

local development plan 2018

**Design Standards
for New Housing Areas**

supplementary planning guidance

May 2020





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Part 1

Introduction, Design in Planning Policy, and the Placemaking Principles



1 Introduction to Design Standards for New Housing Areas SPG

East Lothian is a unique part of the built environment. It is diverse and complex in nature and, as with every place, is always changing. Places consist of multiple attributes and components that all function together, whether small, medium or large in scale. Within any part of the built environment, the people are the key to success, and design has a significant influence over individuals' decisions to live, work or otherwise spend time in an area. Well-designed places create positive experiences for people that can be long-lasting and also mean that places not only survive but grow and improve as people shape them.

The reason for growth and concentration of people often finds its origin in the location of natural resource, physical features that provide protection from climate and weather, provide an important defensive position, or trade routes and economies of scale. The formation of a place can also be as a result of deliberate design interventions and the decisions made over a period of time that have allowed somewhere to become a pleasant place to be.

Places vary widely in scale and functionality, and understanding context is one of the biggest drivers of success in the creation of all places. It is important to look at an existing area and its surroundings to understand why it has become successful.

Places also mean different things to different people. The location of goods and services is an obvious reason to visit or live somewhere. When designing a new part of the built environment, it is important to respect the history and origins of a place as each user will experience the built environment differently. They will also each have a unique influence over how successful new development can be depending on whether it provides them with positive experiences and how this effect encourages others to use a place.

New places should create these positive experiences for people. Good design can be measured by the success of a place, in particular through the design response to a unique set of opportunities and challenges and how people use and interact with the built environment. New places must be designed with human experience as the foremost priority. This means firstly understanding physical factors within and beyond a site boundary so that they can be used to enhance people's experience or where design can intervene to protect people. The design process should not seek to mimic existing built environments or to achieve constant harmony in the built form. Designing new places is about achieving the best outcome using the environment and tools available. Those involved in the design process or consenting

process must always remember that decisions have long lasting effects on people, the environment, buildings and spaces. East Lothian has a rich history and diverse natural and built environment that deserves the highest possible standard of new design to retain and build upon these attributes.

The key aim of good design should be to improve the physical, social and economic aspects of people's lives both directly and indirectly through the built environment. At the design stage, there is the greatest opportunity to shape places and positively impact upon people. Whilst the built environment cannot be expected to meet the needs of everyone at all times, good design must allow free and easy access to and use of places irrespective of age, gender, ethnic background, physical ability or mental health conditions. Designers must ensure that every effort is made to allow anyone from any part of society to feel welcome and safe in new places, and to be able to form part of a community should they wish to do so. The layout and form of the built environment can have significant impacts upon people's physical and mental wellbeing.

This Design Standards for New Housing Areas Supplementary Planning Guidance seeks to raise awareness of the unique characteristics and attributes of East Lothian, how these can be used positively to create new places both small scale and large, and the technical aspects of design that are required to deliver great new places. The Design Standards for New Housing Areas SPG is structured into four parts:

- **Part 1: Introduction to Design SPG, Planning Policy, and the Placemaking Principles** explains the need for and purpose of this Design SPG; it sets the context in relation to the policy and guidance that helps to shape new places.
- **Part 2: Qualities and Characteristics of Place – An Analysis of East Lothian** explores the particular qualities and characteristics that make East Lothian a great place.
- **Part 3: From Site Appraisal to Approval and Beyond** looks at the interaction between design and the planning process, how the site appraisal must be used to take a design concept forward, the planning and consenting processes, and how design must take into account the operational phase of developments.
- **Part 4: Achieving Good Design – Technical Elements of Places** brings together the findings from Parts 1, 2 and 3 and sets out the technical standards, requirements and solutions that must be used to achieve high quality design and exemplar developments.

1.1 Key Aims of Good Design – Environmental and Physical

History and Heritage

At the heart of every place is its history and heritage. Everywhere is part of past events and has a story to tell. Design must both respect heritage value of places but also facilitate the creation of new parts of history. To do this, every opportunity must be taken to use heritage (above or below ground) to provide context to a development and to help form new high quality well-designed places that are worthy of protection and become part of future history for people. Importantly, design can help people with the interpretation and understanding of site history, context and any former use. It can also use heritage to establish a sense of place, improve access to heritage, educate people and create inclusive communities.

Design can respect and be inspired in many ways by heritage e.g. using one asset (e.g. listed building or scheduled monument) or from a larger grouping (e.g. conservation area) where key views are retained, neighbourhoods or streets are inspired by existing heritage assets, or simply incorporating architectural details, materials or building layouts into new buildings.

Designing a development that is suitable for locating within or near to the setting of a heritage asset is achievable, and this can include more contemporary architecture as well. Depending on specific circumstances, developments can often use heritage as the primary influence over how a new development will be set out and designed. Or sometimes it may be more appropriate to incorporate heritage into only part of a development. Whether heritage becomes a key influence over design or plays a lesser role, the key aim is always to ensure a degree of harmony between the old and new built environment, by avoiding harming heritage assets, and by not restricting new development to an overly strict style in an attempt to replicate heritage assets. Historic Environment Scotland's Managing Change in the Historic Environment Guidance provides advice on a range of subjects. Their guidance on New Design in Historic Setting explains the process of design and can be helpful in delivering quality developments that take cognisance of their historic surroundings.

Biodiversity, Green Infrastructure and Blue Infrastructure

Biodiversity, green infrastructure and blue infrastructure are essential for sustainability and high quality placemaking and designers and other professionals must ensure that the natural environment is not only protected but also used positively to enhance people's lives. Legislation provides statutory protection for the most sensitive of habitats and species (European Protected Species), and requires designers and developers to avoid adverse effects. However, regardless of any statutory protection, design must use biodiversity, green infrastructure and blue infrastructure positively, and rather than see these as constraints or issues that can be dealt with through minimal effort to mitigate impacts, use it to enhance the quality of life for people living on a site and to sustain these for future generations.

Development design and layout should be formed around existing natural features and with the key aims of protecting existing features, create new features, helping species to establish, and providing people with opportunities to access and interact with the natural environment. The impacts of development can be reduced where these issues form an integral part of the design process. At the simplest level, this can be achieved through key issues such as the creation of habitats using planting, establishing wildlife networks within and beyond a site to help local ecological cycles, and connecting open spaces to form a safe network for species to live and thrive. The placement of buildings near open spaces and water features provides a highly attractive environment in which to live. It can also involve changing long term habits of people and attitudes towards nature and the natural environment. Examples include provision of better active travel routes and paths, restricting car use to certain parts of sites to reduce noise and help air quality, grouping buildings and creating communal areas/facilities that help to reduce car trips or waste. There are many positive effects of using biodiversity, green infrastructure and blue infrastructure in design not just on the physical environment but also on people through better exercise, recreation and general well-being.

1.2 Key Aims of Good Design - Social

Town Centres, Local Centres, Mixed-Use Developments and Community Facilities

New developments vary significantly in scale and location, and the key aims for the built environment will therefore change depending on these. Development at the upper end of the scale including the creation of new urban centres, require careful balancing of environmental and physical change to support the long-term success of places. Design at this scale is often highly complex and requires solutions that will sustain the vitality and vibrancy whilst managing regular change. Below this, there may be a mixed-use development created that includes a new local centre or community facility such as a school with housing around it. Design must focus on how new residents living on the site will access any local facilities, and services in the wider area.

People use and experience the built environment in many different ways. Some are more consciously affected by it than others. Design must allow free and easy access to and use of places irrespective of age, gender, ethnic background, physical ability or mental health conditions. Designers must ensure that every effort is made to allow anyone from any part of society to feel welcome and safe in new places, and to be able to form part of a community should they wish to do so. Built environment professionals have a moral responsibility and an important role to play in ensuring people can go about our daily lives safely and with dignity without unreasonable physical or psychological barriers. Development design must aim to encourage interaction with others and avoid segregation, whilst at the same time retaining sufficient levels of privacy and separation when they wish. The layout and form of the built environment can have significant impacts upon people's physical and mental wellbeing.

Social Interaction and Cohesive Communities

Occupants of houses in new developments are typically unfamiliar with their surroundings in particular where they have moved from another settlement. Even those who have some familiarity with established settlements are likely to be unfamiliar with other parts of the site they have moved into, and the opportunities for recreation or other activities that exist. Indeed most occupants will at least in the early stages of development life cycles be unfamiliar with their immediate neighbours or those living closest to them. New communities therefore take time to establish. This typically requires people to become comfortable with their surroundings, to recognise others, choose to interact with others, build trust, and form

friendships in order to create strong communities. Whilst the design of the built environments is only one part of this complex change over time, there are certain techniques that can be used to help to facilitate these processes.

Physical Health

Site designs and layouts must take into account the physical health of people and the range of abilities and conditions that people may have. Designing for physical health does not mean that every part of the site must be accessible and useable to everyone at all times. It should however seek to ensure that overall there is no significant difference in quality of provision and that designs and layouts do not result in reduction in people's quality of life or ability to engage with others. Always consider the sensory experience of people for designing a development in relation to visuals, noise, touch and smell.

Mental Health

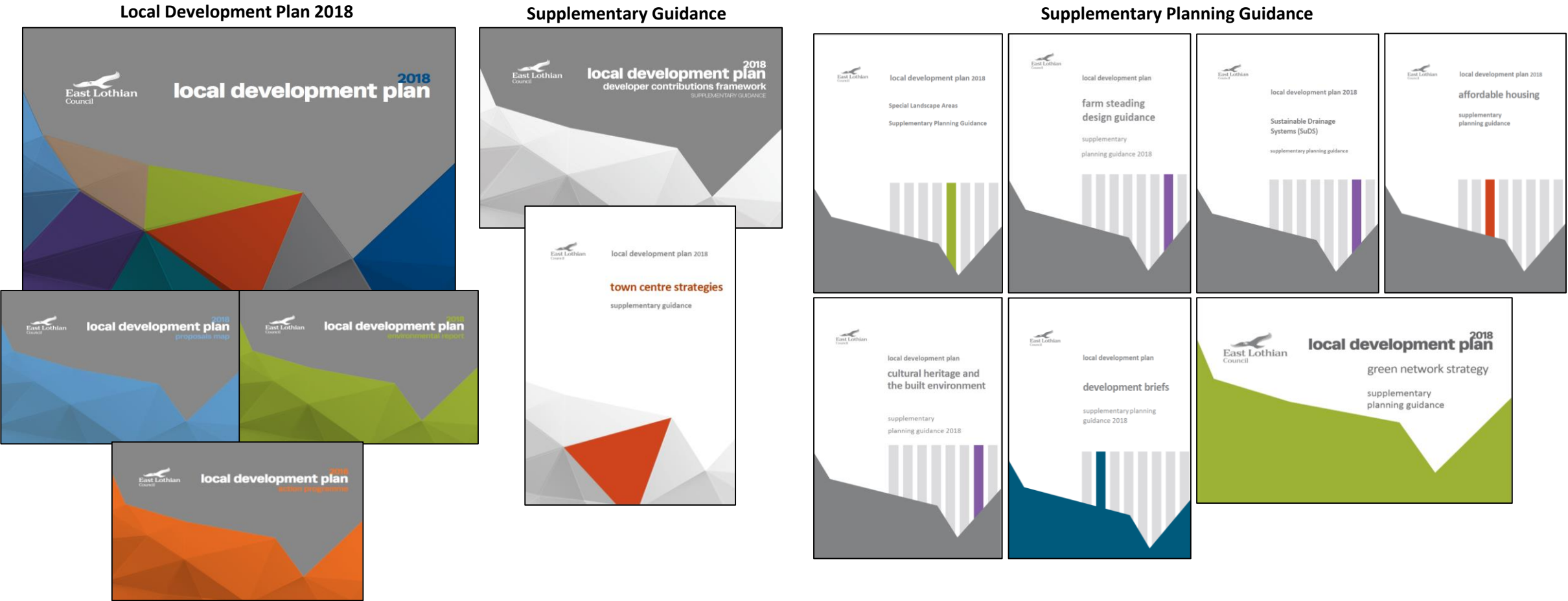
The built environment can have both direct and indirect effects on the mental health of people, and every opportunity should be taken to create positive experiences for people through design. Design and mental health is about helping people to maintain their own levels of mental health as they go about their daily activities. This includes individual experiences, the ability to interact with others in society, accessibility, use and enjoyment of the outdoor environment, and being comfortable in their home, street and neighbourhood. Where people have certain mental health conditions, the built environment may only have a limited influence however there are ways in which design can aim to help people and reduce issues such as stress, anxiety, fear, exclusion and loneliness.

As new housing developments or mixed-use development can significantly alter the character of a place, for some this can be seen as a positive change, regenerating and/or improving an area. For others, this change can be seen more negatively such as the loss of a particular area that previously held a meaning for them, triggered an important memory of a person (or people), of past events, or other experiences. New development can quite dramatically alter places, and it is important for people that through good design, new memories can be created and that not all elements of the past are lost.

1.3 Local Planning Policy and Guidance

The Design Standards for New Housing Areas SPG is one in the series of non-statutory guidance documents that form part of the East Lothian Local Development Plan (ELLDP) 2018. The LDP 2018 focusses on the overall spatial strategy and the key policies and proposals. Together, Supplementary Planning Guidance documents assist with the operation of policies and proposals and the delivery of the plan by providing additional detail on a range of matters covered by policies.

This Design Standards for New Housing Areas SPG provides up to date guidance on the standard of urban design required for new developments in East Lothian. It has been produced through cross-service collaborative working by East Lothian Council involving Planning, Landscape, Housing, Transportation, Sustainability and Climate Change, and Amenity/Waste. It represents the up to date position on a range of detailed design matters that, together with national guidance, will facilitate the creation of successful places and raise the standard of design in the area.



1.4 Design and the Local Development Plan 2018 Policy Framework

The Local Development Plan 2018 contains a wide range of policies that guide the design of new development in East Lothian. Chapter 7 contains specific Design Policies. Other parts of the LDP 2018 are also relevant in design terms. Therefore the LDP 2018 must be read as one

whole document and in conjunction with Supplementary Guidance and Supplementary Planning Guidance. The following policies should inform and influence the design process.

