

# Making it home: the power of landscape to create good housing

**Landscape  
Institute**  
Position statement



# Foreword

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Whether the setting is urban or rural, far too many housing developments make little reference to the landscape in which they are set. The pressure in both the public and private sectors is to maximise use of available space. With a government target of three million new homes in England over the next twenty years, and a Scottish government target of 35,000 homes per year in the next decade, it is understandable but not acceptable that the emphasis is on quantity but not quality, on internal facilities rather than the overall setting. Fortunately, many house builders are increasingly aware that creating successful developments requires that local context, character and culture are part of the planning, design and management process.

Provision of housing cannot be separated from current environmental and social challenges including climate change, biodiversity, energy supply, food security, social cohesion and flood risk management. Ensuring that all of us have access to good quality housing demands that we look again at how we plan and design it. Landscape underpins the environmental, social and economic pillars of sustainability. The vision of the Landscape Institute is that all development should be based on a genuine understanding of its landscape context so that these characteristics can create schemes that are desirable for the developer, the user and the neighbouring communities.

In 2009 the Landscape Institute published a position statement *Green Infrastructure: Connected and multifunctional landscapes* which demonstrated how multifunctional landscapes can meet a wide variety of needs. We were delighted with the positive response to this publication. *Making it Home* builds on this work by showing why multifunctional landscapes should increasingly be at the heart of every housing development.

The need to build more sustainable housing with a limited supply of land means that innovation is necessary but working towards sustainable communities relies on more than the achievement of zero carbon housing; its success will also be determined by the selection of appropriate locations for development, the integration of housing into its urban or rural context, and the recognition of the needs of each community for spaces that help social cohesion and create a good quality of life.

Landscape professionals are involved throughout the development process from pre-planning and strategic decision making through to creative, technical and specialised design.

We hope that 'Making it home' will inspire everyone in the business of creating homes and communities to adopt an integrated landscape approach.

**Neil Williamson FLI**  
President  
Landscape Institute

**Clare Brockhurst FLI, Noel Farrer CMLI, Peter Wilder CMLI**  
Landscape Institute Policy Committee Housing Working Group



# 01 Introduction

The landscape<sup>1</sup> is constantly evolving in response to changing human as well as natural factors. The European Landscape Convention (ELC) which was adopted by the UK Government in 2007, defines landscape as “an area, as perceived by people, whose character is the result of the action and interaction of human and/or natural factors”.<sup>2</sup> This approach recognises the dynamic nature of landscape, and emphasises the management of change, the creation of new landscapes and management of the landscape that we inherit.

Housing developments have a major impact on the fabric of landscapes. Equally, an approach to housing development which works within the constraints and opportunities provided by the landscape will not only minimise adverse effects but will also offer environmental, social and economic benefits. It is these benefits that this position paper will explore.

The Landscape Institute advocates landscape as an integrating framework which will deliver sustainable communities. Building on the European Landscape Convention’s definition of landscape, our aim is to ensure that the principle of multifunctional landscapes is incorporated into all appropriate housing developments.

The mission statement of the Landscape Institute is ‘to create a thriving society and environment through inspirational places’. Our ten point plan for housing and landscape is part of realising this vision.

## We recommend that:

- 01 **Developers** incorporate landscape design and planning into initial site planning briefs.
- 02 **Developers** are encouraged to recognise the power of multifunctional landscapes to achieve their goals as well as environmental and social objectives.
- 03 **Local planning authorities** make detailed design, maintenance and management plans for landscape part of planning agreement before full approval is given.



04 **Local planning authorities** use Section 106 agreements to deliver landscape maintenance and management objectives in line with the original aspirations for the scheme.

05 **Planning committees** become better informed on the significance of landscape for housing developments.

06 **Affordable housing providers** recognise the power of landscape to deliver many of the requirements set out in the regulatory framework against which their performance is measured.

07 **The Tenant Services Authority** and the **Audit Commission** (which monitor the performance of social housing providers) incorporate qualitative and quantitative landscape measures in their regulatory regimes.

08 **Design Review Panels** receive all but the most modest schemes for Design Review.

09 **Building for Life** scores are given equal weight to other economic considerations.

10 **The landscape profession** is encouraged to make use of current policy, regulation and standards which provide for landscape as an integrating framework in the development of housing and revitalising of existing stock.

## From concept to completion

Five case studies have been selected to illustrate exactly how careful planning and design can create developments that are sympathetic to their context and environment, an outcome which is to the benefit of the developer as well as the community.

The landscape profession has a significant contribution to make in the promotion of land for housing and the development of the master plan, green infrastructure (GI) strategy and the detailed creative design, implementation and management of the landscape.

Practitioners may be specialists in planning, environmental design, land management and reclamation, or have specific skills in construction and management. The diagram overleaf illustrates, in simplified form, how the involvement of the landscape profession, throughout the life-cycle of a housing development assists in achieving sustainable communities.

1 All references to landscape include both urban and rural landscapes, the totality of the urban environment which forms the context within which built development takes place.

2 European Landscape Convention, 2000

# The role of the landscape professional – the path from concept to completion

## Phase 1 Understanding and analysis of the site

- a Understands regional landscape character and landscape resources in determining suitability of land for development at a strategic level.
- b Recognises the value of local character in the planning and distribution of housing as new settlements or urban extensions. Considers the ability of the landscape to absorb change.
- c Contributes to strategic masterplanning frameworks that consider the guiding principals for the development informing the strategic and detailed design approach.
- d Part of due-diligence assessment, identifies specific landscape opportunities and constraints in the context of policies relating to new housing provision.
- e Considers site viability. Scopes environmental issues affecting development and formulation of design principals.
- f Balances landscape issues in the context of policy objectives to focus new growth in the most appropriate location.



## Phase 2 Engagement in the process

- a Identifies best possible scenario for development as part of a multi-disciplinary team to ensure preservation and enhancement of key environmental features.
- b Engages with stakeholders to ensure the scheme evolves with support from decision-makers, community groups and other interested parties. Focuses on issues of context and specific desires.
- c Helps to empower community champions in formulating the needs of the community and identifies opportunities for engaging local residents and businesses in the development process.
- d Facilitates consultation and dissemination of outcomes and progress.



## Phase 3 Progressing the scheme

- a Investigates landscape issues and community responses to develop detailed knowledge of the locality, site and needs of the existing communities.
- b Examines the technical veracity of the work undertaken, determines the acceptability of change and mitigation strategy to be employed.
- c Gives evidence at Inquiry to assist with the determination of the application by a Planning Inspector or the Secretary of State.



<b>Role of the landscape professional in the planning and design process – Local Planning Authority</b> ↓	<b>Role of the landscape professional in the planning and design process – Independent Landscape Practitioner</b> ↓
Assesses the landscape character at a regional scale.	Interprets published assessments and considers landscape opportunities and threats and implications on development strategies.
Undertakes local landscape character assessments.	Advises on the implications and special measures required for development within a local context.
Engages with stakeholders in formulating policy.	Involved in the preparation of landscape planning guidance. Interprets guidance in evolution of a development strategy.
	Conducts pre-acquisition appraisal of potential sites including visibility, landscape resources, land contamination, tree preservation, habitat protection, sensitive local receptors, surface water management and access.
	Conducts site specific evaluation of landscape and visual resources. Identifies environmental planning aspirations and objectives. Considers measures to achieve a successful scheme.
Assesses potential development sites as part of DPD process.	
↓	↓
	Development of GI including preservation of existing landscape features, designation of development plots, identification of SuDS train and strategies for adoption, integration of local context and environmental context into strategic framework.
	Review contributions made by stakeholders and evolve the design to accommodate positive change to improve the scheme design. Understand local issues, concerns and desires.
Public Consultation.	Public Consultation. Facilitates communication of the impact of development on the landscape and the measure taken to mitigate and enhance the local environment as part of process.
	May provide information on new groups that should be consulted as part of process and help to facilitate contact with key stakeholders.
↓	↓
	Finalises design principals and parameters of the development proposals. Completes the Landscape and Visual Impact Assessment as part of the planning submission. Further mitigation to be incorporated to avoid, reduce or minimise landscape and visual impacts.
Reviews submitted landscape and visual impact assessment and landscape masterplan.	
Appears as Expert Witness at appeal.	Appears as Expert Witness at appeal.
↓	↓

## The role of the landscape professional – the path from concept to completion

### Phase 4 Detailed proposals

- a Advises on any special landscape considerations including potential innovation that would help to make the scheme viable. Design to be progressed in line with the overarching design principals and achievement of policy and development objectives.
- b Contribute to outline objectives for Code for Sustainable Homes (CfSH) assessment and scheme benchmarking against target objectives. Inputs to the design process and development of management objectives to ensure longevity of the scheme and in particular, the landscape resources.
- c Carefully considers the commercial viability of the scheme against the environment issues and contributes to the balancing of considerations through the introduction of innovative approaches or considered design and application of policy.
- d Consults with stakeholders to ensure that the detailed scheme continues to address the relevant issues and reacts to changes in policy and community needs.
- e Ensures that the design principles are adhered to in the implementation and management of the landscape during and after the construction phases.
- f Sets out proposals which maximise the ability of the landscape to provide a safe and engaging sense of place and mitigate against the impact of development on the natural environment.



