

Urban Design Guidance

at

A96 Corridor

for

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1. Urban Design Guidance

1.1 This guidance on urban design is the result of many years of research into sustainable urban environments and the urban design preferences identified at the facilitated workshops on the A96 masterplan. It has also been prepared specifically for the 'Highland' environment and culture of the A96 corridor.

1.2 The guidance draws extensively on the principles of 'smart growth' noted in paragraph 7.2 of the plan of work, namely, to:

- Take advantage of environmentally sensitive building design that respects and responds to the Highland vernacular and materials, and is energy efficient;
- Ensure land use is appropriate and that development uses sites to maximum advantage emphasising sustainable urban extensions to existing communities;
- Relate development density to accessibility to help ensure viable public transport services;
- Create a range of housing opportunities and choice (through variety, type and tenure) to suit a range of needs and promote a range of housing density to achieve choice;
- Deliver walkable and cyclable places that are distinctive and attractive with a strong sense of place through legible and permeable design with cultural and recreational services provided early that are accessible within 10 minutes of the majority of residents;
- Promote a mix of land uses that allows houses and jobs to be closely related and the mix to be more varied toward the centre;
- Maintain and enhance open space, natural features and critical environmental area. Ensure these are provided within settlements and integrated into developments that maximise their recreational contribution to the quality of life;
- Strengthen existing communities through the provision of services and opportunities for the wider community;
- Ensure accessibility through mobility choice by actively promoting attractive public transport;
- Make development decisions predictable, fair and cost-effective through developing a clear masterplanned context (including design codes). The process should be straightforward, involve stakeholders and promote shared infrastructure.

1.3 Smart growth principles and designs which are rooted in the local landscape and culture will ensure that new development is markedly different from bland and undistinguished suburban developments which characterise much current fringe development. Design codes can be used to control density and phasing, ensure attractive and functional urban form, protect and enhance surrounding habitats and preserve and

enhance the quality of the landscape setting. Design codes can also ensure that a local vernacular architectural style is developed which is appropriate and specific to the A96 corridor.

1.4 High quality urban design guidance will ensure that the new settlements will be physically different from contemporary suburbs. It will also guide the creation of communities with a strong sense of place and identity which will assist in attracting and retaining new populations, including a well educated, high earning cosmopolitan population which will be attracted by good transport links and very high quality urban and landscape environment.

1.5 The new settlements must be vibrant places with activity during the day and at night. To this end they must have a mix of uses including attractions which will draw people from outside to visit the new settlements. Aspects which may influence this could include:

- A major employment generator;
- A unique visitor attraction;
- Events which take place regularly in the new settlement;
- A unique ambience to the settlement, in particular its core area; and
- A cluster of similar services achieving sufficient critical mass to draw visitors from a wider catchment; for instance book shops, speciality food retail and restaurants, traditional music playing and manufacture of instruments.

1.6 The key to creating successful places is very high quality design which responds to local characteristics and is proactive in defining the shape and ambience of the town, not merely finding the best technical or economic solution to a given problem. In this sense the most important success factor for the design of the new settlements is that people want to live, work and spend time there. This overarching principle must guide the technical requirements of any individual component, whether that be transport, energy efficiency or economic competitiveness. Each new settlement can be thought of as house – it comprises many rooms but all are connected and brought together in a single unified design where the whole is greater than the sum of the parts.

1.7 At the current phase of the development of the masterplan for the A96, a number of options for the location of the new settlement(s) are under consideration. Urban design must be place specific and therefore detailed consideration of the application of urban design principles and preparation of urban design codes can only be carried out when specific site(s) have been chosen. However, certain principles can be laid down and should be taken into consideration in the selection of the preferred site.