8 Delivery

DEL1 (Infrastructure and Facilities Provision)

7 Design

DP1 (Landscape Character)
DP2 (Design)
DP3 (Housing Density)
DP4 (Major Development Sites)
DP8 (Design Standards for New Housing Areas)
DP9 (Development Briefs)

3 Growing our Economy & Communities

HOU4 (Affordable Housing)
OS3 (Minimum Open Space Standards for New General Needs Housing Development)
OS4 (Play Space Provision in New General Needs Housing Development)
OS5 (Allotment Provision)



4 Our Infrastructure & Resources

T1 (Development Location and Accessibility)
T2 (General Transport Impact)
T3 (Segregated Active Travel Corridor)
T5 (Cycle Route Network)
T31 (Electric Car and Bus Charging Points)
DCN2 (Provision for Broadband Connectivity in New Development)
SEH1 (Sustainable Energy and Heat)
SEH2 (Low and Zero Carbon Generating Technologies)
W3 (Waste Separation and Collection)

6 Our Natural Environment & Cultural Heritage

CH1 (Listed Buildings)
CH2 (Development Affecting Conservation Areas)
CH3 (Demolition of an Unlisted Building in a Conservation Area)
CH4 (Scheduled Monuments and Archaeological Sites)
CH5 (Battlefields)
CH6 (Gardens and Designed Landscapes)
NH8 (Trees and Development)
NH9 (Water Environment)
NH10 (Sustainable Drainage Systems)

5 Diverse Countryside & Coast

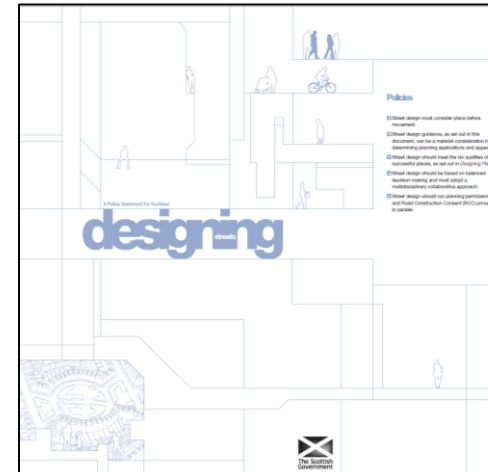
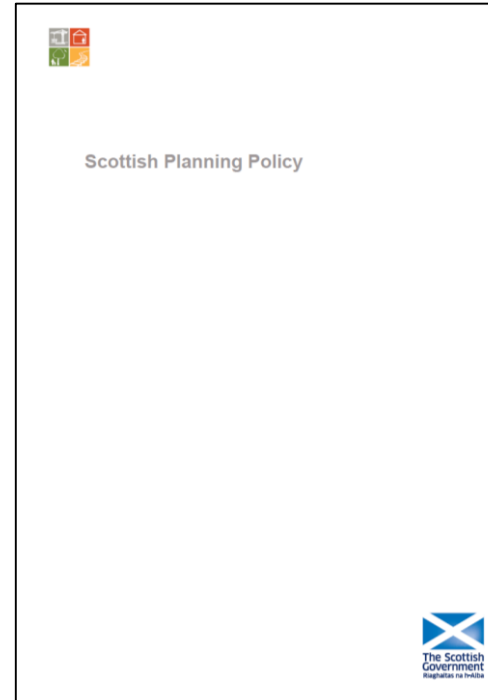
DC6 (Development in the Coastal Area)
DC8 (Countryside Around Towns)
DC9 (Special Landscape Areas)
DC10 (The Green Network)

1.5 Design and the National Planning Policy, Guidance and Urban Design Theory

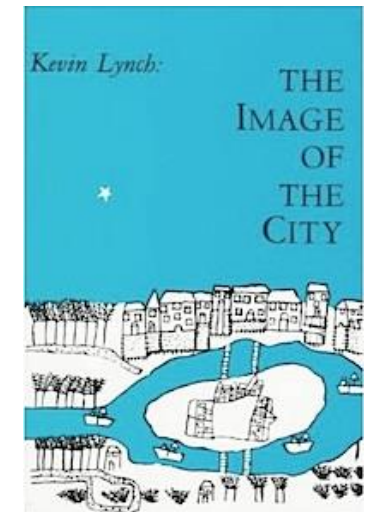
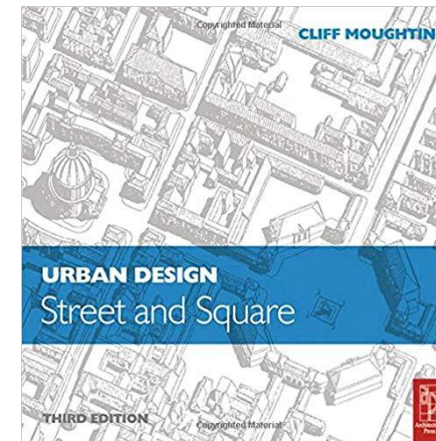
Scottish Planning Policy (SPP) 2014 puts placemaking at the heart of planning at all levels, and the contribution of good design towards achieving this as well as improving health and wellbeing. SPP refers to the need for the creation of well-designed sustainable places, and the policy principle that planning should take every opportunity to create high quality places by taking a design-led approach.

The Scottish Government's Designing Streets Policy Statement for Scotland (2010) highlights that street design must come from a response to location and not through strict application of standards applied to any context. Clear distinction is made between roads and streets, with the primary function of roads being the movement of motor vehicles. Streets have more place and people based functions supporting social, retail, leisure and commercial functions. Streets should meet six qualities in order to be successful places:

- **Distinctive** - *Street design should respond to local context to deliver places that are distinctive*
- **Safe & Pleasant** - *Streets should be designed to be safe and attractive places*
- **Easy to Move Around** - *Streets should be easy to move around for all users and connect well to existing movement networks*
- **Welcoming** - *Street layout and detail should encourage positive interaction for all members of the community*
- **Adaptable** - *Street networks should be designed to accommodate future adaptation*
- **Resource Efficient** - *Street design should consider orientation, the integration of sustainable drainage and use attractive, durable materials that can be easily maintained*



The ELLDP 2018 brings together the requirements of SPP and Designing Streets within Policies DP1, DP2, DP3 and DP4. This Design Standards for New Housing Areas SPG supplements these policies (and others), and expands upon the design principles by providing visual representation and technical detail to assist designers in arriving at the best design solution that meets the key qualities set out in Designing Streets. At the same time the SPG also considers how to take into account local characteristics and specific issues for East Lothian and applying best practice that has been long established in urban design theory. The SPG seeks to achieve the highest quality urban form and to raise the standard of new development in East Lothian. It considers the importance of the site appraisal in forming the basis from which design can evolve. Great new places can only be created through careful analysis of context and the unique opportunities and constraints of each site that must all be taken together to achieve positive outcomes in the built environment.



1.6 Other Design Guidance and Placemaking Tools

This Design Standards for New Housing Areas SPG is part of the suite of adopted Local Development Plan 2018 documents. There are a number of other resources that can be referred to from various statutory bodies and other organisations. Below are some of these resources.

Scottish Government

Planning Advice Notes provide additional guidance on a range of design matters.



Key Agencies

A number of the Key Agencies in Scotland have produced their own guidance on design or specific matters relating to their role in shaping or protecting the built environment.



HISTORIC
ENVIRONMENT
SCOTLAND



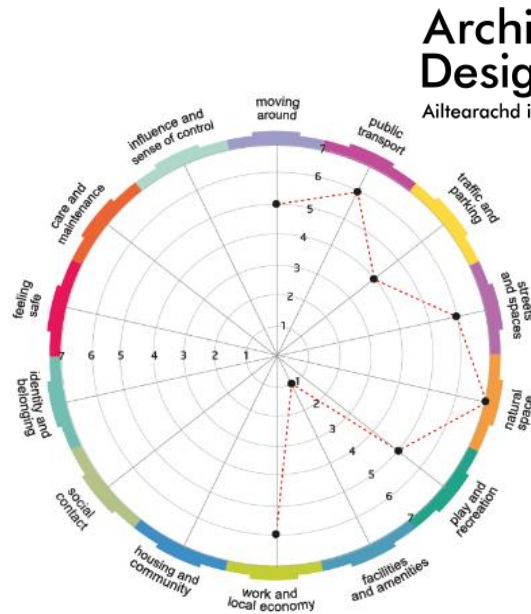
Scottish Natural Heritage
Dualchas Nàdair na h-Alba



Scottish
Water
Trusted to serve Scotland

Design and Analysis Tools

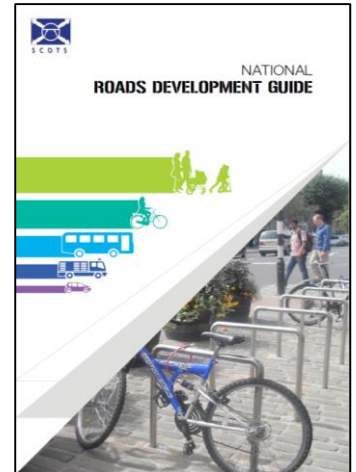
A&DS provide advice and guidance on good design and produced the Place Principle tool for measuring the success of a place.



Architecture &
Design Scotland
Ailtearachd is Dealbhadh na h-Alba

Other Scottish Government Publications and Collaborative Documents

The Scottish Government work closely with other organisations to produce guidance such as the SCOTS National Roads Development Guide.



Other organisations

A number of other organisations provide specialist advice on design matters including Sustrans.



A SuDS Working Party consisting of Key Agencies and other bodies has put together a Water Assessment and Drainage Assessment Guide with some useful guidance on the design of SuDS in new developments.



Part 2

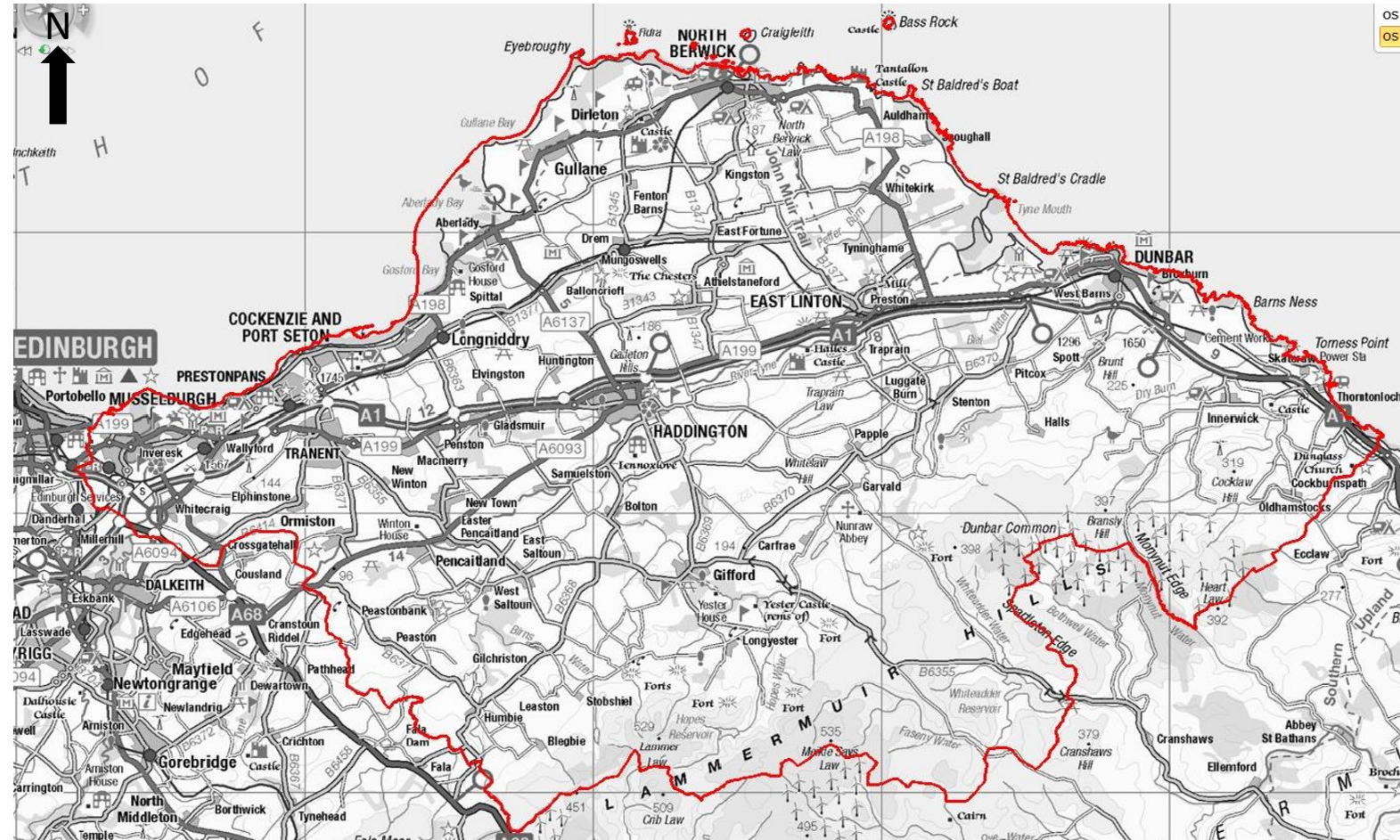
Qualities and Characteristics of Place – An Analysis of East Lothian



2 East Lothian: The Place

East Lothian is located in South East Scotland and adjoins the City of Edinburgh to the west, Midlothian to the South West, and Scottish Borders to the south and south east. It covers an area of approximately 680 square miles and has a population of over 100,000. In terms of housing completions East Lothian is one of the fastest growing areas in Scotland.

East Lothian has a rich history and diverse built environment influenced by its successful agricultural industry, ports and harbours, distinctive natural landscape features, and settlements of varying size, type and function, each with their own inherent character.



2 East Lothian: The Place

East Lothian has spectacular **Countryside and Coast** with award winning beaches, clifftop castles, hill forts and unique land formations...



Tantallon Castle



Aberlady Bay



Traprain Law

East Lothian has diverse land uses including **Agriculture, Industry & Tourism** that continue to shape the area...



Fishing boats at Dunbar Harbour



Arable farming



Golf Courses

2 East Lothian: The Place

With an important place in Scotland's history, East Lothian contains well preserved **Heritage and Grand Architecture** that has stood the test of time...



Gosford House



Northfield House



Carberry Tower

Comprising of six main settlements, East Lothian's largest places each have their own **Settlement Identity** with recognisable natural and built environment features...



Mussel artwork in Musselburgh



North Berwick Law



Dunbar High Street

2 East Lothian: The Place

As an ever-changing place, East Lothian contains highly **Varied Housing** reflecting different architectural periods, local vernacular and reuse of old buildings...



The recognisable nature of East Lothian's built form is often derived from the **Materials and Colour** that can be seen everywhere...