### Phase 5 Procurement

- a Prepares sufficient detail to ensure that innovative approaches are thoroughly thought through and not disposed of due to lack of conviction in resolution. Integration of landscape systems and building systems is crucial at this stage.
- b Promotes best practice in environmental solutions and in community involvement in the creation of place utilising formats appropriate to the stakeholders and consultees.
- c Provides best practice in specification to minimise embodied energy and environmental impact. Promote value of 'green' sourcing initiatives.
- d Engages contractor in the process of delivering sustainable solutions to minimise site waste and traffic and to ensure fidelity to the design objective. Provide full procurement services individually or as part of a multi-disciplinary team.
- e Assesses not only the contractors capacity to deliver the scheme but also proven credentials in waste and environmental management of construction sites.



### Phase 6 Construction/completion of the scheme

- a Ensures that quality objectives are maintained and that variation do not impact on desired objectives of the management plan or the CfSH accreditation of the scheme.
- b Maintains communication with stakeholders to ensure support with the development process and to advise on technical process. This maintains local support to the changes occurring.
- c Ensure that defects are quickly rectified and that varied details meet performance objectives.
- d Inspects quality of work via post completion evaluation of the scheme to review whether objectives were met and that the landscape is performing to expectations and in accordance with specification.



### Phase 7 Landscape maintenance and management to deliver landscape vision

- a Delivers the solutions working with the existing and created environment, utilising management prescriptions which respond to sustainability objectives.
- b Reviews the ever-changing landscape and seeks to address necessary changes through variation of the management plan or delivery of further works.

**Role of the landscape professional in the planning and design process – Local Planning Authority**



Comments on the design and management plan and draws up meaningful reserved matters which are required to be addressed in order to satisfy the policy objectives for a sustainable development.



Monitors implementation on site.

Reviews evidence that management procedures are being implemented and that desired results or compliance testing has been carried out.

Inspects works for handover to third parties (Landscape Institute Work Stage L).



Reviews management plans to address all changes in Phase 5 and 6.

Monitors management plan and evolves plan as necessary.

**Role of the landscape professional in the planning and design process – Independent Landscape Practitioner**



Undertakes the necessary design development to meet clients brief and development objectives (Landscape Institute Work Stages A & B)

Develops outline design solutions in liaison with co-consultants in order to co-ordinate early approaches to energy, waste, transport, surface water management and building specifications (Landscape Institute Work Stage C).

Liaises with development team providing commentary and feedback on potential policy issues and advise on likely areas of conflict such as loss of habitat, amenity or impact on local character.

Conducts consultation which will be tailored to address particular needs of residents and stakeholders. This process will be ideally continuous throughout Phases 4 and 5, involving participation to ensure ownership

Develops, design and writes maintenance programme and management plan objectives to meet planning requirements and submit for planning. Contributes to the preparation of the Design and Access Statement and Design Guidance (Landscape Institute Work Stage D).



Prepares detailed design proposals for cost appraisal and tendering, addressing requirements of planning conditions (Landscape Institute Work Stage E)

Prepares consultation material appropriate for audience. Attends and facilitates consultation on detailed design.

Submits relevant technical solutions to fulfil planning conditions. Carries out value engineering, prepare construction drawings package, schedules and specifications (Landscape Institute Work Stages F & G).

Prepares contract for construction of the landscape and undertakes tender action to meet client procurement needs (Landscape Institute Work Stages H & J).

Provides tender report and advice to allow contractor to be chosen.



Provides Contract Administrator services. Work with a Clerk of Works if required (Landscape Institute Work Stage K).

Conducts resident participation during implementation programme. Explores means of maintaining involvement and cooperation.

Advises on rectification of defects post practical completion.

Carries out handover of works and prepares the final account for the contract.



# 02

## Integrating the environmental, social and economic needs of housing developments

The creation and maintenance of good quality housing requires achieving a balance between the economics of the project, the social needs of those who use it and its environmental impact. Planning the landscape from the very beginning of a project or looking to improve it in an existing scheme, will help to get this balance right and, as policy makers and developers come under increasing pressure to meet social and environmental considerations, it is landscape planning and design that offers a way forward in developing better places to live.

### 2.1 Environmental considerations

#### Creating space for nature

We all rely on the natural processes in our landscape for continued survival, particularly through the provision of ecosystem services<sup>3</sup>. These essential functions which include soil formation, provision of food, fibre and fuel are at risk if any development is unsympathetic to its landscape. There is also growing recognition of the economic value of these services.<sup>4</sup> It is often early site planning and appraisal which leads to the protection of significant habitats or the creation of new ones. This can be achieved in many ways; brown and green roofs in dense urban environments, trees, woodlands, hedgerows, private gardens and open wetlands. Networks of natural features that connect open space in and around developments also assist in minimising the fragmentation of habitats. Incorporating these has other benefits too by assisting in climate change adaptation and mitigation as well as connecting residents to nature.

On larger sites, it is desirable to accommodate woodlands, hedgerows, species-rich meadows, stream beds and wetlands – all of which will often inform the early stages of planning. The inclusion of such historic landscape remnants

provides an opportunity to retain, and enhance, the characteristics which make each place unique.

#### Appreciating the value of trees

Appreciating trees is important within housing developments and when considering the design of streetscapes. In urban settings many street trees have been lost through inadequate budgets for planting or maintenance, as a result of subsidence claims, or through the assumption that their planting will obstruct or cause damage to services.<sup>5</sup>

As a result of increasing pressure on public bodies to adopt a risk-averse approach, these concerns have often led to the replacement of native trees with smaller-growing cultivars and hybrids, collectively reducing the benefit of urban trees. It is important to challenge these assumptions to ensure that services and transport corridors are planned around existing vegetation and that space is allocated for the inclusion of significant trees.

Trees accommodate biodiversity, they help combat many aspects of climate change by absorbing dust and CO<sub>2</sub>, by offering shade and by reducing reflected heat from hard surfaces (aiding cooling, reducing energy requirements)<sup>6</sup>. It is however critical to ensure that species are appropriately selected and that careful thought is given to future management and maintenance.

#### The management of water

The effects of climate change and increased development may well be leading to increased incidence and severity of flooding<sup>7</sup>. However the growing implementation of sustainable drainage systems (SuDS) has the potential to reduce the incidence of flooding, improve the quality of ground water and increase biodiversity. SuDS challenges the idea that water should always be culverted and channelled. It seeks to allow water to find its own level and become an asset in the landscape rather than a threat to be avoided.

A good SuDS strategy will always start at the building edge and attempt to slow down the rate at which surface water run-off reaches the urban water catchment. Methods such as green roofs and rainwater harvesting systems make good primary filtration and attenuation devices while soak-aways help to improve groundwater recharge. These initiatives should be backed up by larger systems such as attenuation tanks and filtration or attenuation ponds which provide larger, site-wide, collection and storage.

#### Growing food

Many people have little understanding of horticulture and few have had the opportunity to grow their own food. Allotment gardens provide an opportunity for communities to work together and develop pride in local food growing. Allotments offer learning, biodiversity and the opportunity for living and eating healthily. Traditionally reserved for remnant land, there is now such demand for space to grow food that the identification of this land at the early stages of the development is essential. Allotments are not the only means of establishing productive urban landscapes. City farms, community gardens and orchards have all been established in many parts of the world where crops are sown, grown, harvested and shared by communities.

Many issues need to be considered in the design of productive urban landscapes, such as security, control of access, contaminated land, maintenance and governance. Designing a productive landscape requires knowledge of soil and plant husbandry as well as the siting of plots, composting, storage and a plan for collective management of the site.