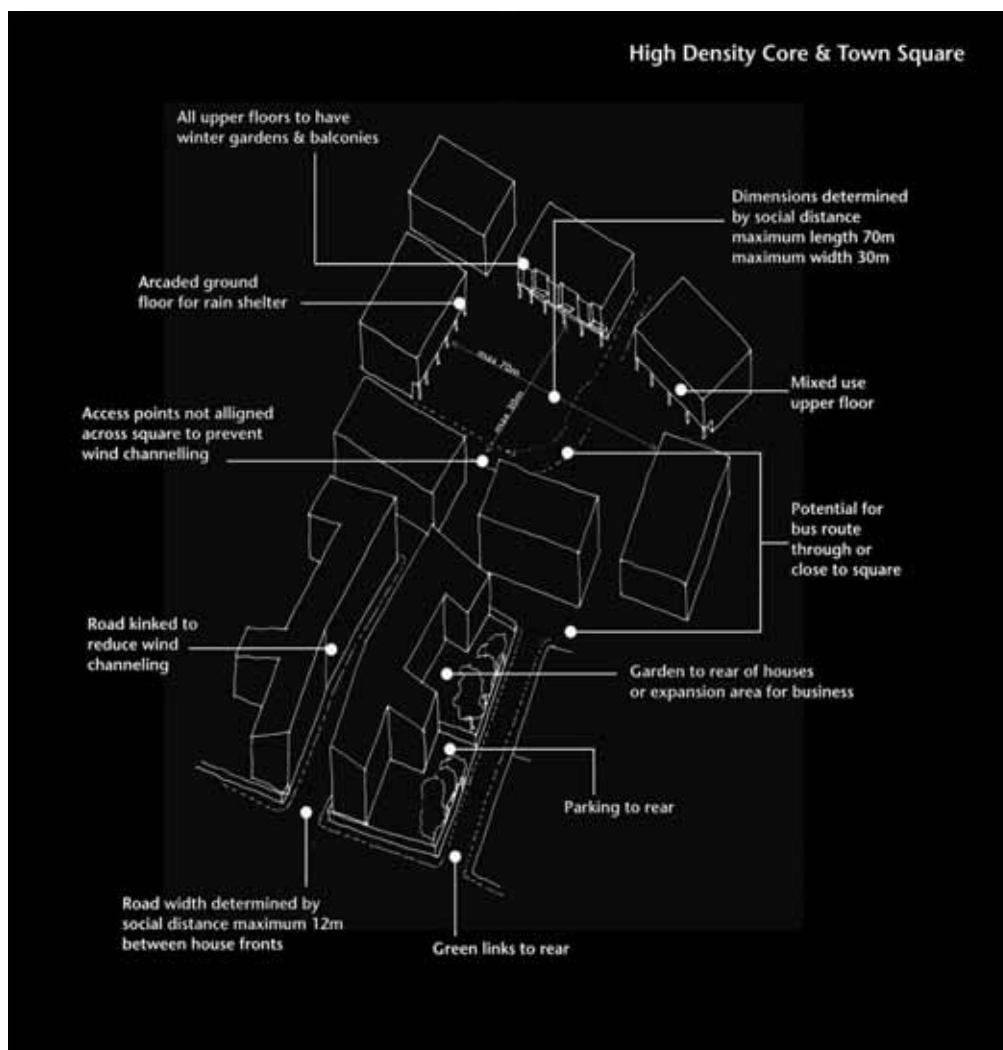
1.8 The table below takes each of the ‘smart growth’ principles and links this to a number of design issues at the level of the individual building, the neighbourhood and the settlement as a whole:

	Settlement	Neighbourhood	Building	Other
Sensitive to Highland environment	Sheltered location Consider combined heat and power	Consider neighbourhood heating schemes Sheltered public spaces	High levels of insulation and thermal performance Sheltered outdoor space Develop contemporary vernacular based on traditional design principles	Take account of traditional highland land use patterns Use indigenous plant species in landscape areas
Use site to maximum advantage	Integrate natural assets such as views and natural features Ensure all uses within walking distance of public transport and central services – limit extent of settlement boundaries	Minimise land take for roads and non functional open space SUDS within each neighbourhood	Make use of existing buildings and landscape features Buildings generally to be located near to street edge to maximise private garden size and create clear definition of public space	Consider integration of energy generation, such as solar panels on new buildings Integrate mixed use to maximise intensity of site usage day and evening
Density related to accessibility	Maximum distance of 0.5km from centre to edge of settlement to ensure all uses within 10 minute walk of public transport	Phasing to ensure that different densities achieved in balance	Develop compact dwelling types with private outdoor space – balcony, terrace, patio etc Integrate potential for mixed use within buildings	Ensure access to public transport is an attractive option for all users through short, well overlooked and attractive links, high quality infrastructure and reliable service
Range of housing opportunities	House types should seek to provide a range of dwelling types which moves the local profile in the direction of national averages. Numbers of dwellings should therefore be provided in the following proportions : Detached 26% Semi-detached 25% Terraced 23% Flats 26%	Neighbourhoods to have wide range of house types and option of working and learning from home.	Develop housing types for high, medium and low density with range of sizes in all densities and types	Consideration should be given to possibilities of self build options Affordable housing should be provided for low income workers and people with special needs
Walkable places	Compact settlement not extending beyond around 80 hectares (radius from centre ca. 475m) for a population of around 5 000 or 140 hectares (radius of ca. 650m from centre) for a population of 10 000	No part of the settlement more than 10 minutes walk from the centre along attractive and safe routes	High quality of design with buildings overlooking pedestrian routes and streets to give a high degree of passive surveillance	Ensure that all houses are close to pedestrian/ cycle routes Maximise permeability of blocks for pedestrians and cyclists
Mixed use	The neighbourhood should provide a range of different types of employment space	Residential neighbourhoods should not exclude small scale non housing activity which is compatible with residential amenity	Homes should be designed to permit working and learning from home Designs should be flexible to permit changes of use within the building's lifetime	Mixed use can make combined heat and power cost effective Mixed use will reduce the need to travel long distances to work
Preserve natural features and open space	Locational choice for development should take into account the natural setting of the new settlement(s), not just in terms of visual impact, but also issues of ambience for the inhabitants such as: shelter from wind infiltration, views out, potential to integrate natural water features	Natural features should be used as much as possible to shape development areas	Open space should be overlooked by dwellings	A settlement with a high degree of biodiversity will be an attractive place to live
Strengthen existing communities	New settlements should be able to meet the needs of existing settlements and contribute to their attractiveness as places to live. The new settlements should therefore be easily accessible from surrounding existing centres of population	The mix of housing types should compliment the range of housing types available locally to move the choice nearer to the national average (see <i>range of housing opportunities</i> above).	If existing buildings are present these should be incorporated into the overall design	
Accessibility	All parts of the centre of the development, where most services will be located, should be equally accessible to mobile and non-mobile residents and visitors	Neighbourhood design should maximise permeability for pedestrians and cyclists, in particular with direct links to public transport routes so that not using the private car is an attractive choice	All buildings should be built to be adaptable for people with special needs or mobility problems Provision should be made for homes for people with special needs	Public transport infrastructure (bus shelters, bus termini and railway stations) should be designed to a very high standard with warm sheltered waiting facilities and reliable information
Predictability	An overarching design code for the settlement as a whole should give clear guidance and promote deliverability	Design codes in each neighbourhood will control and direct development in order that there is a high degree of clarity regarding the future shape of the settlement	Design guidance on buildings will give clear guidance on mandatory and optional elements of building design	Mechanisms will be put in place to ensure the balanced development of the settlement and secure funding for community facilities and maintenance of the environment

1.9 Building on these principles and the preferences identified in the facilitated workshop the following characteristics emerge for new settlement(s) in the A96 corridor:

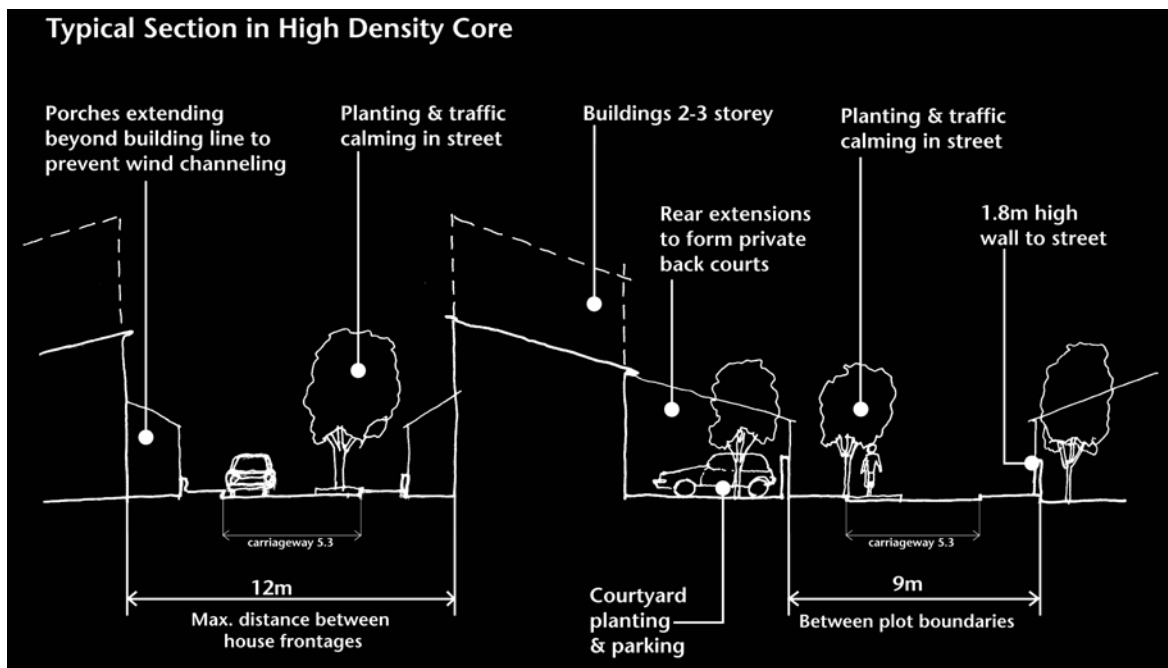
A vibrant public space at heart of the settlement, with the following characteristics:

- Wind and rain sheltered spaces;
- Spaces fully open to public access;
- Easily accessible by public and private transport;
- Pedestrian priority area;
- Mix of uses along the edges of the public space with predominantly residential uses on upper floors;
- Connected to pedestrian links to surrounding neighbourhoods;
- Active ground floor frontages;
- Continuous built frontages within blocks;
- Dimensions determined by social distances i.e. **maximum** 30m wide and 70m long;
- Useful landscaping – e.g. fruit bearing trees, hedges for shelter, permeable surfaces for natural drainage;
- Landmarks which are visible from the A96 and railway. Such features will have to be tall enough to be visible from key receptors, including the A96 and railway line. Open vistas from the edge of the town will not be permitted as these will encourage wind infiltration; and
- **Minimum** building height of 3 storeys or 10m.



A **high density core** surrounding the central public space on 3 sides, with the following characteristics:

- **Minimum** densities set for development parcels between 60 - 80 dph;
- Low to medium rise development – predominantly 2-3 storeys with **maximum** height 4 storeys;
- Range of house types including flats and courtyard clustered houses;
- All dwellings to have an element of private outdoor space;
- All dwellings to have a winter-garden designed to maximise passive solar gain and reduce heat loss;
- Wind sheltered streets and lanes connecting to the central space;
- Distance between building frontages controlled by social distances – **maximum** width for residential streets 12m;
- Traffic calming on residential streets and use of home zone environments;
- Streets and lanes designed for environmental shelter. i.e. narrow kinked streets in preference to straight streets;
- Maximise frontage onto streets and paths and ensure passive surveillance of public spaces; and
- Useful landscaping – e.g. fruit bearing trees of appropriate scale.