Part 3
From Site Appraisal to Approval & Beyond



3 Introduction to Design and the Planning Process

Part 3 of the Design Standards for New Housing Areas SPG begins by setting out how design fits into the planning and other statutory processes. The process diagram on pages 20-21 shows the six key stages in any design process and the inputs that are required for each stage. Although the extent to which the inputs at each stage apply to a development will vary, particularly between small and large scale development, each one can for example apply later on in the process (from permission in principle to approval of matters specified in conditions). It is important for designers to keep these issues in mind throughout the process and that they must demonstrate how each issue has informed the design from initial stages through to the construction and lifecycle of a development.

The six key stages in the process are identified as:

- 1. Site Appraisal**
- 2. Pre-application**
- 3. Design Concept and Masterplan**
- 4. Planning Application Submission**
- 5. Consent**
- 6. Adoption, Statutory Consents and Maintenance**

A process diagram on pages 20 and 21 shows the inputs and outputs at each of the six key stages.

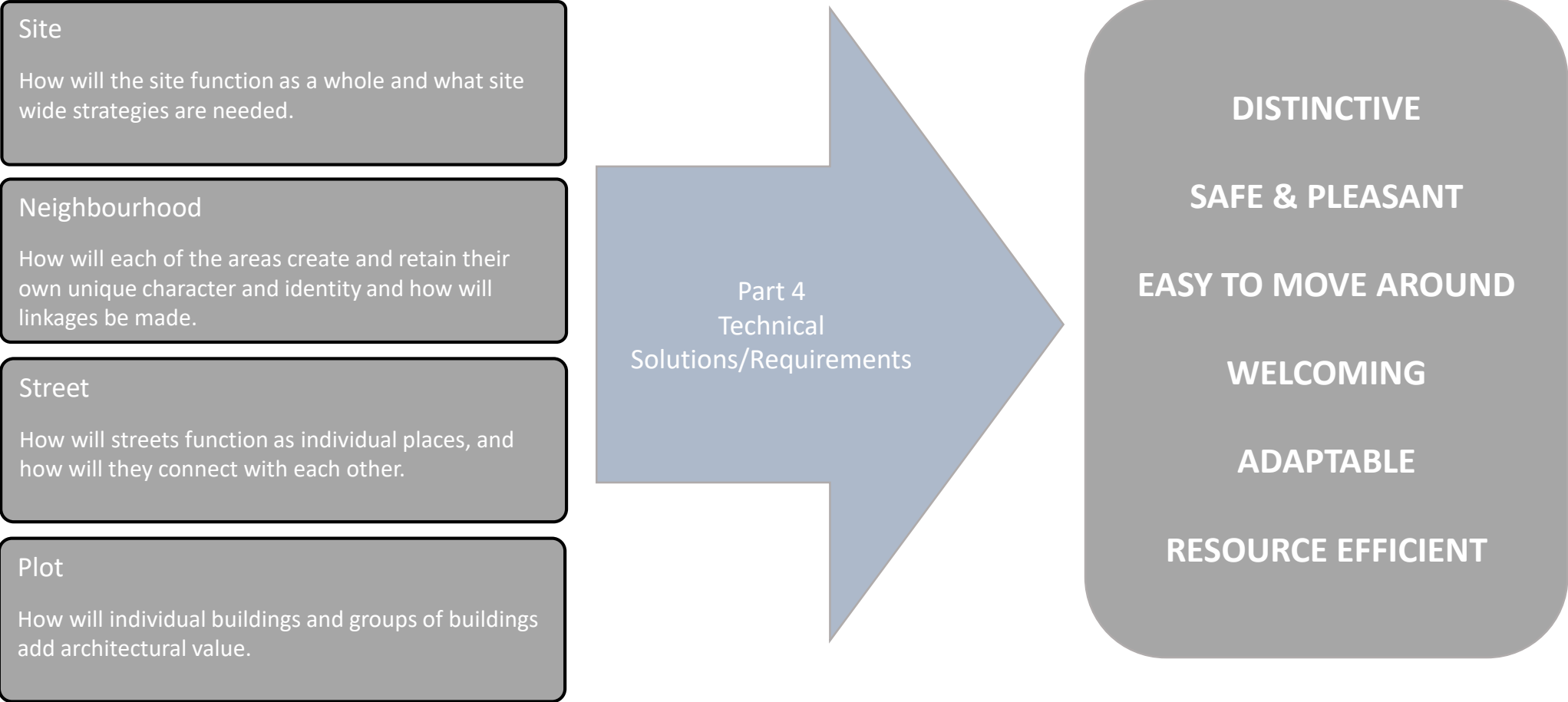
The Design Standards for New Housing Areas SPG uses a hypothetical development site to look at the issues that can arise from site appraisal, and using a series of illustrations to represent the evolution of the design process, how these initial findings can and must determine what happens on the ground. The hypothetical design process highlights the level of information that will be gathered at the site appraisal stage (ground conditions, heritage assets, flood risk and infrastructure), how the basic principles are established (access, movement and open space) and then how the more detailed aspects are arrived at (density, core areas, landscaping and green/blue networks).

Whilst each site is unique in terms of location, history, scale, opportunities and constraints, there must be a clear link between the initial vision, the findings from site appraisal, pre-application and design revisions before arriving at a final solution to be taken forward as a planning application. There must be evidence through the design process that the designer has looked beyond the site boundary to establish a context. A new place should not necessarily attempt to replicate the form and character of the surrounding environment, but the design must be a solution derived from an initial clear vision for how a place will look and function, and that each typology and character of each area has been used based on reasoned design conclusions to achieve the vision. It is often the case that a matter identified at the early appraisal stage as a constraint can become an opportunity to define context and to create something unique and high quality. At each of the stages for designing the hypothetical development site, there are key questions that designers must ask themselves. These have been arrived at through the assessment of the quality of East Lothian as a place and link with the Local Development Plan policies and Designing Streets key qualities on how to create a new place in East Lothian.

3.1 Design Response – Linking Key Qualities and Technical Solutions

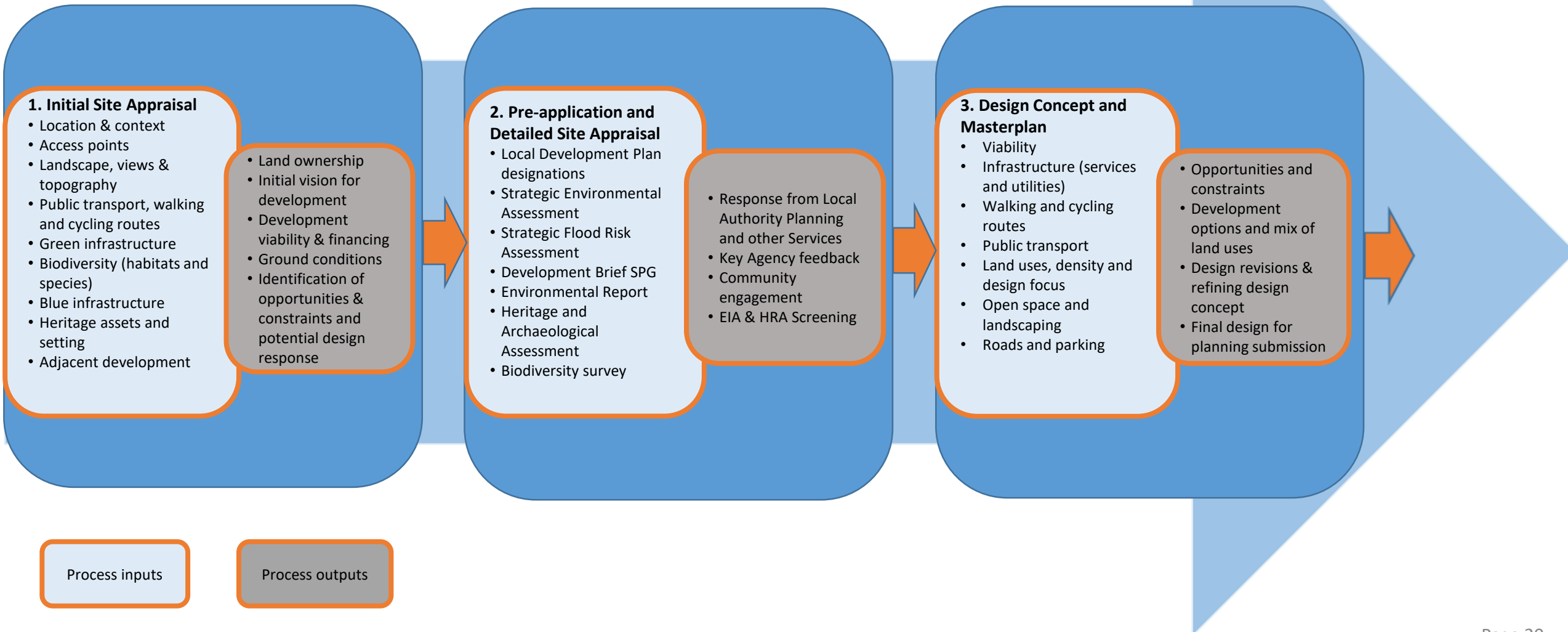
Part 4 of the Design Standards for New Housing Areas SPG brings together the findings from parts 1, 2 and 3, and provides designers with technical requirements for all new developments in East Lothian and how these will be expected to be achieved. This Technical Elements section is divided up into two broad categories of technical issues – People & Environment and Buildings & Spaces. The topics covered here can apply to any development of any scale and sites that are either residential only or are mixed use. It is recognised that certain design principles will apply more than others due to size of development, location and context. Reference must always be made to the policies in the LDP 2018 as to specific circumstances where policies would or would not apply based on scale or type of

development. This Design Standards for New Housing Areas SPG provides more detailed guidance on how these policies apply in practice. For any new residential area, technical solutions should be considered at four different scales: site, neighbourhood, street and plot level. This will ensure that appropriate solutions are considered in depth and that each part of the site fits together. The Technical Requirements section sets out for each topic what developments **must** do as a minimum to achieve good design. It then provides additional criteria for how developments can be considered **exemplar** where they achieve the highest standard of design and represent best practice.



3.2 Design Process

The process diagram shows how at the start of the process (site appraisal, pre-application and design concept) that design requires more inputs and relies more heavily on resources (e.g. from professionals or technical reports). Then in the later stages, design is more process orientated (consent, adoption and maintenance) and includes fewer inputs, but the design is ongoing in the background including for the operational phase of the development.



4. Planning application submission

- Assessment of proposal against LDP policies and guidance
- Consultation with Council Services and agree post-application adoption strategy e.g. Roads Construction Consent (RCC)
- Consultation with Key Agencies
- Developer Contributions

- Site layout plans
- Building elevations and floor plans
- Street visualisations and levels
- Design and Access Statement
- EIA Report
- HRA Report
- Permission in Principle or Detailed App.

5. Consent

- Section 75 agreement
- Decision notice schedule of conditions
- Further application submissions
- Details required for pre-commencement and other conditions e.g. detailed drawings or sample materials

- Site clearance and remediation
- Commencement of works on site
- Build-out rate
- Multiple builders can be on one site at the same time
- Adjacent development

6. Adoption, Statutory Consents & Maintenance

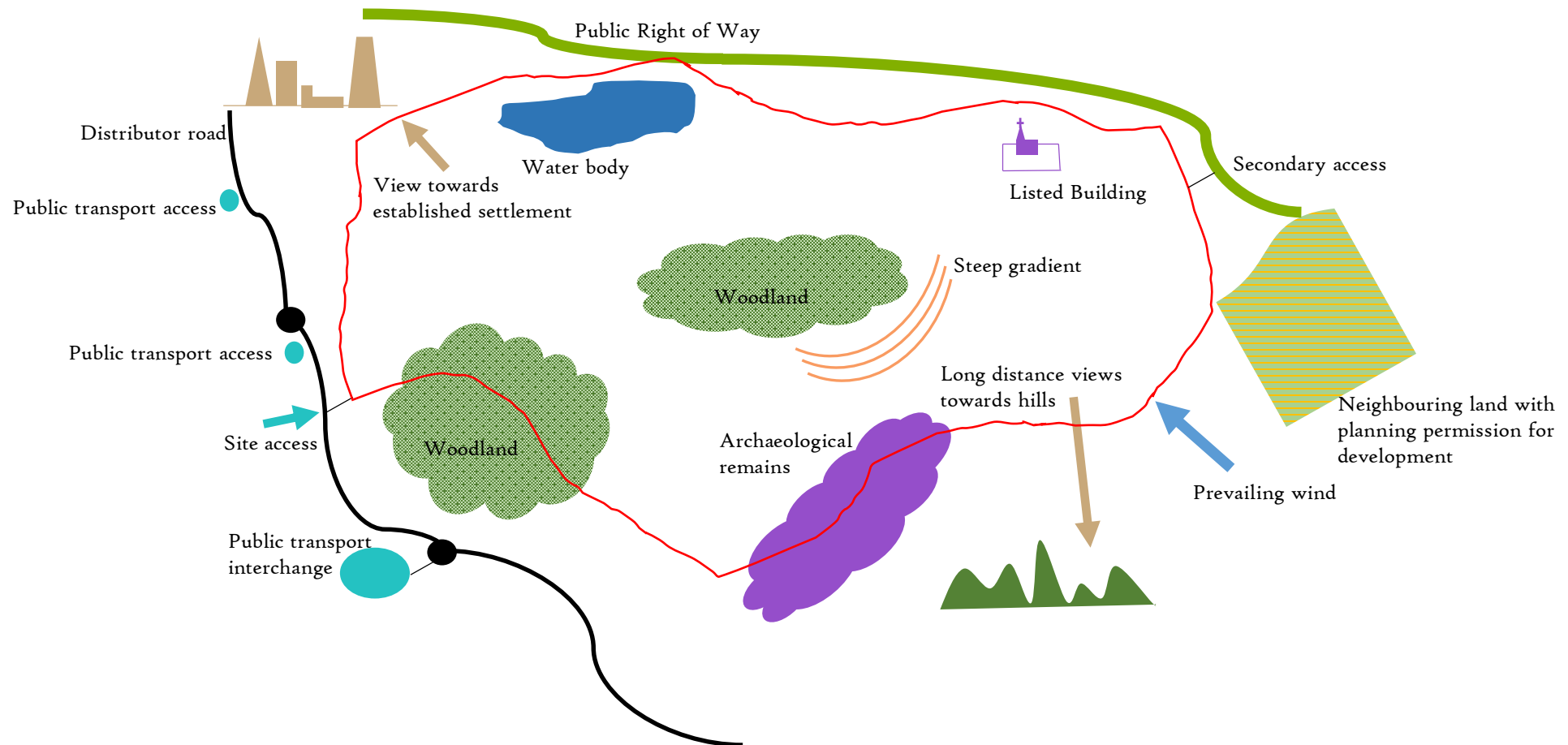
- Roads Construction Consent (RCC)
- Building Warrants
- Infrastructure and telecommunications adoption processes
- Responsibility for factoring, ongoing and long-term maintenance

- Amendments and adjustment to original consent
- Compliance with conditions and Section 75
- Site operational and buildings occupied

3.3 Site Appraisal

Site appraisals should primarily be conducted on the ground in order to fully understand the relationship between a site and its surroundings. Desk based analysis (before or after on-site analysis) can inform and support this. The site appraisal must identify all the features within and around the site including all natural features, existing built development (above and below ground) and environmental factors. These will all help to set the background and context and identify opportunities and constraints to inform for the design process.