#### Waste management and recycling

Waste management is under review by many public authorities. The current model of transporting large volumes of waste to land-fill sites is wasteful when the provision of recycling facilities offers an opportunity to integrate waste management into daily life. Integrated waste-to-energy systems, such as combined heat and power (CHP) or anaerobic digestion to produce biogas, combined with composting of organic waste for food production offers a way forward.

As the preference to develop on brownfield land takes precedence over greenfield sites, the landscape profession has become increasingly involved in the assessment and remediation of contaminated land using biological systems. In many cases volatile hydrocarbons can be absorbed through vegetative systems. The use of waste products such as paper pulp and sewage sludge in the manufacture of topsoil has been widely documented by WRAP (Waste and Resources Action Programme)<sup>8</sup> in the reclamation of brownfield sites.

3 Haines-Young, R. and Potschin, M. (2007) The ecosystem concept and the identification of ecosystem goods and services in the English policy context: a review paper to Defra.

4 O'Gorman, S. & Bann, C. (2008) A valuation of England's terrestrial ecosystem services: a report to Defra.





**Home zones at Nightingale Orchards, West Molesey, Surrey**

Nightingale Orchards is a proposed mixed use development of 100 homes, a community centre and an orchard.

The proposals place an emphasis on food production and provide for a community glasshouse, orchard, vines, beehives and 'edible gardens'. The scheme will function as a home zone, subverting the traditional distinction between carriage and footway by defining the street as a valuable part of the local community's public space. The design principles will be 'safety through uncertainty', whereby an absence of priority, together with short driver sight-lines and the encouragement of social activity will reduce vehicle speeds. Other initiatives include:

- a fire path which also serves as a 3m wide footpath and cycle way;
- open ditches which carry surface water from roofs and paths;
- bin stores at a size to permit separation of wastes for recycling; and
- a planting mix of indigenous plants in communal areas.

**Clients:** Crest Nicholson PLC and BioRegional Quintain Ltd.

**Landscape architects:** Place Design + Planning Ltd

**Architects:** Feilden Clegg Bradley Studios LLP.

**Further information:** Nicola Cox CMLI, Place Design + Planning Ltd

## 2.2

### Social considerations

#### Making the most of public spaces

Communities which encourage participation are more likely to become socially sustainable<sup>9</sup>, increased contact between groups and individuals can lead to greater tolerance, understanding, patience, respect and commonly accepted standards of behaviour.

The public spaces in and between housing developments have the potential to provide for many different activities but they are often ill-defined or difficult to access. For example, a courtyard inside a housing estate may appear to be unavailable to passers by whilst a space outside may appear to be so public, that is unused by residents. The way in which a space is set out, how it is demarcated and fenced will also have considerable impact on how it is used. The development of carefully designed and welcoming spaces will attract use but the way in which these spaces are maintained and managed will also make a huge difference to how they are regarded by residents.

The residents of every housing project will have distinct needs, but consultation and design should reflect the range of functions and amenities required as well as the sense of place for each scheme. A good example of this is the home zone – shared spaces which allow vehicle access but which are designed to accommodate non-car users. Home zones ensure that space in developments can be used by all while assisting in the integration of other functions necessary for the development of sustainable communities like surface water management or food production.

5 London Assembly Environment Committee (2007), Chainsaw Massacre: a review of London's street trees, Greater London Authority.  
 6 Carter, J. & Handley, J (2006), Adaptation Strategies for Climate Change in the Urban Environment, University of Manchester.  
 7 ICE, Landscape Institute, RICS, CIWEM, RIBA, RTPI, RUSI (2009), Joint Policy Statement on Managing Urban Flood Risk, ICE.  
 8 www.wrap.org.uk  
 9 Goodland, R. (2002) Sustainability: human, social, economic and environmental, World Bank, Washington.

## Tackling anti-social behaviour without damaging the landscape

The perceptions people have towards the security of where they live will directly influence their feelings about the open spaces in and around their homes. Residents who are, or who feel vulnerable may wish to see a reduction in the opportunities for others, particularly younger people, to meet, gather and socialise, by seeking the removal of seats and shrubs and the fencing off of public spaces to restrict use.

There is a real risk that responding in this way to such concerns of residents, however understandable, can exacerbate the situation. It is important to show that open space in housing areas can be used positively. Allowing all residents to feel that they retain ownership of a space requires good design and careful long-term management. Comprehensive planning and sensitive design of external spaces for use by all sections of the local community can discourage anti-social behaviour through natural surveillance.

## Encouraging play and relaxation

An increasing awareness of the importance of play has been matched by recognition of the poor quality of present provision in housing areas.<sup>10</sup> The exploration and the creative use of their neighbourhood is essential for children to develop skills. In housing areas it is important that sites identified for play are within safe and easy reach of home and offer a degree of surveillance. This will ensure that such spaces are used to their full potential while encouraging active participation, learning and social opportunities.

Play provision in existing housing areas can sometimes be seen as a nuisance and point of disturbance or anti-social behaviour. Such an attitude means that play areas are often poorly integrated into housing developments. However it is precisely this approach which can lead to underuse and lack of supervision with the problems outlined above.

There is a growing debate<sup>11</sup> about the effect on children of a reduction in creative outdoor play, typified by the popularity of steel and plastic play equipment. It is argued that such equipment offers little in the way of 'risk and reward' to stimulate the development of a child's senses. Increasing awareness of the value of play in 'natural' settings<sup>12</sup> has led to designers advocating the integration of play into all open space

by utilising a variety of materials such as sand, water, logs and timbers and planting. These facilities are natural, resilient and easily combined with other imaginative play spaces.

Older peoples' ability to enjoy open spaces close to their homes is often affected by their mobility. Provision of seating in the right places can make the difference between going out and staying at home. Places for older people to meet and socialise must be safe and accessible where drop-kerbs and handrails are sensitively designed for ease of use. This can increase active participation by older residents who otherwise are often alone in their homes.

### King Georges Field, Hanwell, London

The project introduces reasonable risk, nature and fun whilst also addressing the issues of climate change and sustainable design. Reclaimed materials have been used throughout and the play space features tunnels from drain pipes, timber reclaimed from sea groins, logs from fallen trees, boulders, grassy mounds, shrubs and trees combined with popular play equipment such as swings and slides to create a playful landscape offering 'reasonable risk'. The soil used to create the mounds came from a local building site. All rain water is taken up in the grassy mounds, planting beds and sand surface areas. No water is directed to surface water drains. The water play area is very popular and water is collected in a hidden French drain and channelled into the nearby planting beds.

**Client:** London Borough of Ealing  
**Landscape Architects:** Groundwork London  
**Further information:**  
Adam White CMLI, Groundwork London



10 Cole-Hamilton, I., Harrop, A. & Street, C. (2002) Making the case for play: building policies and strategies for school-aged children, Children's Play Council.

11 CABE Space (2008) Public Space Lessons: designing and planning for play, CABE Space.

12 Lester, S. & Maudsley, M (2007) Play, naturally: a review of children's natural play, Play England.

## Consultation and participation

The involvement of local residents in changes to the environment in which they live can deliver a number of benefits. Research<sup>13</sup> has shown that such involvement leads to design solutions which are relevant and appropriate to the needs and wishes of local people. It also provides opportunities for residents to gain new skills and interact with others. This process of consultation and participation can engender a responsibility and pride in where people live.

The landscape professional has a good understanding of the role played by public and semi-public spaces in housing communities and uses these skills to listen, understand and ultimately synthesise the wishes of a community in its spatial design.

## 2.3 Economic considerations

### Desirability

The landscape impacts on the desirability of housing areas in many ways. Whether a collection of specimen trees, an excellent treatment of public space or a high quality streetscape, the landscape provides a sense of place, aesthetic value and a feeling of security and comfort. These are important first impressions for residents and visitors alike and research has shown that, for example, proximity to well maintained green spaces<sup>14</sup>, can result in higher market prices.

Seating, play opportunities, meeting points, opportunities for wider recreational interests (woodlands, ponds and biodiversity), the beauty of the landscape itself together with the views it affords, all increase the character and desirability of an area.

### Land values and designation

The quality of new housing and the nature of the environments in which it is set, is are driven primarily by the value of land which itself is largely determined by the planning system. Land designated for housing is restricted under planning guidance. The restriction on available land in desirable areas makes them expensive sites to acquire. Land such as brownfield and contaminated sites or areas which are constrained due to location, access and challenging site characteristics can have an abnormally high construction cost which will in turn lead to reduced investment in open spaces within these housing areas.

