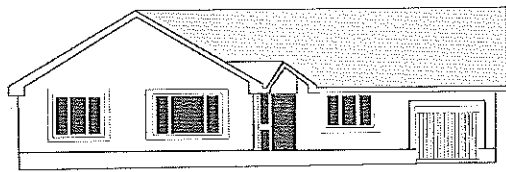


Figure 2.2 VOLUME BUILDER HOUSE TYPE
Well considered

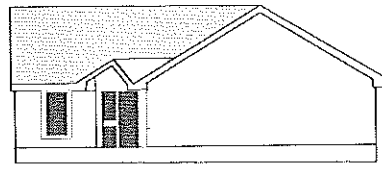
- All openings should have vertical proportions.
- Main entrance doors should create a focal point on the front elevation. Doors on a gable end generally appear less satisfactory but may be acceptable where formally located and in balance with the window arrangement.
- Forward projections i.e. porches, 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

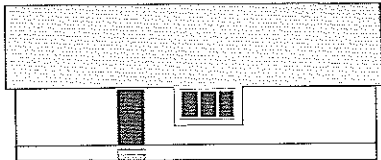
Examples of poor design improved through planning advice



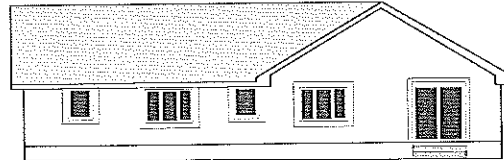
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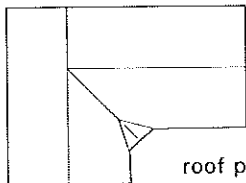
side 1



side 2

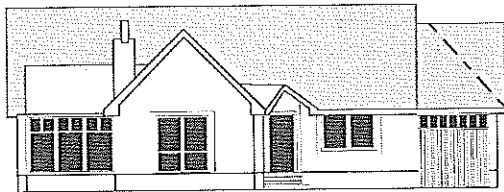


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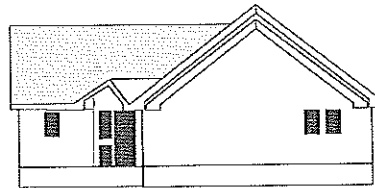


roof plan

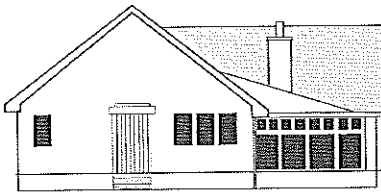
POOR



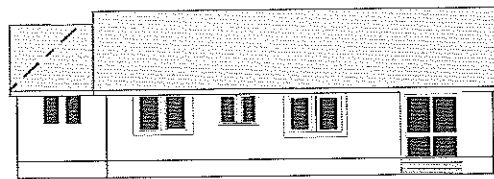
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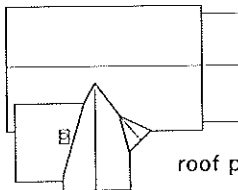
side 1