The hypothetical development site below shows some examples of the key issues that will be identified through site appraisal and early assessments.

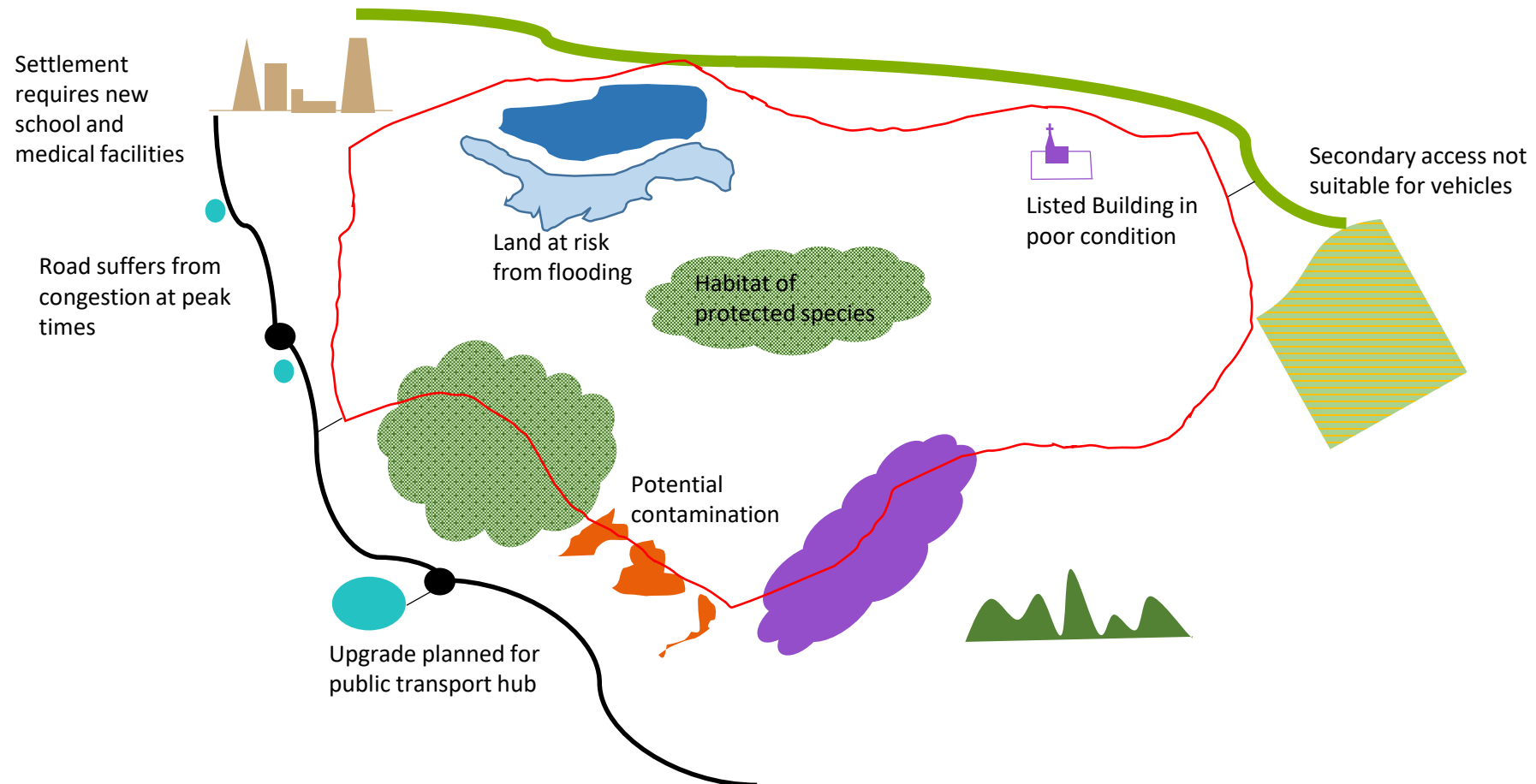


3.4 Pre-application

The pre-application stage is an early opportunity to discuss the site with the Local Authority, communities and land owners. This stage can help to identify specific issues that may not have become apparent at the site appraisal. As shown on the hypothetical development site below, this can include:

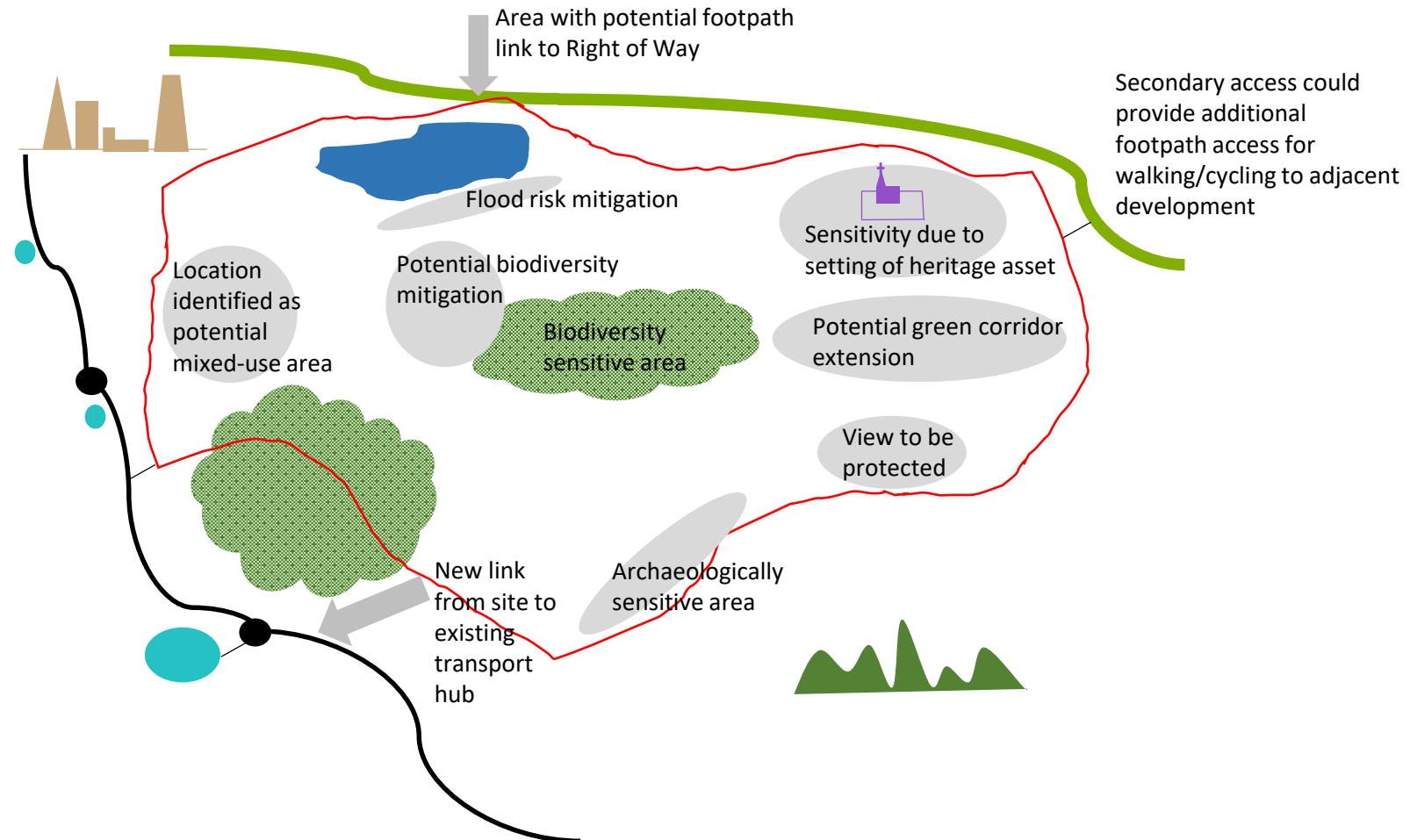
- Any land ownership issues that may require changes to the boundary
- Local Development Plan designations and Council aspirations for a site and surrounding area

- Technical appraisals already undertaken for LDP e.g. public transport and roads, education, health care, flooding, heritage, biodiversity, air quality, soil quality
- Initial feedback from Key Agencies on principle of development
- Community Councils and Neighbourhood Groups opinions



3.5 Design Concept and Masterplan

It is essential to take the results of findings from the site appraisal and feedback from pre-application to identify where there are particular sensitivities on a site. This will help to inform the early masterplan stage where for example mitigation would be required or where development is not appropriate. The hypothetical development site below shows how some of the opportunities and constraints identified earlier can shape the design concept or masterplan.



3.6 Further Stages

Submit planning application

Once a planning application is submitted, the Local Authority will begin their assessment of the proposal using National Planning Policy and Local Development Plan policies/guidance. Also, at this stage consultation with key agencies may be required e.g. on EIA Report or HRA Record.

The quality of the information submitted with the application can help the decision maker to understand how the design has been arrived at, and how the unique attributes of a site have been considered, applied and reimagined to form one comprehensive solution.

The primary consideration is always whether a proposal complies with the Local Development Plan policies. As shown throughout this Design Standards for New Housing Areas SPG, when going through the design process or when assessing the design of a proposal, there are a series of policies that apply, not just those within the Design chapter of the LDP 2018.

Consent

If planning permission is granted, it is important to review the conditions of the planning permission in detail. Conditions may stipulate certain changes to the design that affect timescales and/or how a site is built out.

It is encouraged early on in the pre-application and application process that matters such as final designs for e.g. roads construction consent (RCC) and adoption of sewerage infrastructure and SuDS are thought through prior to application submission. This will avoid the need to make follow-up planning applications to amend the design and will ensure that developments are built as per approved designs and can function during their operational lifetime as originally intended.

Adoption, Statutory Consents & Maintenance

Once construction is advanced, properties become occupied and aspects such as roads construction and landscaping schemes are implemented, these will become adopted or maintenance regimes will begin to come into force. Designers must ensure that there are clear post-construction maintenance schedules and responsibilities agreed for ongoing and long-term management and operational development life cycle. This includes roads, footpaths, open space and SuDS.

Part 4

Achieving Good Design – Technical Elements of Places



People and Environment

Topography

- Identifying Key Views, Landscape Features and Heritage Assets
- Buildings, Open Spaces and Artwork
- Walking and Cycling Routes

Biodiversity and Green Networks

- Site Layout and Biodiversity
- Individual Buildings and Plot Design

Blue Infrastructure

Landscaping and Open Space

- Open Spaces
- Connecting Spaces and Creating Green Networks
- Small Open Spaces and Formal or Semi-Formal Spaces
- Spaces Between Buildings, Street Corners and Edges
- Residential Curtilage and Public or Private Realm
- Play Areas and Play Equipment

Trees, Hedges and Other Planting

- Planting in Large Open Spaces
- Planting in Small Open Spaces
- Street Trees and Planting Within Small Landscaped Areas

SuDS

- Integrating SuDS, Open Space, Paths and Green Networks
- Small Scale SuDS
- Green Roof Design and Rainwater Harvesting

Renewable Energy Technology

- Wind
- Solar
- Heat

Air Quality



4.1 Topography

East Lothian is a diverse area with significant landscape and built features, with long distance views towards Edinburgh and Fife to the north, and the Lammermuirs and Scottish Borders to the south. These areas and identifiable features can often be seen from a significant distance. Land acquired for development is rarely completely flat and usually contains some changes in level across each site. Natural variations in gradient can be used as an opportunity to enhance the character of a development and to add local distinctiveness and variety.

Whilst construction processes always require a degree of clearance and levelling to allow for building, it is more sustainable to make use of existing natural undulations and other changes in landscape and incorporate them into development layouts. This will help to retain the site's distinctive character. When used to positively influence design, topography will contribute towards associated improvements in overall design quality and distinctiveness such as more varied streetscape, retaining key views beyond a site, views towards particular buildings or open spaces within a site, varied walking and cycling routes, and assisting orientation. Careful consideration must be given to how infrastructure such as drainage connections (including methods such as platforming, cut and fill) will require changes to site levels and the effects on visual character and usability of these areas. Level changes must be kept to minimum and must not result in any unacceptable issues such as visual impact, amenity or access issues (in particular for people with mobility issues). All relevant development proposals must be supported by detailed level information and sections submitted with a planning application.

Local Development Plan 2018 Policies

DP1 – Landscape Character
DP2 – Design
DP4 – Major Development Sites

DC10 – The Green Network

Key Design Principles and Priorities

All relevant developments must:

- keep changes to the existing levels to a minimum
- use existing topography to create visual interest in built form and retain views beyond the site
- carefully design the layout using feature buildings and gateways that use topography to create a sense of place and help people to orientate themselves
- incorporate existing changes in level to form varied walking and cycling paths, ensuring as far as reasonable that these are accessible to all users, including disabled users

Exemplar developments will:

- create high quality views to and from a new development by using topography positively together with positioning building heights, scale, form, massing, roof design and colour etc.
- form a varied network of walking and cycling paths that include changing gradients
- incorporate unique feature buildings at every opportunity where changing gradient occurs

Best practice examples



4.1 Topography

Identifying Key Views, Landscape Features and Heritage Assets

The landscape in East Lothian is rich and diverse with many prominent features including Traprain Law and North Berwick Law, expansive coast and beaches, church spires, castles, hillforts and monuments. Due to the proximity of East Lothian to the City of Edinburgh, Fife and Scottish Borders areas, important long distance views exist to the north south and west from within East Lothian. All opportunities to create or retain important views from a site must be taken into account in the design of new places.