Landscape planning provides an in-depth analysis of a site's characteristics and potential. This work provides a framework within which the scope and scale of works can be assessed. It also ensures that the maximum benefit for and from the environment can be achieved. The pre-planning processes can ensure a sound basis for development, ensuring that investment is not wasted and maximising a site's potential.

## Revitalising existing housing

Much of the housing which will be inhabited in the years ahead is currently in use. The need to ensure that existing stock is desirable for habitation is essential.

Recent government programmes for investment in existing housing have failed to recognise the role of the landscape in the creation of sustainable communities. For example, the Decent Homes programme (due to be completed in 2010) has provided better insulation, new roofs, windows and kitchens. However the programme does not extend to public space improvements. This misses the opportunity to unlock the potential that landscape can offer within our existing housing stock to deliver sustainable communities. With residents already in occupation, it is relatively easy to start a dialogue and understand the needs and aspirations of residents who may already have a wealth of views concerning the changes they would like to see take place.

The work of revitalising existing housing through the involvement of residents can transform the desirability of existing places by creating accessible, well-used spaces. This work can raise the value of open space through an awakening of its importance by residents. This is the start of a process of greater investment and better maintenance to ensure the long-term use of the landscape by the local community.

13 Watson, D (1994) Findings – Housing Research 132: Tenant involvement in estate regeneration, Joseph Rowntree Foundation, York.  
14 CABE Space (2005), Does money grow on trees? CABE Space.

# 03 Maintenance and management

The benefits of good landscape diminish quickly if there is inadequate funding for maintenance and ongoing management. To avoid this, realistic financial commitments from those who will be responsible for their day-to-day maintenance and future ongoing management is needed. This commitment needs to be made at the very beginning of the project in order to ensure that proposals are appropriate to the funding they will receive in the future. The involvement of maintenance managers early on in the design process, as part of clear post-construction maintenance planning, will help to ensure that this is achieved. As a result of its multifunctional nature, liaison between those organisations with an interest in the various different functions performed by the landscape should be encouraged.

There will always be pressures on housing managers to reduce the costs of maintaining housing schemes. This will be a major hurdle in the delivery of attractive landscapes. Where underinvestment occurs, it is more likely that open spaces will not fulfil their potential to deliver the range of benefits for residents. This has the potential to reduce use and perceived value, leading to ever greater under-investment, even less use and the degradation of spaces.

The various benefits outlined above are all achievable, where an approach to housing development – or the revitalisation of existing stock – recognises landscape as an integrating framework. This approach considers and responds not only to the aesthetic qualities of a particular location, but also its environmental, social and economic characteristics. In doing this, landscape planning, design and management offers a way forward in developing better places to live.

# 04 Making use of policy and regulation

## 4.1 Policy context

Despite the recent economic downturn, there remains agreement among the major political parties that demand for housing is not being met. The Department of Communities and Local Government has identified a need for more than 3 million new homes in England by 2020<sup>15</sup> and the Scottish Government is committed to raising the rate of house building to 35,000 new houses a year<sup>16</sup>.

The need to build is matched by the understanding of the need to develop homes which are resilient to the effects of climate change and which have a reduced impact on the environment. Other policy areas such as water management, energy and food production, waste, design quality, biodiversity and community cohesion can all be addressed through landscape planning.

The arguments for addressing landscape is supported by planning and related public policy which now recognises the need for developments to do more than just provide housing. An example of this in England is Planning Policy Statement 3: Housing (PPS3), which promotes:

- design that is appropriate to the local context and which makes the most of the opportunities to improve the character and quality of an area;
- the involvement of local communities in the decision making and design process;
- reducing the impact on climate change, adapting to it and seeking to ensure efficient use of resources during construction and in use;
- integrated high-quality public realm;
- creating or enhancing a distinctive character, relating well to the surrounding and nurturing a sense of local pride and civic identity;
- providing for the retention or re-establishment of biodiversity within residential environments; and
- providing recreational areas – private, public and informal – which are safe and secure.

In Scotland, Planning Policy 3 (SPP3): Planning for Home, and Planning Policy Statement 7: Sustainable Development in Rural Areas (PPS7) recognise the importance of understanding the character and diversity of the landscape alongside the appropriate siting of new development.

The nature of housing and its significant impact on a wider range of policy areas means that various other aspects of planning policy are also relevant to landscape as an integrating framework for housing development. In England these include:

- *PPS1: Delivering sustainable development;*
- *PPG2: Green belts;*
- *PPS9: Biodiversity and geological conservation;*
- *PPS12: Local spatial planning;*
- *PPG17: Planning for open space, sport and recreation; and*
- *PPS25: Development and flood risk.*

## 4.2 Eco-towns

The programme of eco-towns in England offers a vision for settlements which act as “...exemplar green developments... designed to meet the highest standards of sustainability, including low and zero carbon technologies and good public transport”<sup>17</sup>. Viewing the landscape as an integrating framework is essential in realising the ambitions set out in this government policy<sup>18</sup>. For example GI can, through its multifunctional nature, deliver many ecotown standards, including water management, biodiversity enhancement, space for food, recreation and renewable energy development. This important role was demonstrated in guidance for the development of these new settlements<sup>19</sup>.

## 4.3 Housing Market Renewal (HMR)

£1.2 billion invested in failing or weak housing markets in the period from 2002 to 2008 through the Housing Market Renewal Programme. A further £1 billion has been committed to 2011. The aim of the HMR programme is to improve twelve neighbourhoods, in the Midlands and North of England through the ‘Pathfinder programme. This approach considers housing in the context of the environmental, social and economic circumstances of the location, an approach often adopted by landscape professionals.

15 Communities and Local Government (2007) Homes for the future: more affordable, more sustainable.

16 Scottish Government (2008) Scottish Planning Policy 3: Planning for homes.

**Bridging Newcastle Gateshead: Value in design guidance – maximising the value of new residential environments**



Housing Market Renewal (HMR) Pathfinder Bridging NewcastleGateshead (BNG), together with Places for People and other government HMR Pathfinders commissioned Fairhurst to undertake research into the range of existing design guidance and standards to maximise the value of good design in residential development. Work was completed by Fairhurst’s Planning and Development Division, with the Landscape Architecture and Urban Design Teams working on the project.

Initial analysis involved assessing the relevance of residential design guidance and how this can be used to influence the practical delivery of design quality including construction and full life cost-benefit analysis. Findings from this work stage were then used to develop a comprehensive consultation strategy which analysed the value placed on design by residents and developers.

The consultation stage included residents from housing developments in the North East and North West of England including Black and Minority Ethnic (BME) groups, developers and Registered Social Landlords. The findings from these initial research stages were then presented in three reports which outlined the key findings and preferences of those consulted.

Following the review and analysis of these findings by Fairhurst’s landscape professionals, urban designers and the BNG project steering group, two reports were produced including:

A literature review of current residential design guidance; and Maximising the value of new residential environments.

These documents highlight which sustainable design approaches provide the best value from a social, environmental and economic perspective to be used by local authority officers and developers alike.

**Client:**

Bridging NewcastleGateshead, Place for People

**Landscape architects:**

WA Fairhurst & Partners

**Further information:**

Stephen Goodchild CMLI, Technical Director of Landscape and Urban Design, WA Fairhurst & Partners



17 Communities and Local Government, 2009.

18 Communities and Local Government (2009) Planning Policy Statement for Ecotowns.

19 TCPA (2008) The essential role of green infrastructure: ecotowns green infrastructure worksheet, TCPA.

#### 4.4 Affordable housing

The provision of affordable housing remains a priority, the delivery of which would do well to consider the role of landscape in achieving many of the regulatory standards for the sector which are currently under development<sup>20</sup>. These include objectives relating to neighbourhood and community; more specifically neighbourhood management, local area cooperation and tackling anti-social behaviour. The potential for high quality environments to engender greater participation within local communities are explored in more detail in section 2.2.

#### 4.5 Code for Sustainable Homes (CfSH)

In April 2007 the Code for Sustainable Homes was launched in England by the Department for Communities and Local Government (CLG) with the aim to protect the environment by providing guidance on the construction of high performance homes built with sustainability in mind. The CfSH is an environmental assessment method for new homes based upon the Building Research Establishment's (BRE) Ecohomes standard and contains mandatory performance levels for the following categories:

- Energy efficiency/CO<sub>2</sub>
- Water efficiency
- Surface water management
- Site waste management
- Household waste management
- Use of materials
- Lifetime homes (applies to Code Level 6 only)

The CfSH has a scoring system of six levels. The different levels are made up by achieving both the appropriate mandatory minimum standards together with a proportion of the 'flexible' standards. The CfSH introduced several key indicators for the performance of a building based on its environmental impact including such criteria as surface water management, health and well-being and ecology. In addition to this, other criteria such as energy were modified to include cycle storage and outdoor drying facilities. Measures were also introduced for the recognition of existing landscape value in determining the value of ecological contribution. The implementation of a surface water management plan, combining SuDS with Flood Risk Assessment, became a mandatory assessment criterion for the first time in the UK. The objective of the code is to lead to the delivery of zero carbon homes by 2016.

