URBAN DESIGN COMPENDIUM

HOMES AND COMMUNITIES AGENCY

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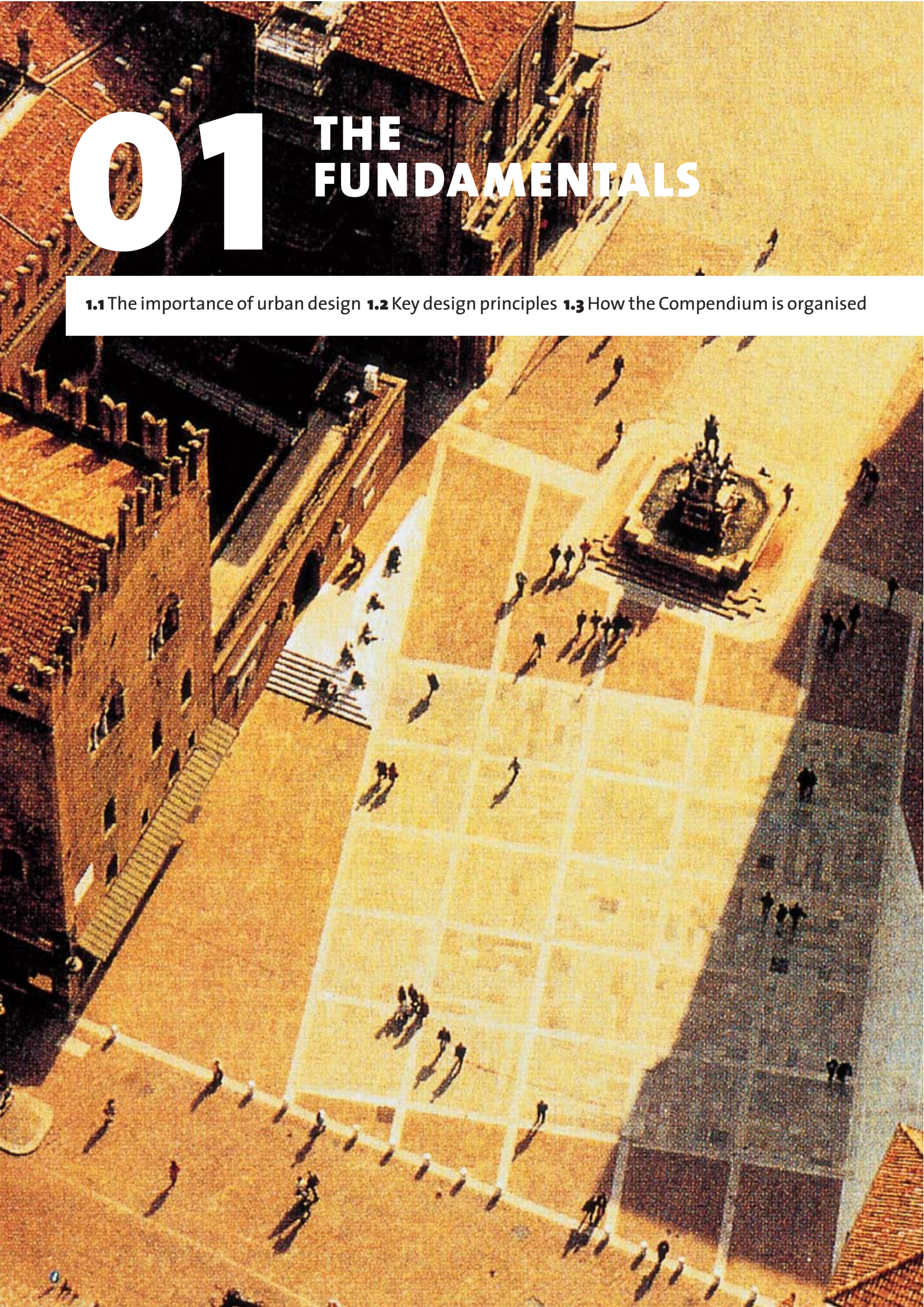

When the Urban Design Compendium was first published in 2000 it noted that quality of design was becoming one of the most important criteria in determining whether a project should be eligible for public funding. Since this time understanding of the importance of design quality in creating places people want to live and work in has grown. All development proposals – whether for new development or redevelopment of small infill sites – need to demonstrate that they will be delivering quality places.

It is therefore vital that those evaluating the quality of design proposals have some guidance on what forms of urban design work well and why. Similarly those developing proposals need information on what will be expected of them in terms of their investment in project design.

The purpose of the Urban Design Compendium is to help equip all those involved in the delivery of places with guidance on achieving and assessing the quality of urban design in developing and restoring urban areas.

It is not an exhaustive text. The Compendium provides an analysis of core design issues through the different stages of the project process, from assessment of overall context to deciding the detail of proposed developments. It is principally about the substance of urban design in creating the product. In other words, how do we change the urban landscape to create places where people want to live, work and socialise, from the street corner to the settlement. The Compendium is not generally intended as a guide on how design relates to the detail of the planning and management process. However, we address these issues in the new companion publication 'Urban Design Compendium 2: Delivering Quality Places'.

The material within the Compendium reflects good practice both in the UK and overseas, relying on the stream of new and rediscovered approaches to urban design that emerged at the end of the twentieth century. The regeneration movement has been at the forefront of producing this new wave of thinking about how design can position development in the market, change perceptions of place and create value. There is also a strong body of research to be drawn upon what constitutes urban quality.

Greenwich Millennium Village is already demonstrating new forms of city living

The Compendium was developed following the work of the Urban Task Force, which was established by the Government to consider how we can use a projected 20% increase in the number of households in England over the next 20 years as a basis for regenerating our towns and cities. In its 1999 final report: Towards an Urban Renaissance – the task force callled for design-led regeneration. This led to wider support for improving design quality, particularly through the planning process.

The Compendium was developed to complement the DETR/ Commission for Architecture and the Built Environment design guide 'By Design: Urban Design in the Planning System: Towards better practice. This document was published to promote higher standards in urban design and provide sound, practical advice to help implement the Government's commitment to good design, as set out in Planning Policy Guidance Note 3: Housing (2000).