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

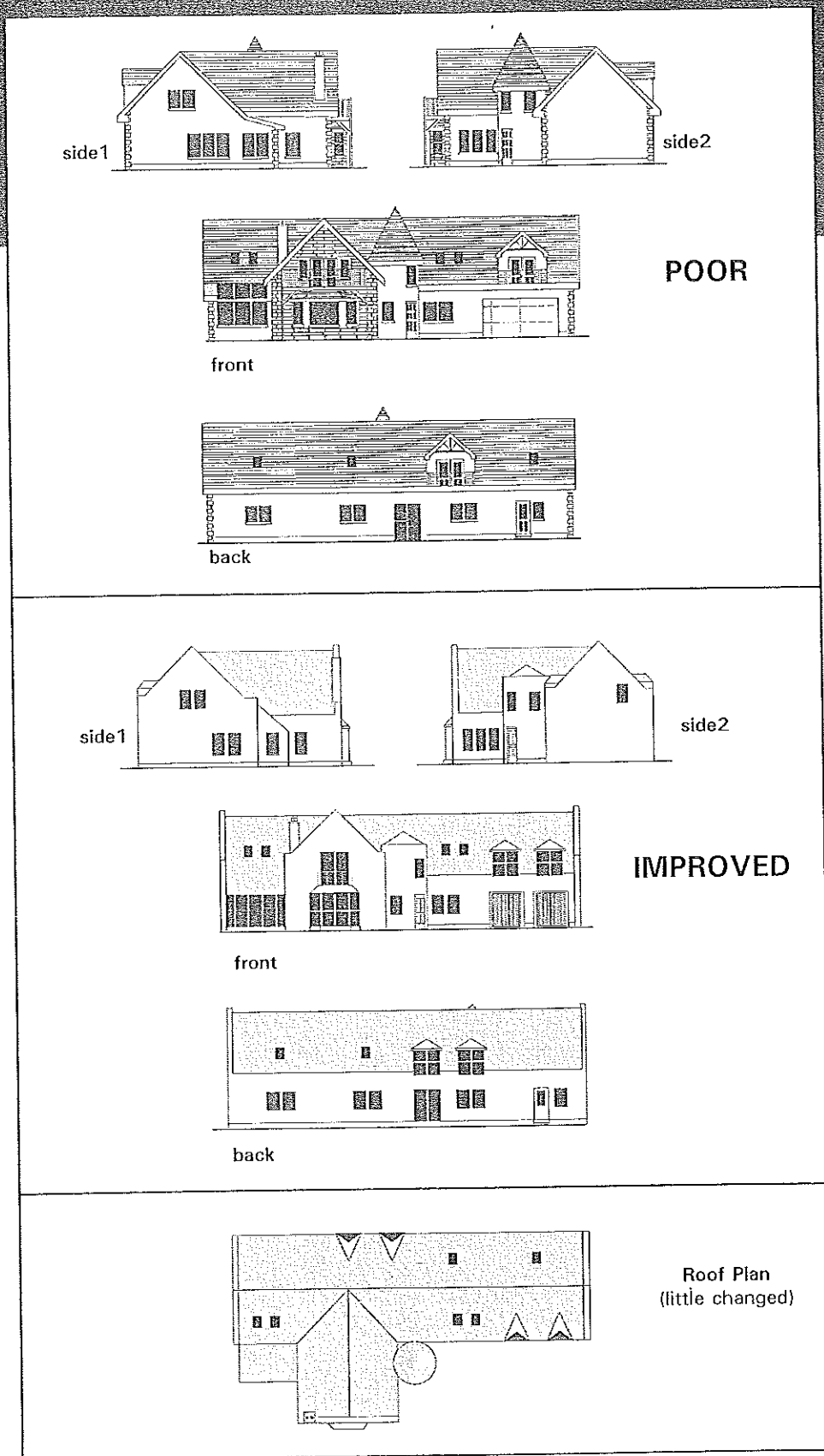


Figure 24 HOUSE DESIGN MODIFICATION B : OVER FEATURED ORIGINAL

"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

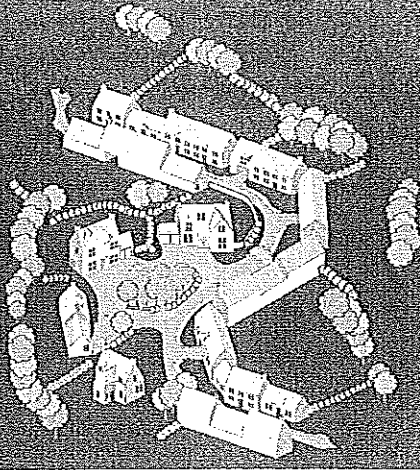
A list of architects can be obtained from:

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?



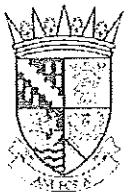
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في اللغات الأخرى في المجتمع.

ਇਹ ਪਰਚਾ ਸਮਾਜ ਦੀਆਂ ਹੋਰ
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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۔

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