#### 4.6 Building for Life (BfL)

Building for Life is the English standard for assessing the design quality of homes and neighbourhoods. Led by CABI and the Home Builders Federation (HBF), the standard recognises that good quality design can improve social wellbeing and quality of life by reducing crime, improve public health, ease transport problems and increase property values. Demonstrating how schemes address BfL criteria are a condition when bidding for National Affordable Housing Programme grant funding or when proposing development on land provided by the Homes and Communities Agency. Many local planning authorities also require applicants to demonstrate how their proposals address the BfL criteria.

The criteria are a series of 20 questions which are used to evaluate the quality of new housing developments. Landscape approaches to development will enable schemes to deliver against many of these criteria<sup>21</sup>, including those relating to:

- reducing environmental impact;
- making the most of existing buildings, landscape and topography;
- distinctive character;
- minimisation of the dominance of highways with streets that are pedestrian and cycle-friendly;
- natural surveillance of public spaces and pedestrian routes;
- well-designed and suitably managed public space; and
- integration with existing surroundings.

Similar guidance exists elsewhere, for example the Residential Design Guide, produced by Welsh Assembly Government with support from the Design Commission for Wales.

The importance of good design in delivering sustainable communities is reinforced in recent guidance issued by CABI, the Landscape Institute, the Royal Institute of British Architects (RIBA) and the Royal Town Planning Institute (RTPI)<sup>22</sup>. The guidance, which outlines how independent built environment professionals can help local authorities achieve better built environments through the design review process, states that “well-designed homes, streets, parks...can all have a positive impact on our lives and our communities” and that “...good design can create a built environment of inspiring places and space as well as buildings”. The guidance also acknowledges the role that the process can play in helping local authorities meet their statutory duty under the Planning Act 2008, a requirement of which is to achieve good design. In the devolved nations similar Design Review services are operated by Architecture and Design Scotland, Place (Northern Ireland) and the Design Commission for Wales



21 [www.buildingforlife.org/criteria](http://www.buildingforlife.org/criteria)

22 CABI, LI, RIBA, RTPI (2009) Design review: principles and practice, CABI.

The BRE Innovation Park in Watford is a research centre for the development of new homes that meet the highest standards of innovation in energy efficiency and environmental design. The site, where new materials are tested and developed, has traditionally focussed on construction methodology and offsite manufacture using modular or pre-fabricated systems that offer the ability to be rolled out to volume house production. In 2007, the focus was changed to address not only the building fabric but also the use of landscape in delivering the sustainability credentials of the buildings. The first house to achieve a CfSH Level 6 rating was the Kingspan Lighthouse. Macfarlane Wilder, part of the design team for this development, designed the rainwater harvesting facility for the building and put forward plans for the landscape that would help achieve the required score for the Code Level 6 accreditation. The building achieved credits for the use of sustainable materials such as locally-grown FSC timber, paving from recycled materials and locally-sourced aggregates. Credits were achieved through the use of grey and rainwater harvesting and the discharge into an attenuation and bio-filtration system. The ecological enhancements of the site and the introduction of wetland, meadow and native shrub species combined with the retention of existing tree species, helped the site to go from low ecological value to high ecological value achieving the maximum points available in this category. Other points that the landscape is able to provide under the Code are detailed below.

**Energy efficiency/CO2**

This includes the use of ground-source heat pumps or water bodies as heat sinks in the cooling or heating of buildings. It also incorporates the provision of facilities to reduce the use of drying appliances and the provision of cycle storage. Solar shading from deciduous vegetation that allows light and heat-gain in winter and shading in summer can also contribute to the energy performance and passive credentials of the house.

**Water efficiency**

This includes the reduction in the potable water demand of the dwelling through the use of grey water or rainwater recovery for WC flushing, laundry or landscape irrigation.

**Surface water management**

The use of porous paving, infiltration devices, surface water conveyors, bio-filtration systems, attenuation devices (including rainwater harvesting systems) combined with discharge controls in order to improve groundwater recharge and reduce the impact of surface water run-off on receiving watercourses.

**Site waste management**

This includes the reduction of site-generated waste through the use of modular components or pre-fabricated components. In addition to this, the provision of waste recycling facilities both during and post occupancy, earn additional points. Systems were used which turn combustible waste into energy and reduce the need for collection and prevent waste from going to landfill.

**Use of materials**

This includes the responsible sourcing of materials from either renewable sources or from recycled sources. Locally-sourced materials are given higher weighting than imported materials. Indicative materials that achieve a high score are recycled glass, rubber or aggregates as part of bonded or loose laid surfaces, concrete paving with a high recycled aggregate content, FSC timber, and products with a low embodied energy or small carbon footprint.

**Management**

Points which can be achieved by complying with 'Secured by Design – New Homes' section 2: include working closely with a Crime Prevention Design Advisor. This forms an important part of the design consultation stage of planning new developments. In addition to this the production of a five year management and maintenance plan that contributes to the effective management of the landscape systems is encouraged.

**Ecology**

The points available for ecology are determined on a sliding scale of improvement where one point is available, for having carried out a pre-development ecological assessment for the site. The remainder of the points available are achieved through a combination of the number of ecologists, recommendations integrated into the design, the preservation of existing features, such as trees or habitats, the change in ecological value and resultant increase in biodiversity of the site.

**Further information:**

Peter Wilder CMLI, Partner, Macfarlane Wilder BRE Innovation Park





# A model of new suburban medium density housing demonstrating its integration into the landscape



1. Road designed to regulate speed and contribute to the distinctiveness of the area
2. Vehicular access balanced with needs of pedestrian and cycle usage through use of playable combined surfaces
3. Traffic table slowing cars and providing access to areas with multiple uses
4. Collection point (gully, catch pit and silt trap) taking surface water from paved areas
5. Petrol and oil interceptor
6. Rainwater harvesting tank
7. Discharge headwall to attenuation pond
8. Use of oversized pipes as an attenuation system
9. Attenuation and bio-filtration lagoon

10. Opportunities for use of attractive open space close to houses
11. Natural habitat and wildlife area
12. Green roofs providing primary filtration system, attenuation, safe usable space and biodiversity
13. Communal gardens or growing areas and allotments
14. Recycling and composting centre
15. Private balconies providing passive surveillance of public spaces
16. Local shop/coffee bar
17. On-street parking shaping the road and characterising the housing location.



# Case Study 1: Owenstown South Lanarkshire

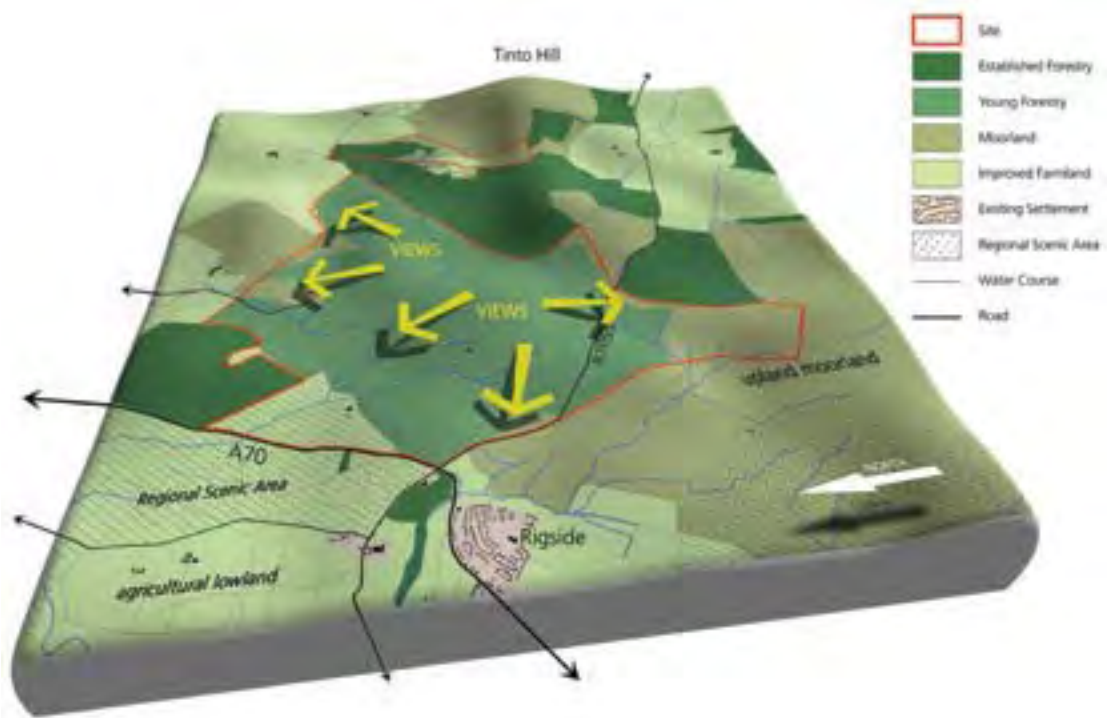


“This is a bold and imaginative proposal which has the potential to be the catalyst for the much-needed regeneration of the Douglas Valley”