The design of a development, including both the size and positioning of buildings and open spaces must be informed by a Landscape and Visual Impact Assessment or Appraisal (where required) and a Heritage Assessment (where required). This will identify where key viewpoints towards landscape features and/or heritage assets exist beyond the site that should be retained. It will also help to identify where buildings can be positioned so that they blend in with the natural landscape. Using land levels to either maintain or create an important view within or beyond a site will ensure a new development has a context and creates a sense of place for users. These opportunities will be identified at the site appraisal stage and carried forward to the final design and layout.

Buildings, Open Spaces and Artwork

The development design and layout must be as a result of the careful placement and arrangement of streets, buildings and spaces to frame views and make a positive use of topography. A clear and coherent layout that uses level changes to create a diverse environment helps people to orientate themselves and to move through a development. For example, placing distinctive or taller buildings at the ends of streets or other areas to assist orientation (where they do not detract from existing tall structures such as churches), locating low buildings in areas where important views beyond a site towards notable features are to be retained, creating deliberate gaps between buildings with glimpses of existing/new architecture or sculptures, and situating open spaces where they provide a view beyond the site to an important landscape feature or heritage asset, greatly contribute to sense of place and high quality urban realm. See also section on Landscaping and Open Space within **People & Environment**, and section on House Types within **Buildings & Spaces**.



4.1 Topography

Walking and Cycling Routes

Topography must be carefully considered in relation to walking and cycling routes in order for them to be accessible and useable for all, regardless of choice of transport mode, mobility, age or ability/confidence level. Developers should consider materials and whether safety features eg handrails are required. Reference to use of these should be made within any supporting documents with a planning application including Design and Access Statements. Such routes, if designed well can contribute towards improving health and wellbeing and overall site sustainability by reducing car usage.

Topography can be used to create varied, interesting and safe traffic free routes. Such routes should be framed with changes in gradient for example creating a slope to the side, areas with mounds, undulations and planting that all help to screen and break up housing and create an attractive green route.



An easily accessible walking route that is separated from areas of vehicular movement and slopes downwards with buildings on either side allowing longer views within the site. Image source: <http://www.ceg.co.uk/news/23-07-2019>



Centrally placed walking and cycling route lined with planting and broken up with access points into streets. Image source: ELC



Topography must not become a barrier to access and free movement. Here, the use of steps is only acceptable where alternative access is also provided such as a ramped access. Image source: <http://zeroc-tornagrain.co.uk/>

4.2 Biodiversity and Green Networks

Biodiversity and green infrastructure support natural environmental cycles, people’s quality of life, health and wellbeing, and are key elements of good design and placemaking. The natural environment including trees, woodland, meadows, shrubs and vegetation all support a variety of animals and wildlife, and the presence of these significantly enhances the quality of the built environment. Design of new developments should seek to ensure that these features are not completely lost or irreversibly damaged through provision of housing or other land uses, and that techniques are incorporated into built environment and urban design to attract and encourage new species and habitats. Some species and habitats have statutory protection and in the design process, the first step is to identify through site appraisal or specific surveys of protected species where these exist within a development site. This will then allow the design of the built form to consider at the earliest stage how to not only protect such species and habitats, but where within sites there are opportunities to enhance biodiversity and green infrastructure. Designers must follow the mitigation hierarchy shown below.

Mitigation Hierarchy:

- 1. **Avoidance** – preventing damage to existing habitats
- 2. **Reduce** - reduce any adverse impacts on habitats and species
- 3. **Offset** – only where avoidance or reduction cannot prevent damage, offset any remaining effects through habitat enhancement

Local Development Plan 2018 Policies and Guidance

Green Network Strategy SPG
DC10 - The Green Network
NH1 – Protection of Internationally Designated Sites
NH2 – Protection of Sites of Special Scientific Interest and Geological Conservation Review Sites
NH4 - European Protected Species
NH5 - Biodiversity and Geodiversity Interests, including Nationally Protected Species
NH8 Trees and Development
DP1 - Landscape Character
DP2 - Design

Key Design Principles and Priorities

All relevant developments must:

- use the findings from site appraisal that identify any species, habitats and green infrastructure on site to establish a layout that retains green infrastructure, minimises development impacts, and avoids conflict between biodiversity and use by people and vehicles or other sources of noise and pollution
- when designing site layouts, incorporate into open space strategies and landscaping strategies, tree belts, groups of trees, other planting, sheltered areas and other features that support existing species and the expansion of habitats on a site
- provide opportunities for people to experience biodiversity and wildlife on a site (e.g. seating in open spaces, bird hides, planting and other habitat support adjacent to path networks etc.)
- ensure that appropriate maintenance regimes are in place following development completion to support long-term high quality habitats and green infrastructure

Exemplar developments will:

- enhance the biodiversity value of the site and the surrounding area through a comprehensive biodiversity and green network strategy that encourages new wildlife to establish across a site
- use open space and green networks to make connections for wildlife to safely move from the site into other areas and open countryside
- enhance people’s experience on development sites and encourage outdoor recreation and exercise through the creation of wildlife trails and tree trails etc.
- design individual buildings that provide occupants opportunities to support and interact with biodiversity, in particular those that are close to open spaces and green networks

4.2 Biodiversity and Green Networks

Site Layout and Biodiversity

Development design must use existing biodiversity positively rather than simply mitigating any effects of new development. This will require a site design and layout that supports long term retention of species and habitats and enhances the quality of and access to these areas. Surveying of sites at the early stage is key as designs must be formed from these findings rather than designed in as an afterthought. Undeveloped sites can contain a range of protected areas such as European Protected Sites, species including bats, badgers, otters, great crested newts, breeding birds, and occasionally migrating birds. There may also be priority habitats present (see adjacent list). Surveys will help to identify where these are present on or near to a site and any areas that will require protection. Surveys must also inform the site layout and positioning/orientation of buildings, where new open space, landscaping and planting can help to support existing habitats, and the species to use depending on those present in the immediate area. Supporting biodiversity across a site requires careful placement of open space, landscaping, buildings, footpaths and roads in order to allow for movement of wildlife, space for trees and other planting to grow, areas of protection from noise, and maintaining areas of low pollution. Primary arterial routes that provide high levels of vehicular movement must not sever or otherwise come into conflict with existing habitats. Consideration should be given in the design of new development, including boundary treatment and hard landscaping to the impact of such development on biodiversity and fragmentation of habitats (in line with Policy NH5 and [the Pollinator Strategy for Scotland 2017-2027](#)).

Open Space, Allotments and Community Gardens

A large open space (such as a park) or a series of linked open spaces (such as linear parks) offer the best habitats for wildlife if they are free from vehicle movement. Where possible, there should be areas within large open spaces that are planted specifically to remain as grassland, scrubland, meadow or wildflower. Consider the maintenance scheme once developments are completed as these habitats must not be damaged or removed when grass cutting is carried out. Open spaces should not be left entirely clear and lacking tree planting. Also consider how residents of the site can get involved in recreational activities that support biodiversity such as allotments and community gardening.

SuDS (Sustainable Drainage Systems)

SuDS features provide a great opportunity to create new habitats and support species that in particular rely upon the water environment. These can comprise of swales adjacent to streets or ponds/basins that form part of large open space. Refer to [SuDS SPG](#) for further information.

Trees, Shrubs and Other Planting

Trees can have a very positive impact by providing habitats for wildlife and also shade and shelter from the weather. At the design stage, consider carefully the placement and grouping of trees to ensure longevity and maximum impact to support biodiversity.

Individual Buildings and Plot Design

On any site, individual buildings can contribute towards supporting and encouraging biodiversity. There are many different measures to do this and whilst some can only be implemented once houses are built and occupied, the following can be used at the design stage:

- Use the layout of houses and gardens to create a biodiversity network between gardens and open spaces
- Bat bricks or swift bricks
- Green roof or green wall features

East Lothian Priority Habitats
Acid Grassland
Bog
Calcareous Grassland
Coastal grassland
Dense Scrub
Heathland habitats
Flush spring
Inundation vegetation
Marshy Grassland
Mixed woodland – semi natural
Neutral grassland
Swamp
Woodland - broadleaf
Dune habitats

4.3 Blue Infrastructure

Many development sites contain existing blue features such as streams, culverts, rivers and ponds. These can provide a highly attractive setting for the arrangement of buildings and to encourage wildlife and recreation. These features should be used to enhance the character of development, to establish wider networks across a site, and link together with useable open spaces to form attractive walking and cycling routes.

Local Development Plan 2018 Guidance and Policies

SuDS SPG
NH9 – Water Environment NH10 – Sustainable Drainage Systems
DP1 - Landscape Character DP2 - Design DP4 – Major Development Sites
OS3 – Minimum Open Space Standards for New General Needs Housing Development
DC10 – The Green Network



Image source: <http://www.oandh.com/the-hamptons,-peterborough>

Best practice examples

This centrally placed pond provides an attractive setting for a large number of houses and includes a path all the way round with soft landscaping adjacent. The shallow sloped sides have designed out the need for a formal boundary. Seating could increase the time people spend around the space.



Image source: <https://www.abodo.com/nashville-tn/the-vistas>

Key Design Principles and Priorities

All relevant developments must:

- use existing blue features to influence the placement and orientation of buildings to maximise views towards them
- connect existing blue features with walking and cycling routes
- link new blue features (such as SuDS or ponds) with existing water environments and green spaces to create a network

Exemplar developments will:

- create a network of traffic free blue and green networks
- provide means of access to existing blue features beyond the site boundary

These flatted properties have been carefully situated alongside a linear water feature to allow good natural surveillance. Recreational path networks have been provided with soft landscaping to the side.

4.4 Landscaping and Open Space

The design and layout of open space including soft and hard landscaping is key to a successful development, both in terms of achieving high quality urban design and also supporting inclusive communities, improving human health and wellbeing. One of the key starting points for designing any new development must be to identify where new areas of open space will be created, and where existing open space can be improved or linked together. A mixture of formal and informal open spaces will provide people with options for how, when and why they wish to use a space. Everyone living in or visiting a new residential development must have easy access to high quality useable open space. As far as possible, building frontages should be orientated towards areas of open space. As far as possible open spaces should have defensible boundaries to ensure they are not prone to change of use applications.

Local Development Plan 2018 Policies and Guidance

Green Network Strategy SPG

NH1 – Protection of Internationally Designated Sites

NH2 – Protection of Sites of Special Scientific Interest and Geological Conservation Review Sites\

NH4 - European Protected Species

NH5 - Biodiversity and Geodiversity Interests, including Nationally Protected Species

NH8 Trees and Development

DP1 – Landscape Character

DP2 – Design

DP3 – Housing Density

DP4 – Major Development Sites

HOU4 – Affordable Housing

OS3 - Minimum Open Space Standards for New General Needs Housing Development

OS4 – Play Space Provision in New General Needs Housing Development

OS5 – Allotment Provision

DC10 – The Green Network

Key Design Principles and Priorities

All relevant developments must:

- provide areas of open space that are accessible to all users (including small developments where appropriate)
- create open space that meet the Council's open space quantity standard of 60m² per dwelling and are not detrimentally affected by traffic routes or other sources of pollution (such as waste transfer sites, industry or other uses that include incinerators as part of their operations, carbon-based energy generators, etc)
- use landscaping to protect buildings and spaces from sources of air pollution
- link open spaces with walking and/or cycling routes

Exemplar developments will:

- exceed minimum open space policy requirements
- design a development that orientates buildings towards open spaces and provides every house with a view towards open space

Best practice examples



The Green, Pencaitland

4.4 Landscaping and Open Space

Unique and well-designed open space adds to local distinctiveness and sense of place, and improves human health and wellbeing. Open space must be designed carefully in terms of location within a site and the size and type of open space so that the function is clear, either as a recreational environment, or simply to improve the visual appearance of the public realm. SUDs areas may form part of informal open spaces subject to their design and provided they contribute to and do not harm the amenity value of the wider open space. Incidental landscaped areas or areas of planting, footways, roads, private gardens, and allotments, will not contribute to open space requirements. LDP 2018 Policy OS3 sets out the minimum standards that may be considered acceptable. On-site provision of open space is required from developments of 20 dwellings or more and encouraged for developments of less than 20 dwellings

New developments must maximise the number of houses that are located adjacent to open space and provide easy access to these spaces without creating overly long linear streets. Multiple benefits are associated with good quality open space including improved physical and mental health and wellbeing. Such open spaces can be centrally positioned to maximise these benefits and easily link with walking and cycling routes across a site, creating a network and adding to the connectivity within it and beyond. The larger the open space is, means that more houses can benefit from views towards it and also provide people with flexibility as to how they use or move around.



Image source: The International Garden Cities Institute
<https://www.gardencitiesinstitute.com/blog/a-visit-to-york>

In large developments with a number of house builders it may be better to consolidate an open space into a large area.

The most successful open spaces are those that achieve a balance between giving users a sense of safety and security through enclosure and overlooking, but also providing people with options for the way in which they use a space, e.g. providing accessible shared paths for walking, cycling, wheelchair users and prams, seating areas, children's play areas, and shelter from weather conditions when necessary. The design process of open spaces and large open spaces in particular must take into account the wide variety of people that will use the space and the manner in which it can be used.



Worcester Park, London
Image source: Ivy Gate <http://www.ivygate.co.uk/area-guides/worcester-park-area-guide>

4.4 Landscaping and Open Space

Connecting Spaces and Creating Green Networks

To ensure open space is as successful as possible in terms of creating pleasant and attractive environments that are permeable and support biodiversity, it must be connected to other green spaces and walking and cycling routes, both within and beyond the site boundary and not be negatively affected by poor air quality from traffic and other sources of pollution. Priority must be given to the movement of people, with any house being located within an easy walking distance from open space. It is therefore important to avoid areas where open space and green networks are interrupted by the movement of motor vehicles (or where their use is negatively affected by other sources of pollution).

In larger developments, opportunities to link open spaces are greater, where the house types and street lengths/layouts differ more thus helping to create more legible and permeable layouts. New developments must create a network of streets and spaces that facilitate easy pedestrian movement without vehicular movement dominating the functionality of streets and spaces. The layout and type of housing will determine how successful the open spaces can be. A network of open spaces can only be created where vehicular movement is reduced or limited only to particular parts of a site. In particular long linear streets designed for vehicular movement, do not facilitate the creation of a well-designed connected network of green space particularly where they run adjacent to the open space itself. It will be necessary to consider how open spaces link with surrounding streets and spaces and how to avoid conflict between people and vehicles.



Image source: <https://www.beaulieu.uk.com/>



Oakgrove, Milton Keynes

Image source: <http://www.movingme.co.uk/property/MM000952/>

This open space forms part of a series of linear parks within a large site with blue feature in the middle. A large amount of houses overlook it with footpaths running separate from roads. There is also a number of bridges connecting each side of the housing surrounding the park, allowing people to move safely and easily within a traffic free area.