In the years since these documents were published there has been increasing government commitment to the improvement of design quality. Planning Policy Statement 1 (2005) clearly states that 'high quality and inclusive design should be the aim of all those involved in the development process'.

Despite this growing understanding of the importance of good urban design CABE's housing audit have highlighted there are few high quality schemes actually being delivered on the ground. This edition of the Compendium is therefore accompanied by Urban Design Compendium 2: Delivering Quality Places, which provides detailed guidance on how to overcome key barriers in the design process which currently impede delivery of quality places.

Why the Homes and Communities Agency?

The Homes and Communities Agency has inherited a strong legacy from both English Partnerships and the Housing Corporation in leading the way on behalf of the public sector in promoting innovation in the design and delivery of the projects they have been involved in.

The Homes and Communities Agency strives to put the latest thinking into practice in its projects and those of its partners. It has pioneered new techniques such as Enquiry by Design and Design Coding on its projects and promoted innovation through competitions such as such as Design for Manufacture, Carbon Challenge and the Public Land Initiatve. It was also the first body to set compliance with Building for Life assessment criteria as a standard requirement on all projects. This emphasis on design has resulted in projects of exceptional design quality being delivered.

The Guinness Trust and Knightstone Housing Association have combined in Frome, Somerset, to create 'The Piggeries' – a mix of high density housing that responds sensitively to local context

Good design is one of the key elements which help the Homes and Communities Agency achieve their aim to invest in homes that create sustainable environments. This means creating areas that are desirable, healthy, safe and better places for people of all ages to live and flourish. The Agency understands that good design can create attractive sustainable communities for residents and justify their sense of pride in their environment.

Over the past decade the Homes and Communities Agency and its predecessors have used their Quality Standards and the competitive bidding process to improve standards and the quality of design. In addition the Agency and the Local Government Association agreed a national protocol which set out how they would work together in ensuring that high quality affordable housing is built and managed.

The bringing together of the Housing Corporation, English Partnerships and significant parts of Communities and Local Government into the Homes and Communities Agency has provided a one-stop shop for local authorities and their partners. With a substantial budget for housing and regeneration activities the Agency has significantly greater critical mass than any of the previous organisations acting on their own. Innovation in design remains a fundamental tenet of the Homes and Communities Agency in maximising the delivery of regeneration and new homes.

Who should use the Compendium?

The Compendium was developed to guide policy development and practical application in new development and regeneration for the Homes and Communities Agency. It was also hoped to have wider relevance so it would inform and assist all those involved in new development and regeneration and contribute to the improvement of housing-led regeneration projects and the promotion of sustainable new development.

Since publication over 30,000 copies of the compendium have been distributed worldwide and it has become a standard text for those studying urban design. It is also being translated into Korean and Serbian with interest from several other countries.

The principles in the Compendium remain constant and we hope they continue to inform and assist those involved in creating and delivering places.

For those requiring further guidance on the practical delivery of quality places the Compendium should be read in conjunction with 'Urban Design Compendium 2: Delivering Quality Places'.

1.1 THE IMPORTANCE OF URBAN DESIGN

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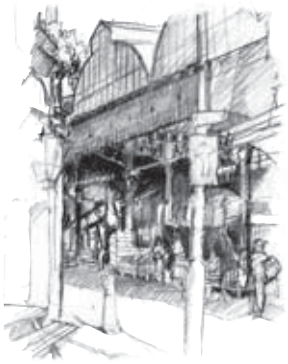
Urban design draws together the many strands of place-making - environmental responsibility, social equity and economic viability, for example - into the creation of places of beauty and distinct identity. Urban design is derived from but transcends related matters such as planning and transportation policy, architectural design, development economics, landscape and engineering. It draws these and other strands together. In summary, urban design is about creating a vision for an area and then deploying the skills and resources to realise that vision.

Since the Second World War, this country has seen very extensive urban development and renewal. While there are exceptions, a great deal of this development has been third-rate and is lacking in any 'sense of place'. At worst, the results have been downright ugly and unpleasant. Fine urban fabrics have been spoilt through the process of re-development. The remarkable built heritage flowing from the English urban tradition has yielded to banal and monotonous development, humdrum in design and dominated by traffic. We have repeated standard housing types and layouts, retail boxes and road layouts so many times, with little or no regard for local context, until we find that now almost everywhere looks like everywhere else.

Unblocking the blockages

The development process, and the players within that process - central and local government, politicians and professionals, developers, financiers and builders – have become entangled in a system which produces developments, but not places. We hope that this Compendium will fulfil a useful role in redirecting efforts, to create a framework for development as a contributor to the creation of quality places. There is a growing commitment on the part of funding agencies, as well as planning law and guidance, to underpin this effort to ensure that developments will not be considered acceptable unless they address the issue of place and do it well. To make quality places the norm rather than the exception means overcoming a whole series of constraints, including :

- The compartmentalisation of professional disciplines - the traffic engineer, chartered surveyor, architect, landscape architect, planner - rather than adopting a multi-disciplinary approach.
- The lack of recognition of the legitimate role of the public sector to promote high quality design through planning, site assembly, procurement and investment.
- The predominantly conservative, short term and supply-driven characteristics of the development industry - particularly the volume housebuilders, who concentrate on the 'house' product rather than the creation of a 'place', lifestyle or community.
- The property and financial industries' preference for single use schemes and buildings.
- A lack of innovation in development approaches in respect of sustainable development, use of new technology, construction efficiencies, and planning and design appropriate for the 21st century.