A **medium – density middle ring** with the following characteristics:

- **Minimum** densities set for development parcels between 30 - 40dph;
- Low to medium rise development – predominantly two storey with **maximum** height 3 storeys;
- Range of house types including flats, townhouses, semidetached and detached houses and courtyard clustered houses;
- All dwellings to have an element of private outdoor space;
- All dwellings to have a winter-garden designed to maximise passive solar gain and reduce heat loss;
- Wind sheltered streets and lanes connecting to the central space or to green wedges;
- Distance between building frontages controlled by social distances – **maximum** width for residential streets 18m between building frontages (See appendix for definition of social distances);
- Maximise permeability of blocks and ensure passive surveillance of public spaces;
- Traffic calming on residential streets and use of home zone environments; and

- Streets and lanes designed for environmental shelter. i.e. curving streets in preference to straight streets.

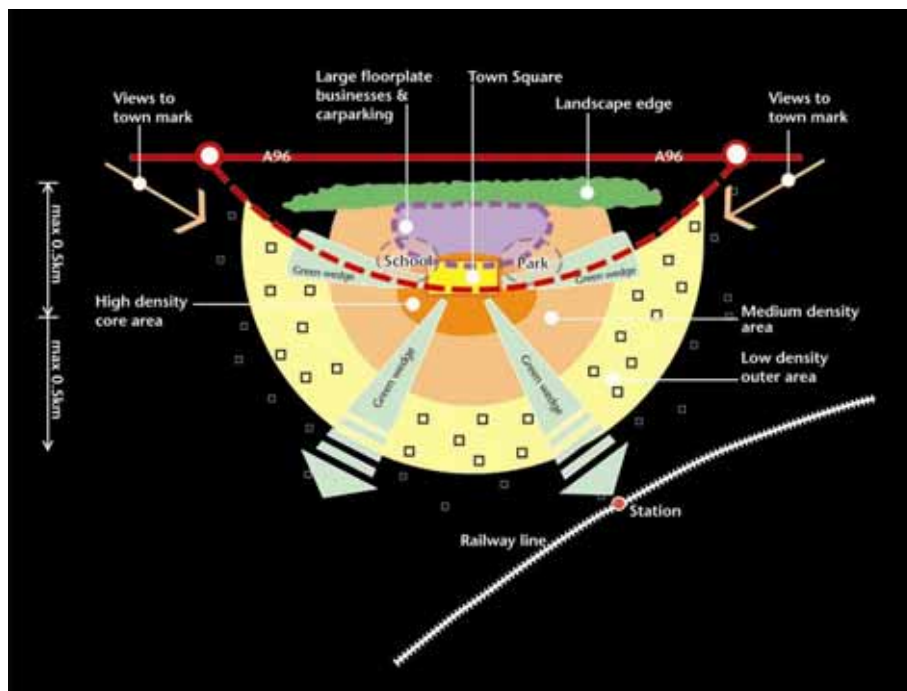
A very low density edge, with the following characteristics:

- **Maximum** densities set for development parcels between 8 - 10 dph with buildings separated from each other by large distances. Space between buildings could be developed under controlled circumstances at a later date;
- Low rise development – predominantly two storey, **maximum** height 3 storeys;
- Range of house types including flatted villas, townhouses, semi-detached, detached houses and courtyard clustered houses set within extensive grounds;
- All dwellings to have a winter-garden designed to maximise passive solar gain and reduce heat loss;
- Wind sheltered streets and lanes connecting to the central space; and
- Traffic calming on residential streets.

Network of paths and green wedges, with the following characteristics:

- Connect from edge of settlement to centre;
- Contain range of landscapes including SUDS;
- Overlooked by houses on adjoining land, either directly or obliquely;
- No blank fences to edges of green wedges – if house backs face green wedges then gardens must be visible from the public routes in the green wedge;
- Cycle and pedestrian paths with street lighting;
- Contain equipped play areas; and
- Planting for biodiversity including edible fruit bushes e.g. brambles, raspberries.