David Mundell MP

Location:	Owenstown, South Lanarkshire
Client:	Hometown Foundation
Project team:	Geddes Consulting, jmarchitects, WA Fairhurst & Partners, Colin Buchanan & Partners, Teviotdale Developments
Area:	820 hectares
Number of units:	8000 homes
Density:	30-40 homes per hectare
Further information:	<a href="http://www.owenstown.org">www.owenstown.org</a>

Owenstown, named after Robert Owen, the founder of the Co-operative movement in Scotland, has the potential to accommodate 20,000 residents. Initially economic prosperity will be fostered through the self-sustaining opportunities created by the town itself. Over the longer term, opportunities will be reinforced by the legal structure adopted to fund and operate the town's development.



### The project

Owenstown Co-op will be established as a charitable business with the aim of promoting economic and community development. Conventional developer requirements to generate specific returns on investment will not apply to this development. To coordinate future development, the Co-op is focusing on delivering an attractive new settlement with a strong sense of place by developing and implementing a code of design which offers the opportunity to create quality place-making. It is important to the developers that a responsive environmental code will ensure best practice in energy efficiency and locally sourced materials. This will provide the flexibility to adapt to shifting local, regional and global conditions, incorporating innovations in low carbon technology, throughout the growth of this settlement.

### The landscape

The landform and existing woodland have directed the grain and pattern that the development will adopt. They also ensure that areas of woodland planting and open space form the green infrastructure around which built form will be located.

The landscape of the general area comprises farmland within the lower lying areas and plateau moorland in the more elevated areas. Tinto Hill is a local landmark, rising to over 700 metres. Its distinctive landform and surrounding foothills are designated as a Regional Scenic Area. The value of this landscape

presents a challenge to development in this location and the landscape assessment provides support in enabling change in this location whilst protecting the landscape which is valued by visitors and existing populations.

There are expansive views across this generally open landscape from elevated locations. In many locations, it is blighted by active and abandoned mineral workings. These can be highly prominent from views over this large scale and open landscape.

The wider landscape also provides open views of wind farms. Black Law Wind Farm to the north and Hagshaw Hill to the south west, are two of the longest-established wind farms in Scotland. Wind turbines have become a feature of this part of Scotland. These existing wind farms make the introduction of further wind energy-based structures as part of the new settlement, an accepted feature of the area.

The land cover reflects the varying topography, with arable and grazing in more sheltered areas and rough grazing, forestry and moorland on the upper and more exposed slopes. Archaeological evidence suggests this landscape was intensively occupied during the Neolithic period, and numerous artefacts and sites in the area reflect subsequent occupants. However, more recently the decline of rural populations, and in particular the virtual collapse of the coal industry, has left the area sparsely populated, with only a few scattered settlements. This contributes to the rural character, but also the sense of decay present in the remnant

mineral workings and degraded field boundaries.

The importance of the landscape in the settlement has been recognised from the outset of the project. Specific consideration is given to providing safe, convenient and attractive walking routes to school.

Activities will be encouraged especially for children by providing dedicated outdoor space for all the schools planned for the town, as well as regular use of the community sports facilities. In addition to the extensive areas of open space and the network of green space throughout the town, a dedicated sports centre, with swimming pool, gyms, and an all purpose sports arena is planned. An outdoor recreation centre is planned to provide mountain biking and hiking opportunities on the slopes at the edge of the town. Fishing and boating are also provided. As the town expands, and this area becomes a destination for outdoor pursuits, a dry ski slope will be added to provide year round activity.

There will be provision of home working facilities. Together with the range of jobs envisaged and the combination of the co-operative and entrepreneurial approach, it is hoped to engender a workforce which enjoys its work. Buildings are integrated into a strong landscape structure, to accommodate a rich natural environment and create a sense of wellbeing.

# Case Study 2: Abbey Orchard Estate, London



“Developing open spaces in existing housing can dramatically improve the quality of people’s lives”

Robert Mathison, Head of Asset Management, Peabody

Location:	London
Client:	Peabody
Project team:	Farrer Huxley Associates, Philip Pank Partnership, Waterman Group, Calabasas Ltd
Area:	Phase 1 – 0.42 hectares
Units:	240 existing 2-4 bed flats
Construction cost:	£650,000
Further information:	<a href="http://www.fha.co.uk">www.fha.co.uk</a>

Abbey Orchard Estate lies on the former ancient orchard site of Westminster Abbey. Built in 1882, it is owned and managed by Peabody. The housing is arranged in five and six-storey connecting blocks around a central courtyard. By 1998 this had become a tarmac surface for car-parking with a small under-used fenced play space and ball court. The only soft features present were six large London planes, protected under a Tree Preservation Order (TPO).

## The project

The blocks had been upgraded in phased works completed in 1998, but the external subterranean surface and foul drainage systems required significant repair. It was recognised that this provided the opportunity to reappraise the entire design and function of the courtyard. The entrance to each block is from the street via the central courtyard. The use of this space for parking meant all residents moving to and from their homes needed to negotiate parked cars and vehicular circulation to access the street.

While the courtyard parking bays were in high demand and all let, the total number available only allowed parking for 10 per cent of residents with others having to park in surrounding streets. Peabody agreed to end parking provision as resident consultation showed at least 70 per cent of residents preferred other amenities.

## The landscape

The proposals were developed in consultation with Westminster City Council planners. The consultation exercise, particularly the removal of cars, supported the application and was upheld by the planners who recognised that good public transport already existed and that the courtyard had the potential to deliver a wider range of benefits.

The scheme has a modern feel using concrete, galvanised steel and modern art to create a strong contrast with the stock brick and restrained classicism of the blocks. Straight paths dissecting the central courtyard join the block entrances



with a white cruciform pattern when viewed from the residents' flats above. The design ensures the shortest route to the street is via the courtyard. The new bin store is visually pleasing and central to the landscape providing an opportunity for people to meet and use the new garden space while putting out their rubbish. The paths offer views directly between the block entrances increasing their use.

The estate allowed access to all areas with door entry security at each block entrance. The consultation made clear that safety was of paramount concern and that the residents felt safe being overlooked. The development of play and ball sports provision drew concerns that it would encourage use from outside of the estate. The solution was to use signage and the bin store wall to reduce visibility into the estate.

CCTV was not considered necessary given the good natural surveillance afforded by the surrounding blocks. The design incorporates lighting which provides soft ambient levels to all areas and additional more-focussed white lighting for the paths and block entrances.

Before redevelopment, each block had access to chutes servicing a ground floor paladin store. Here, as on many estates, the increase in waste and the choice of many residents to use larger bins within their homes led to chutes being blocked. Waste was then brought outside the blocks and deposited in bins positioned in the courtyard.

Central to FHA's proposal was to create an attractive, easy to use bin chamber

which would allow for a high level of recycling. The design solution places the store near to the courtyard exit to allow for ease of collection. The side facing the street is a screen and art wall. The side where rubbish is deposited faces the courtyard.

The design creates a landscape where children can safely explore the entire courtyard without worrying about cars. The rubber surface under play equipment is not the usual bright colour but matches the surrounding paving and is sympathetic to the stock brick of the blocks. This allows children to see the equipment as just one opportunity in the wider area which includes the grass and seating areas, the fruit sculptures and the planting.

The design did not require fencing for the play equipment as the estate had a 'no dogs' policy. The planning approval stipulated a fence be installed as the lack of a fence was an omission. FHA worked for six months with the planners to have this condition removed. Here, as elsewhere, there was a perception that a fence is a statutory requirement for play areas. This is not so but this does explain the difficulty that many designers have in truly integrating play and landscape.