Image source: <http://www.ohampton.co.uk/about-the-hamptons/hampton-vale/>

4.4 Landscaping and Open Space



Open spaces that are surrounded on all sides by a road are effectively an island meaning people must cross it to get to/from the open space. It is important to ensure that any roads that surround areas of open space do not reduce safety and remove potential for connectivity to other green spaces within a site. It will be critical to provide planting such as trees and hedges to ensure that these spaces do not feel unwelcoming. If inappropriately designed car parking around the perimeters of open space may lead to reduced visibility, particularly for young children when moving from the space. Also, without an adequate mitigation parked cars are likely to dominate the visual appearance of the area.



Any traffic routes that run along the areas of open space should be designed in a way that minimises their potential detrimental impacts. Long linear or unnecessarily wide streets should be avoided and if that is not possible designed in a way that limits any detrimental effects such as speeding vehicles or impairing connectivity.



This SuDS pond is situated next to footpaths that connect to the wider site. Only one short section of road runs adjacent to the north western side, with other short semi-private accesses reducing impact of cars. Houses are positioned in a variety of ways and overlook the space and walking/cycling routes.



Long linear or unnecessarily wide streets should be avoided.

4.4 Landscaping and Open Space

Small Open Spaces and Formal or Semi-Formal Spaces

Smaller open spaces require careful design to be accessible and useable environments. In site layouts, open spaces present an opportunity to create a more sheltered and quiet space surrounded by houses and free from vehicular movement. For example, small spaces can easily be created within the central courtyard area of buildings. Avoid creating small spaces that are dominated by parked vehicles as this reduces their usability, safety and visual quality.

Off-street parking or parking at the rear of houses that front onto streets containing footpaths and pedestrian movement near to small open spaces helps to create a highly pleasant, safe and permeable environment in which to move around and spend time within.

Small open spaces can also be designed as more formal spaces where their design and layout has a higher level of influence over the way in which people use them, such as more hard landscaping, more defined footpaths, fixed seating, flower beds, well kept grass, and limited numbers of entrances/exits. They can also contain a central focal point such as a monument or other structure. These spaces should however not be too restrictive in their design and layout and should retain a level of flexibility for the different ways in which people may wish to use a space.



This more formal open space is overlooked by houses on three out of four sides. Vehicular movement is limited as accesses are only serving three properties either side, and the use of boundary walls means the space is still a pleasant place to be. Image source: ELC



Kings Court (Station Road) Dunbar. Source: ELC

4.4 Landscaping and Open Space



Image source: <http://www.benpentreath.com/architecture/masterplanning-development/tornagrain/>

Spaces Between Buildings, Street Corners and Edges

The spaces between buildings are as important as the layout and appearance of the structures themselves and require careful design to ensure distinction between public and private areas and legible environments. New developments should create public areas that are welcoming, safe and pleasant, and provide some spaces that are located away from traffic movement, offer opportunities to sit and interact with other people. Streets that have front elevations set closer together and prioritise the movement of people rather than vehicles are the most successful for reducing vehicular speeds and creating a private feeling. Where vehicular movement is necessary, shared spaces should be used as they offer multiple benefits, allowing for easier pedestrian movement and improved safety and placemaking, with horizontal alignment of roads (the combination of curves and straights) and areas of soft landscaping often the most effective way to restrict vehicle speed.



Image source: <https://www.sightline.org/2014/09/22/courting-families-in-portland/>

Enclosed courtyard with no vehicular access provides a safe private feeling space.

If a public area between buildings is proposed simply to add visual interest, then it should be easy to maintain. If a public space is to form functional useable open space, it must be easily accessible, not restricted by planted or other boundaries, and of a suitable size and gradient to allow multi-user access. Small spaces such as those between buildings and on the corners of streets can provide a function and make a valuable contribution particularly where they have seating. Open spaces as rear courtyards behind buildings can, if well overlooked, become quiet and safe places with no vehicular access, but the house types, their layout/positioning and parking must be carefully designed to achieve this.

4.4 Landscaping and Open Space



Houses set with a direct frontage onto the street create a more private and intimate feeling and help to reduce vehicle speed. Shared surfaces can help to achieve this, but sufficient parking must be provided elsewhere within the site to avoid indiscriminate parking and for areas such as this example not to become dominated by parked cars.

Image source: <http://hulimguf.pw/Allies-and-Morrison-Trumpington-Meadows-PH1-Cambridge.html>

Landscaping in particular soft landscaping must be used to enhance the character and appearance of streets in new developments. The size, type, placement and boundary type for areas of soft landscaping must make it clear to users whether it is intended to be useable open space or not.



Take opportunities to create distinctive and unique small open spaces and soft landscaped areas at street corners.



Narrow areas of soft landscaping parallel to front boundaries where their size clearly indicates their purpose. Such landscaping can help to reduce traffic speed and deter parking in areas which are not designated for this purpose.

4.4 Landscaping and Open Space

Spaces Between Buildings, Street Corners and Edges



Integrating footpaths, play equipment and seating within soft landscaped areas helps to create an active street.



Trees within open space in appropriate locations from buildings add interest, colour and shade. Chapelton, Aberdeenshire

Image source:
<https://www.zeroc.co.uk/fin-d-a-home/chapelton-aberdeenshire/>



A well defined development edge can be created using planting with trees/shrubs combined with low level walls.

4.4 Landscaping and Open Space

Residential Curtilage and Public or Private Realm

New developments must make a clear distinction between public areas of soft or hard landscaping/open space and private residential curtilage/garden ground. Landscaping (both hard and soft) together with boundary treatment will be the primary ways of achieving this and equal consideration must be given to defining the front, side and rear elevations of houses and their gardens from public streets and spaces including footpaths and parking areas. It is important to define public and private areas from the outset as occupiers of houses will often make incremental changes such as erecting walls, fences, gates to the front of houses or installing hard standing to define their plot boundary from their neighbours. This can have a negative effect on the overall landscaping strategy for a site, and whilst design cannot account for all such changes during operation, use of appropriate landscaping and boundaries can help to reduce this.



Dwellings that are set with a direct street frontage (or almost direct) should have limited open space to the front. This still allows occupants some degree of personalisation but removes the issue of lack of maintenance where space is not used frequently.



These flats have a semi-private area for use by ground floor occupants creating a defensible boundary but retaining some street activity and natural surveillance.

Arterial residential streets

Housing fronting onto arterial residential streets with higher volume and speed of vehicles will typically contain a footway and will not be designed as shared surfaces. Use landscaping to create either small open areas of approx. 1m wide soft landscaping to the front of houses (and possibly bin stores) that requires minimal maintenance, or semi-private spaces with boundaries such as low railings or walls. This can help to avoid infrequently used spaces becoming neglected and untidy.

Quieter residential streets

Dwellings that are situated on quieter residential streets with fewer vehicular movements and slower speeds should use landscaping to create and define larger front or side gardens. These spaces will typically be more attractive for occupants to use where the surrounding environment is quieter. These gardens should also have a defensible boundary separating the public realm from private garden ground. Use of low fences, walls or hedges is encouraged to provide some privacy but retain natural surveillance. Very thin boundary planting that provides little privacy and often becomes neglected should be avoided.



Use low level planting or walls to define larger areas of garden ground from public streets or footpaths in quieter areas.



4.4 Landscaping and Open Space

Service strips

Utilities such as drainage pipes that are essential for developments to function will often require a certain stand-off distance from any building. This can impact upon the visual character of a development and must be carefully designed as part of the overall landscaping strategy. These areas should be as attractive as possible using landscaping to conceal their presence and to avoid parking on them. Services will require access by statutory undertakers such as Scottish Water, Scottish Gas Networks, British Telecommunications etc. and therefore usually sit within public areas of developments. When designing these into a layout, consider the access and maintenance required during operational phases of developments and the impact upon landscaping for houses and garden ground. Statutory undertakers should ideally return any area worked on to its original state.



The Maltings, Haddington. The visual character of this development is influenced by a wider landscaping plan that aims to integrate service strips with the areas of amenity open space that provides sufficient space for trees to mature.

4.5 Play Areas and Play Equipment

Development sites must take into account the needs of children, young people and their parents by providing opportunities for having fun, being outdoors and getting exercise, stimulating senses and learning. This can partly be achieved through formal play areas and play equipment where it is high quality and accessible. Soft landscaped areas in particular larger open spaces or areas next to footpaths and green networks can all provide informal useable play space. Fixed play equipment should be located where the surrounding environment is open, overlooked and safe with natural surveillance and on-street activity. Play spaces must be kept away from roads, or where they are to be located near to any areas of vehicular movement, the surrounding streets must only contain very slow moving vehicles such as shared surfaces or short semi-private access roads. Play equipment should consider the needs of different users including any medical conditions or disabilities. Sites should provide for the needs of all users and avoid exclusion through only limited play equipment. Often more effective ways of providing for the needs of children is through natural play equipment and equipment made from sustainable materials.



Locating play equipment within wider open spaces near to footpaths and seating will help to create a safer environment for children and young people. Image source: <https://www.goosefootuk.com>

The simplest things can be fun for children, help them to interact with their environment, and interact with other children. Use of topography such as mounds to create tunnels, natural materials such as safe boulders or tree trunks can all be effective ways of creating such features. It also avoids segregation of play areas from other parts of open space or the wider site. Natural play equipment can also sometimes have a double function and provide informal seating areas or space for people to gather and interact. They are often more cost effective and require minimal maintenance once installed. For detailed guidance refer to the East Lothian Council Play Policy 2017 – 2020. In some cases it is preferable for developers to provide financial contributions towards improving nearby larger or existing play areas instead of providing on-site play provision.



Natural play equipment can be located anywhere within a site that is safe and overlooked, providing children and young people opportunities to spend more time outdoors.

4.6 Trees, Hedges and Other Planting

Trees and other planting play a very important role in the character of a place and the quality of streets and spaces. They can be used to enhance buildings, define public and private spaces, enhance large and small open spaces, provide privacy, improve air quality and sustainability, and create shelter and shade from the weather. Whenever possible, established trees should be incorporated into landscape designs.

Trees must be part of the early design of new developments in order to ensure they are located in the right places. Consideration should be given to locating new tree planting where it will not create future issues of overshadowing or concern over safety to residential properties. The garden boundaries to all residential properties should be located no closer than the edge of the root protection area (as defined by British Standard BS5837:2012 'Trees in relation to design, demolition and construction') of any existing tree. This root protection area should be measured for the mature size of the trees (regardless of their size at planning/development stage). This allows growing space for the trees' roots and avoids future issues of development within gardens (such as sheds, summerhouses, patios and extensions) impacting on tree roots, and therefore health and safety, of the trees. Smaller tree species in small groups could be planted closer to the houses to soften the streetscape and improve the setting, whilst not creating future issues.



Large open spaces that have minimal or no planting or landscaped boundaries often do not feel welcoming to people and can affect the perception of safety and shelter. Single lines of thin or dispersed trees are unlikely to remedy this. Instead, use specimen tree planting that will grow to a decent height (preferable in groups) to create shelter and some enclosure within large open spaces.

Planting in Large Open Spaces

The provision of trees and other planting within large open spaces is highly important as without sufficient enclosure and shelter, these spaces can be very unwelcoming and unattractive. They can also become under-used as people tend to avoid large unenclosed or entirely unsheltered spaces that make them feel uneasy. Tree planting must be planned as part of overall open space design and this must be informed by how a space is intended to look or function. Where buildings are spaced far apart, it is for example unlikely that a small number of trees planted within one part of a large open space will rectify this by providing sufficient enclosure. Care should be taken when designing the layout of a housing scheme to avoid positioning rear gardens where they will be overhung or overshadowed by woodlands or bands of trees, which could reduce the amenity value and usefulness of the garden for residents. In general, houses/buildings should be located no closer than 20m to the edge of woodlands and tree belts. This removes the concern of residents of houses being within the fall height of mature trees.



Trees are likely to thrive in larger open spaces where their roots can spread and the trees can mature and grow to their full potential. These should be provided in groups and of large specimens that will add to the visual quality of the open space. The combination of trees planted on the edge of this open space, larger group of trees within the space, and landscaping and planting of front gardens makes the space and street feel welcoming, safe and attractive.

4.6 Trees, Hedges and Other Planting

Planting in Small Open Spaces

Planting in small open spaces requires careful design and management to ensure that the space can provide a variety of functions whilst also achieving a safe and pleasant environment. Small spaces must not become overshadowed by too many large trees reducing the perception of safety.

Hedges to front gardens are important as they clearly define the private areas and effectively soften the streetscape. It may be necessary to use planning conditions to secure factoring agreements to ensure the hedges are properly cared for and not replaced by less desirable boundary treatments.



Hedges enclosing the private areas and large trees surrounding the public spaces play an important role in defining the parkland character of Tenterfield Drive in Haddington.



There is enough space for some of these trees to grow and mature. These trees will add to the aesthetic and character of the area creating a pleasant amenity open space. Hallhil, Dunbar. Image source: ELC



Trees can be incorporated into hard landscaped areas to improve the visual appearance. Gilsland, North Berwick. Image source: ELC

4.6 Trees, Hedges and Other Planting

Street Trees and Planting Within Small Landscaped Areas

Trees can provide much needed greenery particularly in areas that would otherwise contain only hard landscaping. These pockets of greenery are important to design in from the start. New developments can often appear very bleak due to the lack of greenery. However, once vegetation grows and matures, the appearance of a place often changes significantly.

Tree planting in the streetscape must be carefully considered in order that they do not obstruct visibility for moving vehicles, unless planting is used as part of a speed control strategy. Trees can be seen as a safety concern or nuisance where they are close to buildings and the full crown spread of the mature tree should be considered when specifying or locating trees within the streetscape.

Landscape designers should work closely with the services and roads designers in achieving a workable overall design that avoids, in particular, service routes being placed in the root protection areas of trees or within landscape spaces left for tree planting, either impacting the health and safety of existing trees or preventing the approved landscaping scheme, important to the amenity of the area, from being implemented. Other planting such as shrubs and flower beds add visual interest to all developments. Shrub areas must be sufficient to allow establishment and success of shrubs. Areas narrower than 1m or close to buildings will have limited areas for growth and can be excessively dry.



Trees and shrubs can be used to screen designated car parking areas.



Trees provide attractive landscaping on street corners and can reduce or avoid illegal parking.



Trees provide enclosure and shelter for this small space from the road on the other side meaning it is used more frequently and is safe for children.