The illustration below shows the overall structuring principles for the new settlement:



Integrate existing natural or built features

1.10 If existing buildings are present these should be integrated into the development and suitable uses found.

1.11 Existing natural features should be integrated into the development and where possible their biodiversity enhanced.

1.12 **Provide an area which can accommodate incompatible functions** such as refuse recycling, intrusive business uses or large scale industry, retail and transport requirements such as volume car parking, etc. This element of the settlement should be provided adjoining the central area so that car parking can be as near as possible to the pedestrian priority core area. The car parking can be used for park and ride purposes and should therefore be close to good public transport facilities.

1.13 50% of all parking should not be at grade. Possibilities include below ground parking, parking on roofs of larger volume buildings and stacked parking.

1.14 Parking areas should not exceed 60m in any direction (i.e. maximum car park size will be 3,600sqm. This area of the settlement should not be visible from the A96 or railway.

Flexibility

1.15 The development of the settlement should proceed in such a way that there is a range of different property types available in each phase. Properties should be designed to maximise flexibility and changes of use, for instance:

- Upper floors around the central square can be used for residential or business uses;
- Property in the high density core area can include workshops, offices and dwellings which can be readily converted;
- Dwellings in the medium density middle ring should be permitted to incorporate space for working from home and local neighbourhood services; and
- The large development plots in the very low density edge could be developed for prestigious office use under circumstances controlled by the design codes.

1.16 In addition to the design of individual buildings, street blocks will be dimensioned and structured in such a way as to enable a range of different development types within any block.

Materials and Construction

1.17 Materials will be an important element in defining the character of the settlement as a whole and individual neighbourhoods in particular. Detailed guidance on requirements for materials should be addressed in the design codes.

1.18 Wherever possible locally sourced materials should be used. One of the most commonly available materials in the north-east is timber and timber by-products. Consideration should be given to developing a range of cladding materials which make use of this local and sustainable source.

1.19 The central space should be considered as a future conservation area and should be built out of durable materials and to a quality of design which sets international standards.

1.20 In the core and middle ring and edge areas there should be a homogeneity of materials in each area; wherever possible using locally sourced and produced timber products.

1.21 The sheltered core area should have buildings which make use of light coloured materials which will reflect light and brighten the narrower streets and lanes. Light coloured timber cladding or render would be appropriate in this area.

1.22 The middle ring should have buildings constructed of light coloured materials. Light coloured timber cladding, render and brick and would be appropriate in this area.

1.23 The edge area should have dwellings constructed of very durable materials which will withstand the full effects of the wind and weather. Brick, stone or cement render would be appropriate. Colours to respond to the landscape would be appropriate in this area.

1.24 Roofs will be the most visible manifestation of the new settlement due to the prevailing topography. Roofs should be designed to have a uniform pitch between 35 – 45 degrees. Green roofs (flat roofs with sedum planting) would also be acceptable.

1.25 Other materials should draw on the traditional resources of the region, namely:

- Render;
- Stone; and
- Corrugated metal.

Design Codes

1.26 Within the above principles a set of more detailed design codes would be prepared for specific sites chosen for the new settlement(s). These would seek to address:

- Establishment of character areas;
- Street hierarchy and characteristics;
- Design principles for development parcels;
- Development characteristics for street blocks;
- Scale and massing of built form;
- Relationship of buildings to public space;
- Boundary treatments;
- Building typologies and potential mix of uses;
- Integration of landscape and environment, including SUDS, public open space and recreational provision;
- Building materials and construction; and
- Signage and street furniture.

Relevant Reading:

Life between Buildings : Gehl, Jan, Van Nostrand Reinhold, New York 1980

A Pattern Language : Alexander, Christopher, Oxford University Press, New York, 1977

Towards an Urban Renaissance : DETR, E & FN Spon, London, 1999

Designing Places : Scottish Executive, HMSO, 2001

Urban Design Compendium : Llewelyn-Davies, English Partnerships, 2000