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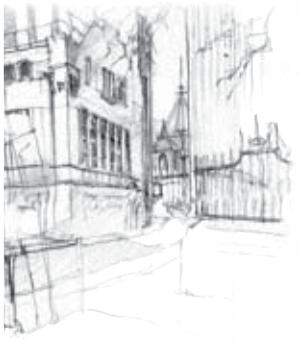

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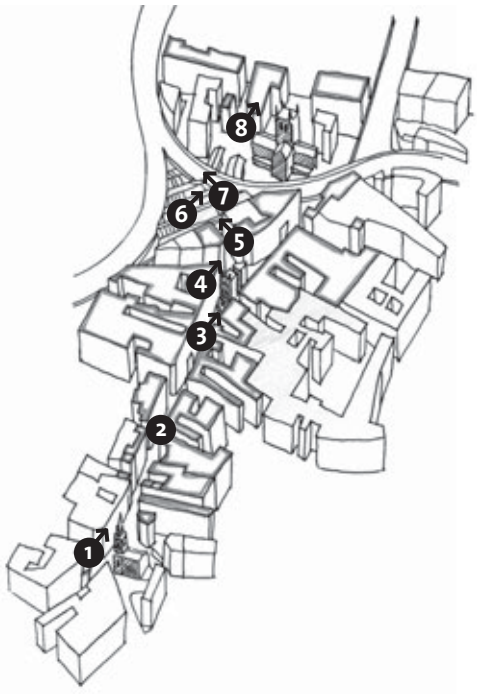
- Reactive planning and development control approaches and mind-sets, applying quantitative standards (zoning, density, car parking, privacy distances etc.) rather than providing qualitative advice and judgements .
- The lack of a reliable, robust and generally adopted series of guidelines and procedures through which high quality design can be procured.

Everyone owns Design

Design is not just for designers and their acolytes. Urban design, like all design, should involve a dialogue with the customer, whether the existing people within an area or those likely to move in. It is a process that needs to generate and draw upon consumer interest. The users hold the knowledge of how an existing area works, its needs and possibilities. Collaborative planning and design processes and a shared understanding of the issues ensure attention to local concerns and reduce possible antagonism from local communities to change.

Local communities can also have a role in implementing projects and managing aftercare. Involvement and commitment can be harnessed on these fronts through early involvement in the design process.

The commitment to dialogue extends, of course, to the professional interests. Urban design is not the province of one professional group; it should involve joint working between different stakeholders representing different interests. This means that a full range of professional skills needs to be involved at each stage of the design process, with the team members testing and challenging each other, coming under continual scrutiny from an informed client, and thus, through joint working, producing a single cohesive product to which all are committed.



By analysing existing places and the complex relationships between their constituent parts we can learn to recognise and create the qualities of a rich and stimulating urban environment

1.2 KEY ASPECTS OF DESIGN

Set out below is a summary of some key aspects of urban design which run throughout this Compendium. These have been developed with specific reference to regeneration and development issues and provide a basis for starting to think about a site or area - whether an empty brownfield or greenfield site, or for the refurbishment of an existing urban area. As such they differ in emphasis although not in broad policy direction, from design principles or objectives published in other design documents.

Table 1.1 – Key Aspects of Urban Design
Places for People
For places to be well-used and well-loved, they must be safe, comfortable, varied and attractive. They also need to be distinctive, and offer variety, choice and fun. Vibrant places offer opportunities for meeting people, playing in the street and watching the world go by.
Enrich the Existing
New development should enrich the qualities of existing urban places. This means encouraging a distinctive response that arises from and complements its setting. This applies at every scale - the region, the city, the town, the neigbourhood, and the street.
Make Connections
Places need to be easy to get to and be integrated physically and visually with their surroundings. This requires attention to how to get around by foot, bicycle, public transport and the car - and in that order.
Work with the Landscape
Places that strike a balance between the natural and man made environment and utilise each site's intrinsic resources - the climate, landform, landscape and ecology - to maximise energy conservation and amenity.
Mix Uses and Forms
Stimulating, enjoyable and convenient places meet a variety of demands from the widest possible range of users, amenities and social groups. They also weave together different building forms, uses, tenures and densities.
Manage the Investment
For projects to be developable and well cared for they must be economically viable, well managed and maintained. This means understanding the market considerations of developers, ensuring long term commitment from the community and the local authority, defining appropriate delivery mechanisms and seeing this as part of the design process.
Design for Change
New development needs to be flexible enough to respond to future changes in use, lifestyle and demography. This means designing for energy and resource efficiency; creating flexibility in the use of property, public spaces and the service infrastructure and introducing new approaches to transportation, traffic management and parking.

The table below sets out how these key aspects of urban design relate to the principles and objectives in key design documents

UDC1 Key aspects of urban design	By Design Principles of urban design	Princes Foundation Design and theory principles	Responsive Environments	PPS1 Principles of good design
Places for people	Quality of the public realm	Make Places	Robustness	create an environment where everyone can access and benefit from the full range of opportunities available to members of society
	Continuity and Enclosure			
Enrich the existing	Character	Build beautifully	Visual appropriateness	be integrated into the existing urban form and the natural and built environments
			Richness	
Make connections	Ease of Movement	Allow movement logically and legibly	Permeability	be integrated into the existing urban form and the natural and built environments
	Legibility		Legibility	address the connections between people and places by considering the needs of people to access jobs and key services
Work with the landscape		Design using natural harmonics		consider the direct and indirect impacts on the natural environment.
Mix uses and form	Diversity	Engender social interaction	Variety	address the connections between people and places by considering the needs of people to access jobs and key services
Manage the investment		Sustain land value		
Design for change	Adaptability		Personalisation	create an environment where everyone can access and benefit from the full range of opportunities available to members of society

The following chapters interpret these principles for each stage of project development.

1.3 HOW THE COMPENDIUM IS ORGANISED

The Structure of the Compendium

The scope of the Compendium

The Compendium has been designed to assist at three levels of project development :

1 Commissioning and setting up development projects

Ensuring that this complex process is done in a way that ensures that design is integrated throughout the evolution of a project. Therefore, at the very early stages of a project, the Compendium insists that urban design issues are considered, whether in respect of the economic appraisal, the preparation of an environmental statement, the development of a community participation strategy or other tasks.

2 Designing individual schemes

Within an overall development framework, the Compendium provides advice that will be useful in designing individual development schemes, from an entire block to an individual plot. For example, the guidance can be used to help construct individual site development briefs.