4.7 Sustainable Drainage Systems (SuDS)

The primary function of Sustainable Drainage Systems (SuDS) is the protection or improvement of water run-off from built development. Developers will be required to ensure that SuDS are designed, sized and built to accommodate the volume of water they are expected to hold. SuDS can provide multiple additional benefits when appropriately designed e.g. they can help manage flood risk, improve water quality, and provide significant placemaking opportunities. SuDS can enhance the visual character and amenity, provide useable open space where they are accessible, create habitats for biodiversity value, improve physical and mental health through more active healthier lifestyles, and have educational benefits. SuDS must be integral to the site design from the outset to realise these benefits, and have a clear, long-term management and maintenance strategy and responsibility.

Local Development Plan 2018 Policies and Guidance

SuDS SPG

NH5 - Biodiversity and Geodiversity Interests, including Nationally Protected Species

NH8 Trees and Development

NH9 – Water Environment

NH10 – Sustainable Drainage Systems

DP1 - Landscape Character

DP2 - Design

DP4 – Major Development Sites

OS3 – Minimum Open Space Standards for New General Needs Housing Development

DC10 – The Green Network



Best practice examples



Key Design Principles and Priorities

All relevant developments must:

- ensure SuDS contribute positively to the character of a development and where possible to useable open space
- ensure SuDS are well-integrated into development layouts as part of green networks and walking and cycling routes
- develop a site layout that maximises benefits of SuDS including being overlooked by orientating buildings towards them
- design SuDS with a range of planted species to add visual variety and provide opportunities for wildlife and biodiversity to establish and thrive
- develop a long-term strategy for maintenance and safety of SuDS

Exemplar developments will:

- only use types of SuDS that form publically accessible open space
- provide seating areas and spaces for social interaction adjacent to SuDS
- provide information boards on the biodiversity that can be seen in SuDS

4.7 Sustainable Drainage Systems (SuDS)

Integrating SuDS, Open Space, Paths and Green Networks

SuDS can contribute towards useable recreational open space in new developments, by being well integrated into site layouts. This means that the benefits of SuDS can be maximised, such as connecting with footpaths and cycling routes, and creating wildlife and biodiversity corridors. They should not be situated on the edge of a site or near to roads that will carry high volumes of traffic so that they are instead pleasant places to spend time within. Detention basins can be particularly good at delivering useable open space that is accessible for a variety of users, and contributing towards flood risk management at the same time. It is important to effectively design the SuDS feature so that edges are not too steep allowing access for users and escape in times of heavy rainfall. If SuDS are to manage flood risk they must be designed to accommodate the volume of water predicted for the relevant flood event. These details must be agreed with the Council. Boundary treatments should be avoided as this reduces the usability of SuDS, unless fencing or other boundaries are necessary as identified through a risk assessment. Planting can easily be used as an alternative. More technical guidance and specific requirements are included in the SuDS SPG.

SuDS can form part of a site wide green/blue network, contributing to flood risk management and open space requirements

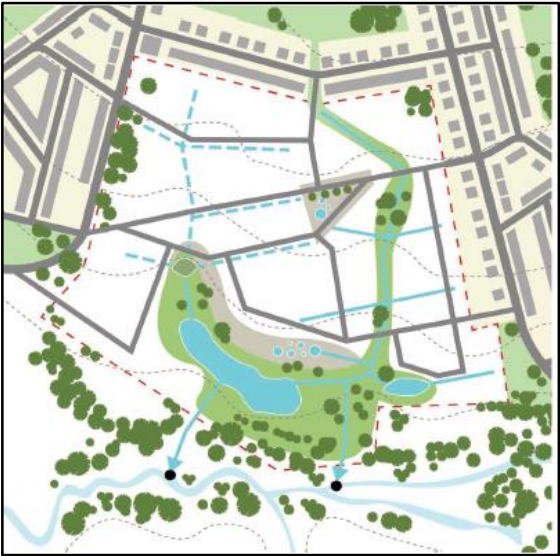


Image source: CIRIA The SuDS Manual C753

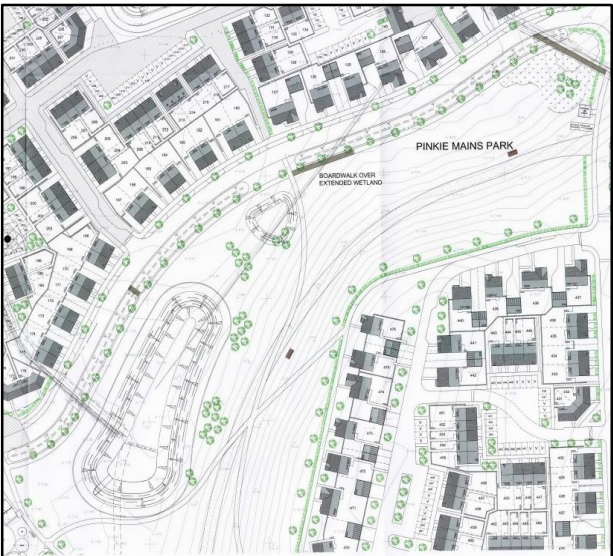
Use SuDS to create a feature or focal point that can be incorporated into walking and cycling routes around a site and beyond



Windygoul South, Tranent.
Image source: EMA Architects and Masterplanners



Image source: Landscape Institute



Pinkie Road, Musselburgh
Image source: Taylor Wimpey

SuDS that form part of a large park area contribute to the variety of open space on a site, particularly where a range of planted species are used attracting a variety of wildlife.

4.7 Sustainable Drainage Systems (SuDS)

Small Scale SuDS

When designing a new development, opportunities should be taken to incorporate SuDS features into the layout of small spaces. These can be adjacent to footpaths or on street corners. These spaces can then add visual interest and help to reduce the impact of large hard landscaped areas. They also help to distribute green space across a site rather than being contained to park.



Fairbairn Way, Dunbar. Image source: ELC



Image source: Allen Pyke Associates



Upton, Northamptonshire.
Image source the Land Trust



Gilsland, North Berwick. Image source: ELC

Green Roof Design and Rainwater Harvesting

Individual buildings can contribute towards water management on a site through the use of features such as a green roof. In many cases, rainwater can be harvested adding to the sustainability of buildings and developments.



Image source: <https://www.wildroof.co.uk/green-roofs.php>

4.8 Renewable Energy Technology

At the development design stage, the opportunity exists to include (both for site wide energy and individual buildings) solutions that involve use of renewable energy technology. This not only helps to minimise the impacts of development on climate change and create a more sustainable built environment, but it also means occupiers of properties and other buildings can reduce carbon footprint and potentially costs for electricity and heating. It is much easier to design in these technologies from the outset rather than retrofitting.

East Lothian Council supports energy efficient design. At the site level, this can include measures such as support to electric vehicle charging points, on-site solar or wind generation that can serve multiple properties or buildings, creation of heat networks serving one or more developments etc.

For individual buildings, this can include micro wind generation, roof mounted solar and PV panels, ground/water/air source heat pumps etc. Policy SEH2 requires that all new buildings must include Low and Zero Carbon Generating Technologies (LZCGT) to meet the energy requirements of Scottish Building Standards. Use of renewable energy technologies will generally be secured through a planning condition.

Local Development Plan 2018 Policies

SEH1 - Sustainable Energy and Heat
SEH2 – Low and Zero Carbon Generating Technologies

Key Design Principles and Priorities

All relevant developments must:

- design buildings to be as energy efficient as possible
- allow occupiers to modify their home and garden to use renewable energy technology
- include Low and Zero Carbon Generating Technologies (LZCGT) that help reduce building’s CO2 emissions by at least 15% in line with Policy SEH2 and do not have a negative impact on air pollution

Exemplar developments will:

- be carbon neutral and will meet all building energy demands using only renewable energy technology
- be electric vehicle only
- Use LZCGT to achieve a reduction in building’s CO2 emissions by more than 15% in line with Policy SEH2 and create some low carbon or carbon neutral housing that allows potential occupiers to choose either on or off grid energy consumption

Energy Statement

Policy SEH1 encourages developers to submit an Energy Statement, and following the declaration of a Climate Emergency, the Council will seek an Energy Statement on new development proposals to allow climate change obligations to be met through decisions on granting of planning permission.

The Energy Statement should contain:

- SAP Dwelling Emissions Rate (DER) or for non-residential developments SBEM Buildings Emissions Rate (BER) calculations with and without LZCGT
- If the Target Emission Rate has been met by use of LZCGT and not energy efficient design, why such design were not used
- Where community heating technology is used, a feasibility assessment for the financial model proposed and management plan (e.g. if an Energy Service Company is being formed, costs of energy relative to the grid)
- Where LZCGT is used, what the arrangements for export of electricity/heat are, and how the technology will be maintained to allow the benefits to continue to be realised
- For major developments, what carbon emissions are expected from transport from the site in operation

4.8 Renewable Energy Technology

Wind

Development layouts can (where appropriate) incorporate wind energy to serve the new buildings. This would be subject to acceptable location and design and without impacting negatively upon the amenity of occupiers. Lower level turbines may be easier to integrate into development layouts. Small groupings of buildings may be able to accommodate turbines. Refer to LDP Policies WD1 – 6.

Solar

Development layouts can (where appropriate) use some land for ground level solar panels that would provide free and clean energy for occupiers.

Individual buildings can utilise roof mounted solar panels providing that the orientation of buildings is not restricted or negatively affected in order to capture this energy. Solar panels are available in a variety of shapes and colours. They must also be well integrated with the appearance of the building, with particular attention to roof colours and avoiding significant contrast on buildings with more traditional materials. Some solar panels can mimic roof surfaces such as slate or even transparent cells. Consider how landscaping (in particular how trees will mature) and potential conflict with capturing solar energy.

Heat

Community heating schemes (also known as District Heating) provide heat from one central source to more than one property, sometimes a considerable number. They are sometimes twinned with power generation meaning they are combined heat and power (CHP). On development sites, a large proportion (or even all) properties could be served by such a scheme. The Council would discourage CH/CHP that rely upon fossil fuels. Where biomass is proposed, information on total greenhouse gas emissions including transport would be required. The location of CH/CHP plant must take into consideration air quality and noise in respect of proximity to residential dwellings. Visual impact must also be minimised using screening.



The top example shows poor integration of solar panels on a roof through the stark difference in colour. The bottom example shows much better integration of solar panels.

4.9 Air Quality

New developments must accord with the Council’s Air Quality Action Plan, and not render any of its measures unworkable. Good practice principles are set out in “Delivering Cleaner Air for Scotland” Environmental Protection Scotland/RTPI 2017.

Air pollution affects everyone whether they are young or old, whether they have certain medical conditions or are in good health. Various sources contribute to air quality including certain industries, motor traffic, agriculture and domestic burning of fossil fuels. New housing developments must ensure air quality is good in order for them to be pleasant places to be, and in particular to encourage people to undertake outdoor activity and recreation to improve health and wellbeing.

Local Development Plan 2018 Policies

NH12 – Air Quality
DP1 – Landscape Character
DP2 – Design
DP4 - Major Development Sites

Key Design Principles and Priorities

All relevant developments must:

- locate homes away from sources of pollution (such as main arterial routes, waste transfer sites, industry or other uses that include incinerators as part of their operations, carbon-based energy generators, etc)
- provide an Air Quality Assessment (where the proposal is likely to result in either a breach of National Air Quality Standards or a significant increase in concentrations of air pollution within an existing AQMA)
- mitigate air quality impacts for proposals that would result in a breach of air quality standards within an Air Quality Management Area

Exemplar developments will:

- use construction methods that do not have a negative impact on air quality
- install air pollution monitors in new housing located within AQMA
- install air pollution forecast displays in sensitive areas e.g. outside schools



4.10 Density

Analysis of different urban areas within East Lothian shows that density varies with town centres usually having the highest density of development and outer areas lower densities. Housing developments built in the 1990's had much lower density of development than many earlier developments and tended to average under 20 dwellings per hectare net. Lower average densities usually mean that developments have not made the most efficient use of land and resulted in only limited house types being provided on a site.

Housing density is calculated on a net basis by dividing the total number of houses by the area of land that will accommodate housing and directly associated development – local streets, private gardens, parking areas, incidental open space and landscaping. Distributor roads, non housing uses, open space serving wider areas such as parks and play areas, large SUDS areas and significant landscape buffer strips at site boundaries are excluded. Higher densities allow a range of different house forms to be included in a development and for land to be used efficiently.

To encourage a greater range and mix of different house types in East Lothian has adopted a default requirement as part of Policy DP3 for an average density of 30 dwellings per hectare net using a full range of house types and sizes. All new housing sites should achieve this **as a minimum**. Sites with predominantly only detached houses and/or the minimum amount of open space are unlikely to achieve this target density and may not be supported. The reason for this density figure is to ensure that housing sites accommodate a range of house types including detached, semi detached terraced and flats which in turn helps to ensure the housing development is one where people can move house in future as their housing needs change without leaving the community in which they live.

Local Development Plan 2018 Policies

CH2: Development Affecting Conservation Areas

DP2 - Design

DP3 - Housing Density

DP4 - Major Development Sites

DP7 - Infill, Backland and Garden Ground Development

DP8: Design Standards for New Housing Areas

Key Design Principles and Priorities

All relevant developments must:

- assess the character of surrounding built form to ascertain density at site appraisal stage
- design a site layout with buildings and open spaces that fit the location, not design a site to fit a particular house type or market conditions
- ensure a range and mix of different house types to ensure policy compliance with Policy DP3: Housing Density
- prioritise good quality useable public open space in development layouts over the provision of primarily detached houses
- respect the density and urban grain in sensitive sites such as conservation areas or small villages to ensure that a development fits with the urban grain of the local area
- locate higher density housing in those parts of the development that are close to public transport routes

Exemplar developments will:

- Achieve a density that is above the minimum average density of 30 dph using a mix of high quality house types, streetscapes and urban realm, and at the same time exceed minimum open space requirements providing high quality useable open space

4.10 Density

For major developments proposals (more than 50 units), sufficiently detailed masterplans and design & access statements must be provided to demonstrate the range and mix of house types and open space to be provided, and to allow a density calculation to be made. For developments of less than 50 units, sufficiently detailed layout plans should be provided to demonstrate these matters, often resulting in fewer conditions being required for details to be submitted at a later stage. For all planning permission in principle (PPP) applications, details will be required through a series of conditions attached to any permission.

It is recognised that in small development sites, particularly in small settlements a minimum of 30 dwellings per hectare may not be achievable. In small villages or in sensitive areas such as conservation areas, new houses should fit with the urban grain of the local area to ensure an appropriate fit with the settlement. This will be subject to provision of justification for the design methodology used.