The existing courtyard had only six mature trees. The London planes were removed as they were unstable, leaving a younger common lime, complemented by new London planes. The new scheme has provided shrub beds outside the front of each block below ground floor windows providing screening and privacy. The ground floor residents were

encouraged to adopt these areas and allowed to plant their own shrubs and perennials. The central space is bounded by a hornbeam hedge with a large shrub planting area adjacent to the play equipment providing a range of nectar sources and shelter for wildlife.

FHA developed three key ways to address maintenance and management of the project:

**Creative design solutions** – The establishment of the hornbeam hedge was essential to the scheme's success. The design incorporated large concrete cheeks creating entrance doors into the square.

**Collaboration** – Peabody's housing management team were involved and approved the planting and hard landscape proposals. It became clear that closer involvement with the landscape managers and the maintenance team themselves was important.

**Future management** – Peabody understood the benefits of increased use of the courtyard would inevitably bring increased costs for the maintenance of a more diverse and complex landscape. Central to the scheme's success has been Peabody's recognition of landscape as an integrating framework to deliver a range of benefits for residents. Peabody considered the implications of encouraging more activity in the courtyard and provided the appropriate and additional management and maintenance to ensure its success.

### Benefits

Sustainable benefits of the works undertaken which recognise landscape as an integrating framework include:

- Greater participation amongst residents in communal areas
- Improved opportunities for play and recreation for all residents
- Biodiversity enhancements
- Community growing
- Improved recycling and waste management

Peabody's recognition of landscape as an integrating framework has delivered a range of benefits for residents. Abbey Orchard Estate is more attractive and desirable and the success of the main courtyard led to the refurbishment of two smaller courtyards in 2007-08 employing similar principles to the first.

# Case Study 3: Cambourne, Cambridgeshire



**“We hope that developers elsewhere will learn lessons from Cambourne and realise that places that are good for wildlife are places where people want to live.”**

Brian Eversham, Conservation Director, The Wildlife Trust for Bedfordshire, Cambridgeshire Northampton and Peterborough

Location:	Cambourne, Cambridgeshire
Client:	The Cambourne Consortium – Taylor Wimpey, Bovis
Project team:	Randall Thorp, Terry Farrell, WSP Group Plc, RPS Group Plc, Ecological Services Ltd
Area:	400 hectares
Number of units:	4250 new homes
Density:	Gross = 10.6 units/hectare; Net = 33.1 units/hectare
Further information:	<a href="http://www.randallthorp.co.uk">www.randallthorp.co.uk</a> <a href="http://www.cambourne.net">www.cambourne.net</a> <a href="http://www.cambournebusinesspark.co.uk">www.cambournebusinesspark.co.uk</a>

Cambourne is a new settlement covering an area of 400 hectares 9 miles west of Cambridge. It has planning permission for 3300 new homes (with an allowance in the Local Development Framework for an expansion by ‘at least 700’ additional homes), three primary schools, and a town centre with shops, offices, commercial units, a library, health centre, ecumenical centre, burial ground, allotments, police station, sports centre, hotel and a 50 hectare business park. A planning application is currently being considered for an additional 950 homes.

What is clear when considering Cambourne, is that the process adopted to analyse the environment and identify the important characteristics and local context relied upon the fundamental understanding of landscape which is now widely published in good practice guidance and associated texts which deal with methodologies for assessing the landscape.





### The project

Initially Randall Thorp was appointed to consider options for a new settlement within a predetermined Area of Search. The key landscape elements influencing the location for new housing development included the landform, vegetative features and the associated ecological value. In addition land ownership was an important consideration for the team of consultants and designers working on the project.

Following the Local Plan Inquiry in 1989 agreement between adjacent landowners meant that that a preferred scheme utilising an amalgamated land area was possible. With an understanding of the local context the scheme was able to optimise the development area whilst delivering valuable green infrastructure. This ensured visually prominent areas were left undeveloped and key habitats were retained in situ, delivering a robust and mature landscape framework within which change has been successfully accommodated.

### The landscape

The landscape framework assisted in shaping the overall settlement and more importantly the local open spaces and urban fabric. The landscape architects also played a key role in developing the design guides for the new settlement.

The involvement of landscape consultants and ecologists in the design team from the outset of the project ensured that landscape and ecological issues have been an integral

part of the design process from the beginning. The approach has been recognised by the consultees and officers involved in considering the scheme, as well as others such as CABE and Natural England, as a major reason for the development's success.

The process of understanding the landscape from the earliest stages in the planning of the scheme has resulted in cost savings for the clients through the use of existing natural resources to provide benefits to the community without the need to create new features from scratch. These savings applied to the implementation phase, for example through the disposal of all excavated soil on site, through to the operational phase of the settlement by measures such as associating the SUDs solutions with the retained existing ditches, ponds and streams on site and using green spaces to reduce runoff.

The consideration of the new residents of the settlement has ensured that a distinct sense of place is created and that the community is engaged with its landscape through the provision of a network of footpaths, cycleways and bridleways. The village greens, play areas, sports facilities and other public open spaces provide a range of opportunities for people to gather and integrate and strengthen their sense of community. The provision of allotments and orchards facilitates the reduction in food miles for the residents as well as creating opportunities for meeting and social integration.

The involvement of the county Wildlife

Trust in the management of the open spaces has also improved the economic sustainability of the Trust as well as ensuring that the long term management aims of the open spaces are met in a cost effective way. This innovative approach to the future management of public space is being adopted in other projects due to the success experienced.

Tangible benefits of the scheme have been assessed through a household survey coordinated by Cambridgeshire County Council in 2006. These benefits include:-

- 51 per cent of residents' leisure trips are within Cambourne, prior to leisure centre being constructed.
- 53 per cent of leisure journeys by non-vehicular modes in Cambourne compared to a national average of 26 per cent
- 68 per cent of journeys to school by non-vehicular mode in Cambourne compared to a national average of 47 per cent

In the same survey, the number one reason given by residents when asked "What do you like most about living at Cambourne?" the response was "The environment".

# Case Study 4:

## Staiths South Bank, Phase 1, Gateshead



“You can’t have sustainability without  
liveability”

Wayne Hemmingway, Designer

Location:	Gateshead
Client:	George Wimpey North Ltd
Project team:	Glen Kemp, Ian Darby Partnership, Hemingway Design, Arup, Kendall Cross Holdings Ltd, Donald Anderson
Area:	3.4 hectares
Number of units:	158 for market sale
Density:	63 per hectare
Further information:	<a href="http://www.glenkemp.co.uk">www.glenkemp.co.uk</a>

The historic Dunston Staiths on the River Tyne became a dramatic backdrop for the delivery of a new community on the site of the 1990 National Garden Festival. The scheme, which aims to deliver an innovative approach to public open space in a housing context and the integration of shared pedestrian streets, was championed by Wayne Hemmingway, with the planning and detailed design undertaken by landscape architects Glen Kemp. Staiths South Bank embodies many of the objectives of a sustainable community through its creation of a sense of place that is capable of being adopted and defended by its residents. Staiths South Bank received the Building for Life 2005 CABE Silver Award and best Residential Project.



### The project

Fundamental to the design was the integration of riverside biodiversity and historic setting as well as the design of intimate central spaces within a road structure that allows vehicular spaces to be shared by pedestrians. The result is that the public space seems more generous and the boundary between vehicle use and pedestrian use blurred through creative transitions and subtle changes in texture and colour. In the central spaces between houses there is a similar merging of the spatial functions that appeals to different groups without segregation. A variety of integrated play and community gardens have been established that evoke a feeling of permanence and heritage to the internal spaces.

### The landscape

In the planning of the scheme the landscape professionals worked with the engineers to break down the dominance of the street structure, a move which was supported by the planners. The introduction of central community spaces that can be accessed from most back gardens provides an extension of private spaces and a sense of ownership where the play structures have been constructed using natural materials. With the right creative treatment, these can be spaces children remember later in life with fondness as places they made their own. The process of working with a local craftsman has led to a more vernacular approach to street furniture and play equipment

made from timber and willow. Where traditional play equipment has been used, it had been incorporated into the spaces with natural planting and timber fencing that blurs the boundary between formal and informal play. A central design principle was that good quality play opportunities should be deeply engrained within a shared landscape.