3 Evaluating project proposals in design terms

From major area regeneration schemes or town extensions to small applications for gap funding, individual buildings or spaces, the Compendium can provide the evaluating team with the triggers it requires to ensure a comprehensive assessment of a project's design potential and it can point funding bodies in the right direction. However it is not a substitute for project specific specialist advice.

The structure of the Compendium

The Compendium follows the chronology of the project development process (see left).

At times important advice is repeated but we make no apology for this. For example, issues that are crucial to making the right connections may also be essential to the pattern of the overall structure. To help the reader in making the right judgements as to what is relevant and what is not, and to assist the many readers who will want to 'dip into' the Compendium, rather than read it cover to cover, there are frequent cross-references.

The value of guidance

Taken together, guidance contained within the Compendium relating to both the 'product' and 'process' of urban design provides a comprehensive overview. Yet this is not a tick-box exercise. A note of caution is required. In design guidance, as in other fields, there is a sort of inverse utility rule; the value of new measures diminishing as a function of time. The more they are institutionalised, the less their utility. A classic case is the original Essex Design Guide - a first class piece of work in its time - rapidly adopted by planning departments and then by the development industry. This led to permissions being won on a 'deemed to comply' basis, almost regardless of the actual design quality. They learnt the tune but ignored the music!

For every piece of general guidance produced, there is an excellent place that defies the guidance, or shows other ways of achieving high quality solutions. Genius, or indeed serendipity, breaks the rules.

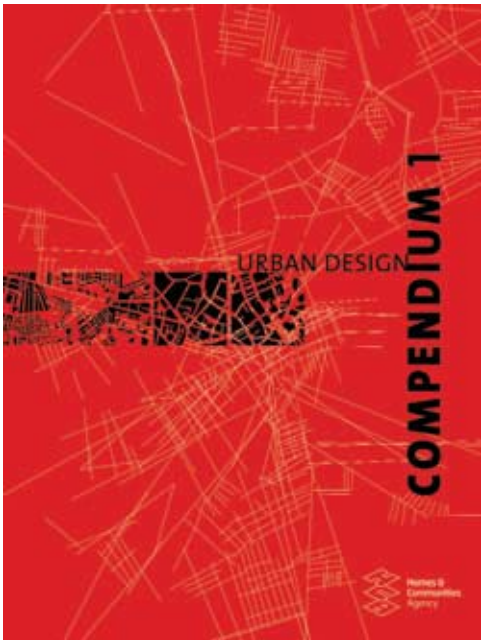
Important to the spirit of the Compendium is its encouragement of clients and their designers to aspire to the creation of high quality places. Our overall messages are that there is a need for everyone to contribute to a new culture of high quality urban design and that there is no substitute for a good design team.

How to use the Compendium

The Compendium has been constructed in such a way that it can be read as a single coherent narrative, tracing the design of a project from first principles to specific features, but at the same time it can be dipped into on a topic-by-topic basis. There is no prescription in the Compendium but neither does it shirk from giving quantitative advice where this is deemed helpful. Thus, throughout the report, there are many rules-of-thumb and guideline values that should be considered in drawing up design proposals.

Different parts of the Compendium will be relevant to different types of project. In respect of significant area regeneration schemes, town extensions or new settlements, most of the material contained in the Compendium will be relevant. For smaller infill schemes, it will be a case of extracting those items that are relevant in any given case. What is important is that funding applicants do not sell themselves short. Even the simplest infill scheme must, for example, have due respect for its site context and its overall contribution to the neighbouring urban structure.

The Compendium contains a series of tables and checklists. These are intended for practical use, to be employed in real project scenarios by project promoters and evaluators, in testing the robustness of the design approach. In the final chapter there is a particularly important flow diagram that presents all the core elements of the urban design process. All significant area regeneration projects should pass through each of these processes. Smaller projects will need to employ some but not all of the stages.



The Compendium also provides case studies to illustrate different approaches and points of principle. Each case study has contact details so that relevant projects can be followed up.

How does it fit with Urban Design Compendium 2: Delivering Quality Places

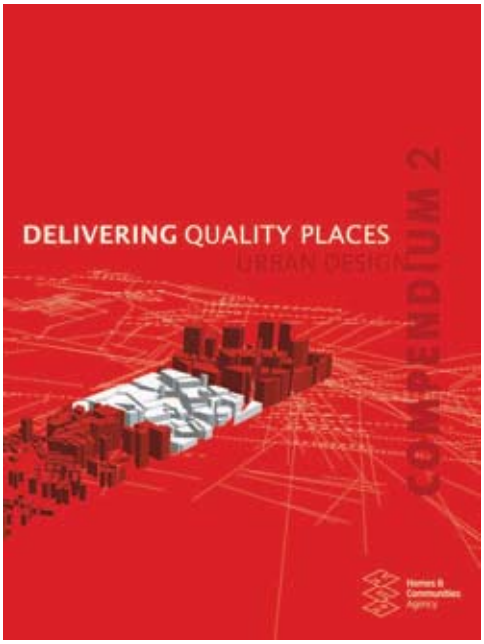
If Urban Design is 'the art of shaping the interaction between, people and places, environment and urban form, nature and built fabric, and influencing the processes which lead to successful villages, towns and cities' (Campbell and Cowan, 1999) this Compendium deals with the former aspects and the second Compendium addresses the processes which lead to successful villages, towns and cities. Urban Design Compendium 2: Delivering Quality Places therefore builds on the principles of this Compendium to provide guidance on how these principles can be effectively delivered in practice.

To do this the second Compendium considers the different processes that impact on project delivery; policy, design, investment and development economics, planning and technical approvals and governance, management and maintenance. It provides guidance on what needs to be done at each stage to ensure delivery of places which prove to be high quality in the long term.

As with this document, the second compendium draws on the experiences of those who have been involved in project delivery, from the Homes and Communities Agency and beyond. It is hoped that this guidance on why particular aspects of projects have been successful will provide an effective resource for all those involved in delivering new developments and regenerating existing areas.

The first edition of this Compendium noted that it was prepared against a shifting and evolving backcloth. In the seven years since it was published there have certainly been significant changes in public policy, technological development and environmental thinking which have significant implications for urban design. The second compendium looks to address some of these in more detail, particularly with regard to environmental issues and long term management of places.

UDC website – www.homesandcommunities.co.uk/udc



The Compendium does not purport to be the final word on best practice in urban design. Further information on urban design principles and case studies can be obtained from organisations such as Commission for Architecture and the Built Environment (CABE), the British Urban Regeneration Association, the Urban Design Group, the Civic Trust and the Resource for Urban Design Information (RUDI) website (www.rudi.net).

As a best practice guide such as this derives its value from the projects and partnerships it forms and stimulates. The Homes and Communities Agency wants the Compendium to continue to be used but we also desire feedback from the experience of its use. What needs to be changed? What is missing? What should not be there? What is difficult to understand? What is difficult to implement?

We will learn from this feedback and use it to develop both the web based guidance and our other best practice documents. We will also look to implement any suggestions for better, more effective ways of working in our future projects.

02 APPRECIATING THE CONTEXT

2.1 Community **2.2** Place **2.3** Natural resources **2.4** Connections **2.5** Feasiblity **2.6** Vision

London Aerial Photo Library

What is meant by context

Context is the character and setting of the area within which a projected scheme will sit. It is its natural as well as human history; the forms of the settlements, buildings and spaces; its ecology and archaeology; its location, and the routes that pass through it. Context also includes people, the individuals living in or near an area and how communities are organised so that citizens become real participants in the projected development. A thorough appreciation of the overall site context is the starting point for designing a distinct place.

Why context is important

Context is crucial. It is about understanding the position of development, and how to position a development. This involves a range of considerations and participants, directly or indirectly. High quality places will only emerge if the approach is cohesive and inclusive. Designers need to take account of the following priorities:

Strengthening local communities

To help ensure that proposed development reinforces, rather than undermines local communities and assists successful project delivery.

Creating places of distinction

Drawing inspiration from a neighbourhood's indigenous character strengthens local identity. Context-less design leads to 'anywhere places'.

Harnessing intrinsic site assets and resources

Harnessing the intrinsic resources of the site - the existing development form, soils and geology, drainage, landscape, solar and wind energy - to create more sustainable development.

Integrating with surroundings

Achieving careful integration with the landscape or surrounding built environment, using the right materials, forms and landscape elements for the locality; respecting footpaths, street and road linkages and relating to existing urban structures.

Ensuring feasibility

To ensure economic viability and deliverability.

Providing vision

A vision focusses community aspirations, sells a scheme to a developer and provides a long term aim for project participants. It embodies a strategy for the future that everyone can sign up to and work towards over a period of time.

2.1 COMMUNITY

The success or otherwise of a project is a product of understanding the human as well as the physical geography. Above all, places must be stimulating for people, and buildings and open spaces must be comfortable and safe. This requires an appreciation of the dynamics of the local community, including:

- local views and initiatives;
- local history and custom;
- the views of other stakeholder groups and individuals (such as developers, landowners, utility organisations);
- organisational or institutional arrangements;
- the policy context.

Design is an essential tool for negotiating trade-offs between different interest groups and securing mutually compatible solutions. The best way to gain the necessary understanding of the above factors, and the potential role of design in strengthening existing communities, is to adopt a public participation strategy that involves a wide spectrum of local interest groups and individuals.

Hosting an Action Planning Day during the initial phase of the Brixham Harbour Regeneration Project ensured design ideas were based on a thorough appreciation of the views of local people

Understand the social dynamics

A community-led review process will address a number of key questions. What are the perceived problems? What is the local image of the place? Can the development complement this existing identity, or does it need 're-imaging'? What behavioural characteristics are distinguishable on the site and its surrounds? Where are the main routes, popular uses and focuses of activity? In order to answer these questions, it is essential to include local people in the design and development process. It is also useful to delve into local historical archives to understand how the place has evolved over time.

Table 2.1 provides an inventory of considerations for undertaking a review of the existing community network and the policy context within which design aspirations are to be taken forward. Section 6 provides references on public participation in design.

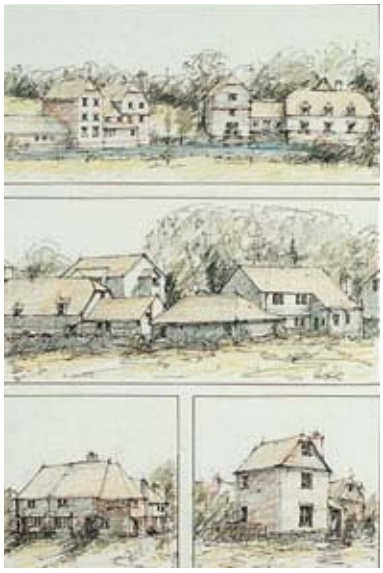
The framework has helped deliver improvements to public realm in Bracknell Town Centre

Table 2.1 Community and Policy Appraisal Inventory	
Subject area	**Considerations**
Community profile	• Stakeholders
	• Local views, preferences and aspirations
	• Organisational structures
	• Census and other statistical data
	• Cultural characteristics
	• Safety and security
Local plan policies	• Design
	• Strategic views
	• Land uses
	• Transportation plans
	• Interim uses
	• Specific constraints (eg. airport protection zones)
Heritage and conservation	• Conservation areas
	• Listed buildings
	• Ancient monuments
	• Archeology
	• Sites of Special Scientific Interest
	• Local Nature Reserves and other designated ecological sites
	• Protected flora and fauna
	• Nature conservation, Countryside and Green Strategies
Other relevant policies and initiatives	• Supplementary planning guidance – Development frameworks – Design guides – Site development briefs • Other relevant local authority policies • Relevant policies and requirements of other bodies (eg. RDAs, Environment Agency) • Other local initiatives

Bracknell Town Centre Renewal: *Creating a consensus for improvement*	
Location:	Bracknell Town Centre
Design Team	URBED, Jon Rowland Urban Design
Local Authority	Bracknell Forest District Council
Project	Urban Design Framework and provision of Supplementary Planning Guidance
Details:	Bracknell Forest District Council, in the face of two major planning applications, required an urban design framework that would help set the design agenda for the renewal of the town centre and provide a basis for negotiations with the developers. A series of public workshops, which also included members, officers, and representatives from the developers, was held. These established the image and perception of the town centre and a set of design principles. The workshop groups also designed their own plans and aspirations for their town centre. A general consensus was apparent, and this formed the basis of the Urban Design Framework. The key principles on such aspects as access, mix of uses, and public realm were set out in the form of Supplementary Planning Guidance.