Part of the success of this scheme is the subtle transition of the linear central corridors between formal and informal uses in a manner that makes the space entirely programmable by its residents. Cubes of timber can be play structures or seats; a low timber deck with a timber post becomes a barbecue place or a pirate ship depending on who occupies the structure. The use of willow screens to separate active and passive use is also picked up in the detailing of the refuse shelters, giving the scheme a low key and informal appearance.

The materials used in the communal gardens provide subtle clues to the function of the landscape. Softer materials such as gravel and bark in informal areas, and tarmac in shared play areas and multi use games areas (MUGA). The adoption of a kerbless approach to the street design means that the street becomes a natural extension of the central green space, with contrasting bands providing delineation of shared zones.

This transformation of 'space' to 'place' engenders a greater sense of ownership and motivates them to contribute in a more positive manner to the community. In communal gardens,

barbecue areas and shade structures provide places where residents can meet and greater social cohesion can emerge. Although there has been some rare cases of vandalism, this has often been motivated by jealousy from groups of youths from nearby estates. This was dealt with by talking to the offending individuals brokering a deal to relocate some of the play structures to more accessible areas where they could be more easily shared.

The use of an integrated palette of native and exotic plants throughout the development has resulted in a non-ostentatious biodiversity strategy which becomes stronger at the periphery and the riverside frontage. Links through the development to the riverside cycle network and the provision of cycle storage in every garden have resulted in a greater uptake of cycle use within the development.

At the Staithe the ambition of the design team, encouraged by the client, was supported by the Local Authority planners, engineers and adoption officers. Without the strong commitment of all partners, the end product would not have been realised.

# Case Study 5: The Triangle, Swindon

“Social sustainability cannot be made or grown. You have to leave communities to do that. But you can leave a fertile site ready for them. Studio Engleback has provided our projects at Hab with all the rich loam we could hope for; edible hedgerows, sensible SuDS schemes, car clubs, fruit trees, usable social space, LED street lighting, interest, joy and delight.”

Kevin McCloud

Location:	Swindon, Wiltshire
Client:	Hab Oakus
Design Team:	Studio Engleback, Glen Howells Architects, Curtins Consulting and Pinnacle, Max Fordham LLP, DBK
Area:	0.84 hectares
Number of units:	43
Further information:	<a href="http://www.studioengleback.com">www.studioengleback.com</a> <a href="http://www.haboakus.co.uk">www.haboakus.co.uk</a>

The Triangle is a proposed residential development on the site of a former caravan storage area/plant nursery in northwest Swindon. Forty-three dwellings will be developed in a cul-de-sac ‘homezone’, surrounding a central green with satellite spaces for food growing and parking. The external designs for the development, by landscape architecture practice Studio Engleback, are informed by the client’s overarching principles – a strong sense of community, a belief in the importance of public space, respect for cyclists and pedestrians, and a commitment to sustainable lifestyles and outstanding contextual design. Work will start on site in spring 2010.

## The project

The collaborative approach undertaken by the members of the design team recognises the need for clients, designers and local authorities to think differently when designing new developments in response to a various challenges such

as climate change, food production, community cohesion and water management. The landscape elements of the design are considered integral to the success of the scheme in delivering against such challenges.

## The landscape

A multifunctional green infrastructure approach is central to the plans for the Triangle, with many of the various aims of the project being delivered via ecosystem services.

## Food production

Food production is central to the design solution for the site. Allotments and orchards are proposed as part of the plan in the north of the site and planting which uses soft fruit bushes in place of ornamental shrubs are proposed for some front entrances to dwellings. In developing the plan, Studio Engleback has considered the need for solar access in the site layout, the opportunities presented by a changing climate and

rainwater harvesting for watering regimes.

## Urban thermal regulation

Designs for the site have taken into account climate change projections for the Swindon area, as forecast by the UK Climate Impacts Programme (UKCIP). In response to higher temperatures, the importance of tree cover and green walls to provide cooling via evapo-transpiration, radiation reflection and shading has been reflected in plans for the site. Trees and vegetation within the external environment also help regulate air quality, which is particularly vulnerable in urban areas and exacerbated by increases in temperature.

## Water management

Contained within the proposals for the Triangle is the recognition of a need to attenuate pulses of surface water run-off, a situation which is likely to become increasingly relevant in light of more extreme weather events. There is a need to clean this water on-site and retain moisture in the soil for longer to off-set the stress to vegetation during longer, drier periods. A sustainable drainage system that includes rainwater harvesting, porous paving, swales, storm crates and tree planting are all methods of retaining surface water in the landscape at the Triangle and attenuating surface run-off. These have been designed to be aesthetically pleasing as well as contributing to biodiversity enhancements.

## Reduced visual and physical impact of cars

One of the priorities for the Triangle is to avoid the dominance of the car within the site. Parking is provided for within the cartilage of the dwellings, either in garaging, parking courts or behind hedgerows to reduce their visual impact. There is no parking surrounding the central green so that this regarded, in spatial terms, as an extension of the home zone streets and front gardens

## Place-making and community cohesion

Outdoor activities make a townscape come alive, and they are influenced by



a number of conditions. These spaces become the setting for social interaction and the generation of the charm we were seeking to create to the triangle. Social activities rely on the presence of other people in public spaces and a field of vision between people. The design team also believe that creating opportunities for people to meet in different contexts aids neighbourliness. 53 per cent of the site is public realm, where cars are tolerated rather than cow-towed to.

In the first instance the design team needed to consider car parking. Swindon Borough Council generally require two spaces per dwelling plus an additional 20 per cent for visitor parking. Development of a travel plan, car club, and cycle storage throughout enabled the team to propose one car per dwelling with additional visitor parking to reduce the requirement to an average of 1.5 car spaces/dwelling. However there was a desire that cars should not dominate the space or separate a central green from homes. In-curtilage parking whose impact was reduced by the use of 'L' shaped freestanding gabion walls hiding bin/recycling facilities for each home were used as an extension of the built form into the street scene. These front gardens may be used for parking or as gardens for those without cars. The design team set a rule that there would be no parking around the central green, and placed most visitors' cars at the entrance between dividing hornbeam hedges.

The central space is the heart of the new development. It deals with surface water attenuation – surrounded by

planted bioswales, and incorporated a sunken space for occasional storm water storage a few centimeters deep, but more importantly a place for kids to play in, linked to a lawn with fruit and nut trees that may activate additional seasonal activities. Two kitchen gardens are part of the food/one planet living ethos for the design and provide further opportunities for meeting and sharing.

#### **Biodiversity enhancements**

Biodiversity provides essential ecological services, but also detail and delight found to be of benefit to human well-being and contentment. The wildlife potential for this design includes low nutrient biodiverse lawns, planted swales, native and fruit trees, native species hedges, and wildlife porous hard elements such as the gabion walls. Surface roughness and aspect are essential in housing design to create opportunities and niches for wildlife to take advantage of – so our design allows for amphibians, reptiles and invertebrates, as well as nesting for birds away from predation of domestic cats, and darker areas favoured by bats.

#### **Material choice**

This was influenced by a need to conform to a limited palette of adoptable materials by SWB – tar macadam and tegula paving, as well keeping costs low and using local materials, and materials that would allow for surface absorption of water, which in turn feeds into urban thermal regulation in summer through evaporative cooling, albedo and the consideration of heat

absorption and re-radiation. To this end we have advocated the use of local gravels and porous blocks that allow small plants and mosses to colonize to provide a green appearance.

#### **Lighting strategy**

The external lighting for the Triangle has been design to address requirements to reduce energy use and light pollution. The proposals include the use of LED (light emitting diode) fittings which have a longer life span than standard street light units and can be dimmed successfully depending on requirements. Furthermore, a semi-'intelligent' green solution to lighting offers the possibility to cut light and energy use levels after a certain period of time; lamps can be programmed to reduce light levels by 50 to 75 per cent and motion activated lighting can (will?) be used in 'dark streets' to increase a sense of security or to switch on in residential parking bays whilst they are being accessed.

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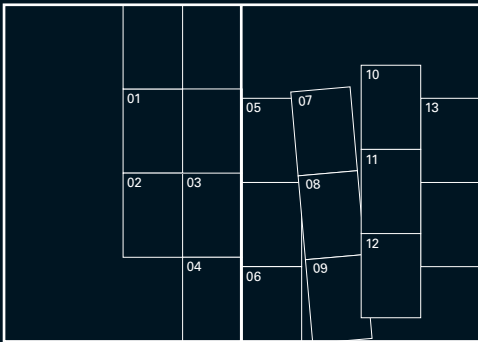
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