2.2 PLACE

Responding to local context – applying a palette of materials and architectural features unique to the North-East Region



Studies of local vernacular in and around Ashford

1919 **Today**

Devonport street grid

Part of the urban design lexicon is the "genius loci", the prevalent feeling of place. Perceptions of a place are made up of layers of understanding - the settlement in the landscape, its overall structure, the district, the street, the building. They arise from understanding the physical and human geography, the history and morphology of past uses, the natural landscape and buildings, both on a site and around it.

This analysis is essential for both regeneration and new build schemes to make them distinctive and to halt the production of endless, almost featureless, estates which look the same throughout the country.

Everywhere is somewhere

An assessment of the roles and relationships of the area or site to its strategic context, together with an appreciation of the individual characteristics of form and the way a place is used, will lay the foundations for a unique design response.

Table 2.2 provides an inventory of considerations in undertaking a character appraisal.

The key components are:

1 Regional identity

Start by identifying the common characteristics of the region or sub-region. This may relate to climate and physical geography (see Table 2.2), as well as to socio-economic profile (see Table 2.5).

2 Linkages to surroundings

How do connections define the settlement characteristics - is it a linear structure along a main route or part of a grid of streets?

3 Local character

Establish the elements of local distinctiveness, both the form of a place and the way it is used. How can these be built into a project? Are there particular local materials, building forms and features that can be used as a source of inspiration?

4 Morphology

Define what gives shape to the local morphology (historic routes, block patterns, building heights and massing, local vernacular, for instance), and how this provides cues for appropriate design forms.

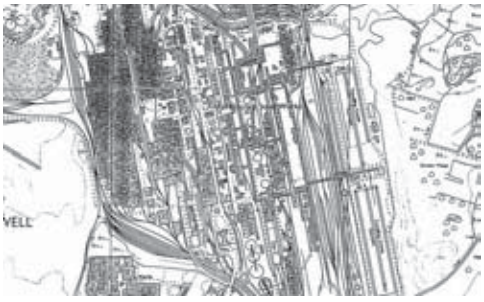
5 Natural features

Are there particular ecological or geological characteristics, for instance, that give a place its essential character? (see Table 2.2)

6 Socio- economic profile

What are the demographics of an area and are there particular local traditions and events to draw influence from? (see Table 2.3 and 2.5)

Ravenscraig is located between Motherwell and Wishaw

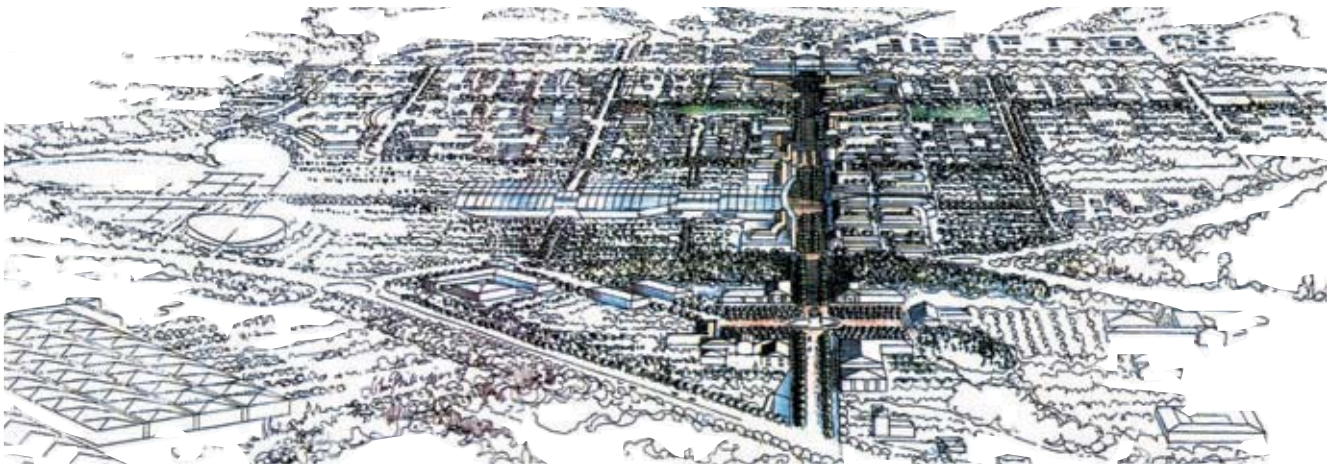


The legacy of the Ravenscraig steelworks (shown here in 1922) is a site largely constrained by sub-surface structures

The figure-ground plan shows how streets and blocks are proposed that take account of these constraints

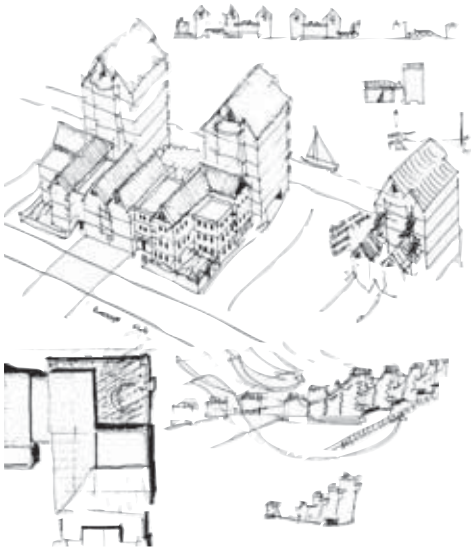
Ravenscraig Master Plan, North Lanarkshire, Scotland: *A new place based on old foundations*

Location	Between the towns of Motherwell and Wishaw and adjacent Craigneuk and Carfin in West Central Scotland, 15 miles from Glasgow.
Design Team	Master Planner: Llewelyn-Davies Property surveyor: Grimley Engineer: The Babtie Group
Developer	Lanarkshire Development Agency, North Lanarkshire Council and British Steel
Site Area	455 hectares
Project	The preparation of a Master Plan for the redevelopment of the former Ravenscraig Steelworks.
Details	The closure and subsequent demolition of Ravenscraig Steelworks left a huge physical hole in the Motherwell / Wishaw urban fabric, and a huge economic and social hole in the community. The North Lanarkshire area was traditionally very dependent on steel and allied industries, and since 1979 has lost some 40,000 jobs. Preparation of the Master Plan in 1997 required an appreciation of these wider issues and the physical design of buildings, streets and public spaces had to take account of the constraints posed by ground contamination, deep foundations, large drainage culverts (including the South Calder Water), high voltage cables and railway lines. The design response has been to propose an orthogonal grid (which takes a cue from Craig's New Town Plan of 1767 for Edinburgh) aligned with these sub-surface constraints. This provides a flexible framework that is capable of accommodating over 3000 new homes, a full range of community and leisure facilities, a variety of employment opportunities (from large single users to small workshops) and an efficient public transport network - all contained within an outstanding landscape setting.



The Ravenscraig vision is for a new settlement comprising more than 3,000 new homes

Michelin building, Fulham Road, London



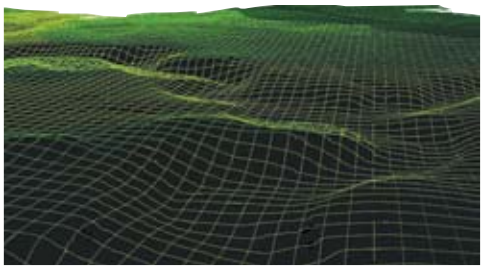
Sketching concepts to respond to place

Table 2.2 Character appraisal inventory

	Subject area	Considerations
Roles and relationships of the site/area to its strategic context	• Function • Linkages to wider area • Relationship to adjacent areas	• Current performance relative to similar areas • Identity
Contiguous areas	• Land uses • Views and skyline	
Character appraisal	• Historical development • Settlement pattern	• Building elements and fenestration
	• Archeology	• Rhythm and pattern
	(initial appraisal) • Cultural characteristics and heritage	• Details and richness • Local community aspirations
	• Local history • Colour and textures	• Local/regional building traditions and materials
	• Local vernacular	• Other local traditions
	• Facade treatments	• Events/festivals
	• Roofscape	• Place names
		• Natural environment/ ecology / local provenance (plants, trees etc.)
Streetscape and public realm analysis	• Visual clutter • Lighting • Barriers • Live edges	• Street furniture, public information and signing • Public art • Safety
Buildings, structures and spaces	• Layout and form of spaces • Public /private interface • Layout and form of buildings (including height, scale and massing) • Age and condition of buildings and structure • Relationship between built and unbuilt form	• Sense of enclosure • Types of buildings • Continuity of facades • Urban grain • Public and open spaces
Uses and activities	• Ground floors	• Arts and culture
	• Upper floors	• Amenities and facilities
	• Evening economy	• Education
	• Activity spines and nodes • Public and open spaces	• Leisure and recreation • Employment
		• Wildlife
Visual analysis	• Image and perception of the area • Gaps and enclosure	• Boundaries and barriers • Aesthetic quality • Legibility
	• Views (local and strategic), vistas and landmarks • Skylines	
	• Gateways and thresholds	

2.3 NATURAL RESOURCES

Urban design in the Nieuwland neighbourhood of Amersfoort, Holland, is centred on optimising solar potential



A terrain model can provide an invaluable tool for masterplanning sloping sites

Existing features can provide cues to inform design

A thorough investigation of a site's natural resources will lead to an overall design response that:

- integrates the various needs of the new development;
- identifies possibilities that the site offers; and recognises the site's limitations.

Work with the elements

The optimum approach involves the maximum use of the site's resources while placing minimum demands on the environment. This involves taking a long term view of the possible environmental impact and addressing how to:

- utilise the solar potential;
- make full use of rain water and drainage systems;
- use the potential of the ground for heating or cooling;
- harness wind energy;
- further reduce energy demands by, for instance, integrating a Combined Heat and Power (CHP) plant into the development (see 3.4.5) or harnessing biomass.

Table 2 .3 (taken from English Partnerships' *Best Practice Note 65*) provides an inventory of considerations to use as the basis for environmental and landscape appraisal. This may culminate in an environmental statement or environmental impact assessment, according to the project scale.

'If it ain't broke, don't fix it'

The critical questions to be asked include:

- should the site be developed at all?
- if it should, then what parts of the site?
- what mitigation measures can be taken to avoid, reduce and remedy negative environmental impacts?
- what types of development are appropriate and how can these integrate with the wider urban structure?
- which features can form the basis of the landscape structure?
- how can exploitation of the site's assets reinforce a unique sense of place?

As a general principle, it is important to focus on how to repair and re-use previously developed or damaged parts of the site, while retaining and respecting undamaged parts. This requires three key considerations:

1 Identify landscape assets to preserve

Many of the most valuable spaces, places and landscape assets are precisely thus because they have been left alone. Most ecological or landscape assets need respecting, rather than exploiting. The value of a landscape asset can easily be degraded.

2 Re-use and repair brownfield land

Many sites will be deficient in natural or semi-natural assets, such as topographical features, watercourses and planting. Furthermore, decontamination or remediation may cause further impacts on the existing landscape. On such sites consider ways of:

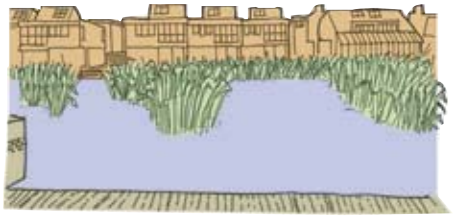
- introducing new landscape features and wildlife habitats;
- restoring damaged parts by, for instance, re-profiling a slope;
- integrating elements from the site's past life, such as routes, structures and buildings.

3 Strengthen the identity and structure of the landscape

Identify those landscape features for inclusion in a scheme which contribute towards the unique character of a site. Particularly on greenfield sites, every effort should be made to work with the 'grain' of the land and incorporate existing features of the landscape into a scheme. Reviving historic features provides opportunities to enrich outdoor space and can include natural and man-made elements, from watercourses and streams to ancient field boundaries.

The intrinsic landscape characteristics for evaluation include topography; orientation; aspect and prospect; current landscape assets (trees, water, habitat etc) and liabilities; contaminated, despoiled and poorly drained land, unsightly structures; overhead lines and utility facilities.

Ecolonia's layout is centred on a reed-fringed pond, with buildings orientated to maximise solar gain



Highest density homes are located in the central area and enjoy a direct relationship with the water

Ecolonia: *A model of low-energy housing*	
Location	Ecolonia, Alphen aan den Rijn, The Netherlands
Promoter	NOVEM - Dutch Government Trust for Energy and the Environment (now Agentschap NL)
Design Team	Urban Designer / Masterplanner: Atelier Lucien Kroll, Brussels
Details	The Masterplan provides the framework for nine different architects, each given a particular design priority: Energy 1 Bakker, Boots, Van Haaren, Van der Donk, Schagen (high insulation) 2 J.P. Moehrlein, Groningen (solar energy) 3 Hopman bv, Delft (low embodied energy and in use) Recycling 4 BEAR architects, Gouda (economy of water and materials) 5 Alberts & van Huut, Amsterdam (durable materials) 6 Lindeman c.s., Cuijik (flexibility and adaptability) Quality 7 Vakgroep FAGO, Technical University, Eindhoven (acoustic insulation) 8 Peter van Gerwen, Amersfoort (health and safety) 9 Archi Service, s'Hertogenbosch (bio-ecology)
Developer	Bouwfonds Woningbouw Housing Association
Project	101 housing units (constructed between 1991-93) in groups of 8 to 18 buildings to foster a sense of community, each with different environmental design priorities (see above). A reed-fringed pond with bisecting canals forms the focal point.
Details	Ecolonia is heralded as the most important EU-funded low-energy housing demonstration project to date. The project is organised to develop a wide range of new technologies and housing designs, each focussed on different ecological aspects. These include the • use of rainwater;- • use of passive and active solar energy; • energy saving strategies; • reduction in water consumption; • recyclability of building materials; • organic architecture; • durable materials; • flexible ground plans; • soundproofing; • healthy building materials. The performance of buildings is subject to on-going testing, evaluation and monitoring.

Table 2.3 Environmental Appraisal Inventory

Characteristics of the Proposed Development																										
	Operation														Construction											
Characteristics of the Existing Environment	Landscaping	Potential Emergencies (including hazards)	Transport Requirements	Traffic Movements	Production Outputs	Labour Requirements	Demand for Services	Waste Disposal	Water Demand	Storage/Stockpiling	Equipment Operation	Raw Material Inputs	Location of Buildings or Works		Landscaping	Potential Emergencies	Traffic Movements	Labour Requirements	Equipment Operation	Raw Material Inputs	Building Construction	Location of Buildings or Works	Drainage Construction	Land Clearing		
Physical Environment																										
Ground conditions and soils																										
Surface and groundwater resources																										
Topography and geology																										
Climate, microclimate, orientation, exposure																										
Air quality																										
Hydrology (inc. water quality and watersheds)																										
Land and Land-Use																										
Property (residential and commercial)																										
Leisure activities																										
Agriculture																										
Forestry resources																										
Access to the countryside																										
Ecology and Nature Conservation																										
Terrestrial & aquatic habitats & communities																										
Plant and animal species																										
Specially protected animals and plants																										
Heritage																										
Landscape setting, structure and type																										
Archeology																										
Historic sites and features																										
Cultural interests																										
People																										
Human health and welfare																										
Employment																										
Community and cultural cohesion																										
Views																										
Noise and vibration																										
Transport																										
Accessibility																										

2.4 CONNECTIONS

Sometimes facilities introduced in the name of 'pedestrian improvements' actually impede movement

Successful development depends on good access and connections. The connections between a site and its surroundings are important for even the smallest of developments. A site that comes up for redevelopment will have existing points of access, but they may not be of the right kind or in the right place. For instance, the entrance to a railway goods yard may be totally inappropriate when the site is made available for a mixed-use development.

The contextual analysis that will provide the basis of a movement framework will need to establish:

- how routes from the new site will knit in with the existing infrastructure;
- the provision made for all forms of movement, with positive discrimination in favour of walking, cycling and public transport;
- how the new development can benefit the area as a whole, for instance by the extension of a bus route, or a more direct footpath to the neighbourhood centre;
- how movement will be provided for at all stages in the development.

At project inception, it is a matter of establishing the principles of the movement framework. The structure will be designed later in relation to the overall development scheme.

Understand existing access and linkages

To integrate the site with its surroundings, it is first necessary to analyse existing points of access and linkage for both movement and infrastructure. Table 2.4 provides an inventory of considerations.

Observe the quality of movement

Watching how people move through an existing area reveals the various influences on movement at work. How people move, particularly on foot, is not just a matter of the simplest and most obvious route, but will be influenced by, for example: variety and interest; safety; light and shade; commercial activity; landscape; noise and pollution. Movement analysis will suggest how these considerations can be added to and improved. Remember, how we experience travel also differs according to the particular needs of women, children, the elderly, the disabled etc.

Table 2.4 Movement analysis inventory

Subject area	Considerations
Circulation	• Access and mobility • Walking
	• Cycling
	• Public transport
	• Private vehicles
	• Interchanges
	• Permeability
	• Barriers
	• Rights of way
Legibility	• Points of entry / gateways • Hierarchy of routes and spaces
Traffic generation	• Current levels • Future proposals and projects
Accommodating cars and services vehicles	• Parking • Servicing • Traffic management