Case Study

Hallhill, Dunbar

This residential development of 130 houses in Dunbar has achieved an average density in excess of 30 dwellings per hectare (net) whilst at the same time incorporating large areas of open space and using a wide variety of house types.



4.10 Density

Case Study

Dirleton

This residential development of nine houses in the small conservation village of Dirleton was sensitively designed to fit with the existing urban grain of the area. It represents a good example of how design and density of new housing can respond positively to the context and character of an established settlement.



4.11 Public Transport

Good public transport opportunities should be identified at the initial phase of any new residential development and made available, either by linking to existing networks or providing new routes. All public transport routes must be clearly shown on masterplans and layout plans. If new bus routes are proposed then these will usually require arterial streets, their width being designed appropriately to carry such vehicles, and with an overall focus on their movement function. On these streets, the use of on-street parking needs to be formally designed in, and intentionally limited to particular marked bays. Whilst these streets will require to be planned specifically to allow direct and fast bus services to the benefit of the operator and passengers with movement as the primary function, their place function must also be given proper attention to achieve high quality placemaking.

Local Development Plan 2018 Policies

T1 – Development Location and Accessibility
T2 – General Transport Impact
T4 – Active Travel Routes and Core Paths as part of the Green Network Strategy
T6 – Reallocation of Road Space and Pedestrian Crossing Points
T8 – Bus Network Improvements Proposal
T9 – Larger Station Car Parks
DP1 – Landscape Character
DP2 – Design
DP3 – Housing Density
DP4 – Major Development Sites

Key Design Principles and Priorities

All relevant developments must:

- be public transport-oriented where new residents have easy and safe access to bus stops, rail halts/stations
- promote compact, higher residential densities along a public transport route
- maximise opportunities for higher density and greater mix of uses at key stops e.g. close to public transport interchanges / transport hubs
- support a mix of land uses to reduce the demand for travel
- when applicable, include higher-density development within a 300-200m catchment of a bus stop, and preferably closer
- include cycle access and cycle parking where appropriate e.g. as part of transport interchanges, close to key bus stops located within mixed use areas or key bus stops which serve a high-frequency bus corridor;
- ensure that paths connecting bus stops with residential areas and destination points (e.g. schools) are well-overlooked, safe and attractive

Exemplar developments will:

- incorporate planting as part of the street design, to achieve multiple objectives e.g. improve the connectivity of the green infrastructure network, reduce traffic speeds etc.
- incorporate renewable energy solutions within the design of bus shelters e.g. in major activity centres and interchanges such as railway stations

4.11 Public Transport

Pedestrian and cycling routes to bus stops should be direct, well overlooked and well lit to ensure that they are desirable. It is often the case that the frequency of the bus service and the quality of these routes itself will influence the people’s judgement of an acceptable walking distance. Depending on the size and nature of the development the developer should provide bus stop poles, plates and shelters to a specified standard as agreed with the Council’s Road Services. If new bus stops are required, then their detailed positioning should be discussed with the Council. Accessibility to any new and existing bus stops should also be considered at the design stage.

Recommended maximum walking distances to bus stops

Situation	Maximum walking distance
Core bus corridors with two or more high-frequency services	500 metres
Single high-frequency routes (every 12 minutes or better)	400 metres
Less frequent routes	300 metres
Town/city centres	250 metres

Source: Buses in Urban Developments, The Chartered Institution of Highways & Transportation, 2018

General requirements for new bus stops (bus shelters):

- spaced at around 300m to 400m apart, taking account of density;
- located away from the immediate frontages of residential properties. If this is unavoidable they should at least not be directly in front of ground floor windows;
- located close to natural focal points e.g. schools, shops or local facilities;
- where new bus shelters are provided, localised widening of the footway will be required
- a network of footways and footpaths serving both the stop and the local activities should be provided

Larger development proposals may be required to provide cycle racks or lockers at certain stops to allow residents to leave their bikes whilst using the bus. Including cycle access and cycle parking close to key bus stops serving high-frequency transport corridors or as part of transport interchanges can effectively expand their catchment area beyond a 400 metres radius and help increase public transport patronage. Proposal T9 of the LDP 2018 safeguards land for station car park expansions to increase their capacity for cars and to increase the provision for cyclists, including cycle racks and stores.

There might be tensions between achieving efficient vehicular movement while maintaining a high quality of environment and amenity required from public spaces. Therefore, public transport corridors have to be designed holistically, making use of both urban form and planting.



Planting used to improve people’s experience of this arterial street with high movement function also designed for speed restriction



Cycle parking on Haddington High Street

4.12 Street Function, Length and Layout

In order for new developments to be successful places, street design must have a positive impact on people. Well-designed places actively encourage people to make use of streets as they move through them, interact with other people and form communities.

The positive relationship between streets and people helps to create a sense of place and for new areas to develop into an inclusive community. To do this, the overall street layout must be clear and coherent with a network of streets and spaces that are safe, pleasant, welcoming and easy to move around. Good street design is essential for any size of site, and the layout must be understandable and memorable. Streets must also become places where people want to spend time and where they can easily move between places without conflict between users. Achieving this requires careful design to create a balance between place function and movement function. Reducing the impact of vehicular movement on streets is essential, and walking and cycling must become the easiest and preferred mode of transport, followed by public transport, and lastly the private car. Street design must help to achieve improvements to environmental quality and human health for example by avoiding junction designs or waiting areas outside particular buildings (such as schools or shops) where traffic is likely to be stationary for extended periods of time.

Local Development Plan 2018 Policies

T1 – Development Location and Accessibility
T2 – General Transport Impact

DP1 – Landscape Character
DP2 – Design
DP3 – Housing Density
DP4 – Major Development Sites

Key Design Principles and Priorities

All relevant developments must ensure that streets and paths are:

- safe public spaces that are visually attractive, well lit, and free of unnecessary clutter or obstacles
- places where people want to spend time and interact with others
- places where pedestrians and cyclists feel safe and their movement is prioritised over the movement of motorised vehicles
- places that help to reduce the impact of vehicular movement and achieve improvements to environmental quality and human health. To achieve this various measures may be considered where appropriate, including:
 - modes of transport with no or low emissions (cycling, walking, electric cars and bikes, public transport)
 - layouts and design that do not contribute towards air pollution building up and allows for dispersion of pollution e.g. by avoid idling vehicles and waiting areas near to public buildings or services
 - shared surfaces or car-free developments/areas

Exemplar developments will:

- include street furniture and planting as part of a speed control strategy and to encourage activity on the street
- explore opportunities to provide shared surfaces in residential and mixed use areas
- include good quality surface materials such as natural stone so they contribute to a pedestrian friendly and attractive streetscape

4.12 Street Function, Length and Layout

To achieve good street design, there are three key considerations when forming the overall site layout:

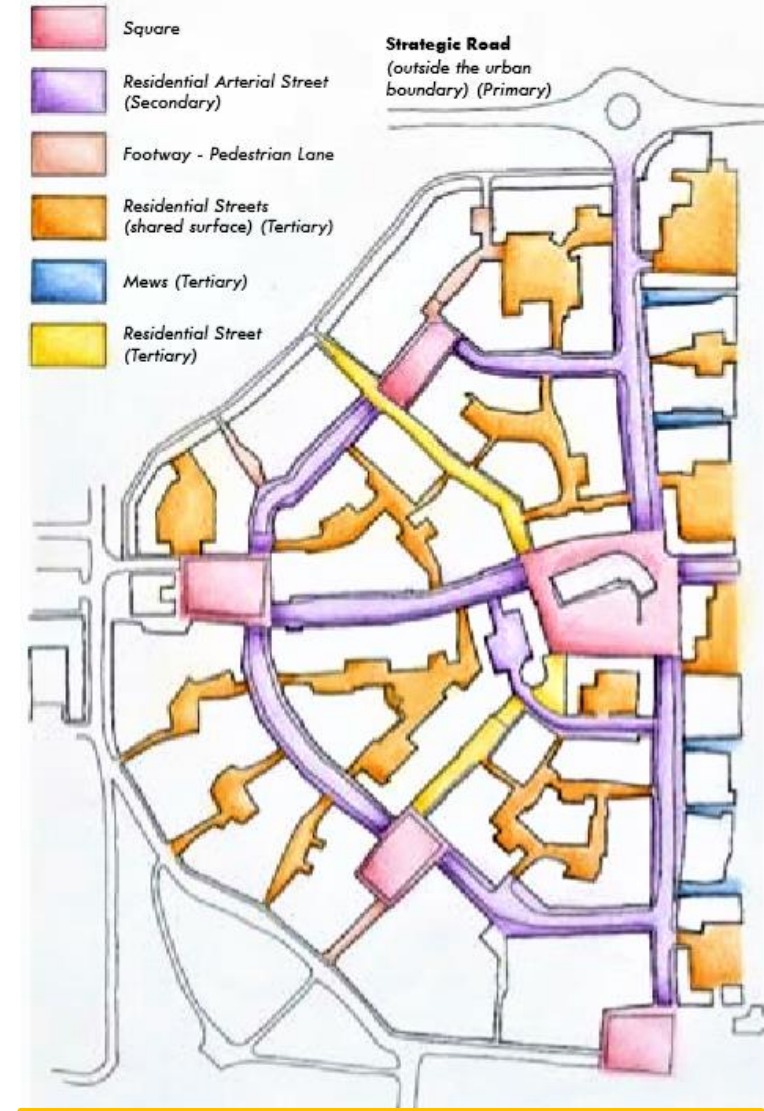
- Street function
- Street layout
- Street length and width

Street Function

Streets have two key functions: place and movement. The function of a street must be derived from its position within the site and whether it is to form a key route providing the easiest way to move from one place to another, or whether it is intended to be used for spending more time within and moving through a series of streets and spaces.

Good street design demands that issues of place and movement are considered together. Well-designed streets will be capable of performing more than one function and will always be integrated with surrounding streets and path networks. They will be able to create a positive sense of place by making a positive use of its relationship with the buildings and the surrounding spaces whilst at the same time be designed to satisfy their particular role in the movement framework.

Pedestrian and cyclist movement should be considered first and motor vehicles movement should be appropriately accommodated within the context of the street function. When streets are required to move larger volumes of motorised traffic, they should still be designed as pleasant places for pedestrians and cyclists. In order to enhance the place function and reduce the effects of larger volumes of motorised traffic, a number of design techniques can be applied, including ensuring that main vehicular routes do not run uninterrupted in a linear fashion across a large part of the site, and using buildings, spaces and landscaping to create breaks and add interest to arterial routes.



The colouring process illustrated above can be a useful tool in defining street character types as part of an analysis of function of submitted development proposals (source: National Roads Development Guide, SCOTS).

4.12 Street Function, Length and Layout

Street width and building height should be considered together in terms of the function of the street and its location e.g. overly wide streets serving low to medium density residential developments of single or two-storey detached or semi-detached buildings will usually create visually monotonous places that lack an adequate sense of enclosure. Whilst there will be ways to mitigate against these undesirable impacts e.g. by planting street trees, it will be often more sustainable to minimise the overall area covered by tarmac.

Swept path analysis is likely to be required at early stages of the design process. The Council's Roads Services team should be contacted early to discuss what vehicle specification should be used for this analysis.

New dwellings must be sensitively positioned to ensure that windows in principal elevations, above ground floor level, do not result in unacceptable level of overlooking. The council recognises that adherence to rigid minimum distances can discourage innovative design and reinforce use of standard layouts. Therefore separation distances should be sufficient to demonstrate that appropriate design solutions can be employed to retain privacy and protect residential amenity.

Goldsmith Street, Norwich;
source:

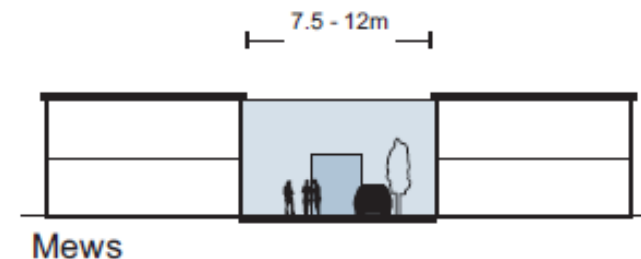
<https://www.architecture.com>

This relatively high-density development of council houses won the 2019 RIBA Stirling Prize Award.

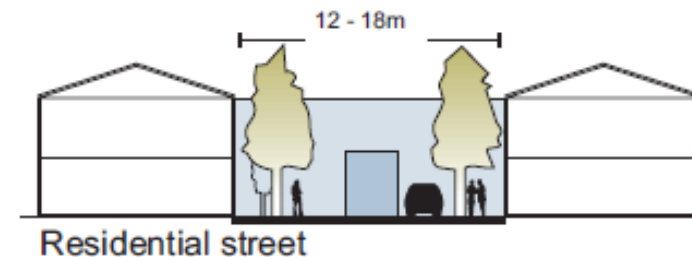
A narrow 14m 'front to front' width has been considered acceptable through a careful design of windows to minimise overlooking.



Street trees and higher buildings provide a sense of enclosure within this wide residential arterial street (Basingstoke Taylors Farm Source: Bus Services & New Residential Developments, Stagecoach 2017)



Source: *Designing Streets* p24



4.12 Street Function, Length and Layout

Street function and character types in new residential developments must be determined by the findings from a site appraisal, and an urban design response formed from detailed analysis of location both the built and natural environment. Natural characteristics such as micro climate and topography will assist with informing street function and the placement of buildings, as well as built features that help to define the place. Assessment of surrounding movement patterns will also help to form a movement framework for people and vehicles.

Key Design Techniques

Avoid the use of very wide streets where buildings are set too far back to have a positive relationship with the street

Avoid long linear uninterrupted streets where the design does not prohibit speeding through the placement of buildings and trees, and other street narrowing techniques

Create medium length sections of arterial streets that meander and curve with buildings that are set close enough to the street to provide enclosure and natural surveillance.

Use variations in building layout and orientation, groups of buildings, public spaces, shared surfaces, boundary treatment and soft landscaping to break up the arterial streets

Ensure that arterial streets retain high movement function and form part of a legible site layout

Arterial Residential Streets

These streets will form the main access and movement routes through a residential development. They typically allow for higher volumes of people and vehicles to get from one part of a development to another through good walking and cycling paths. They can also form part of public transport routes usually buses. This type of street must be designed to allow a high level of access and movement linking parts of the site together, but at the same time, be safe enough and be pleasant places with natural surveillance and street activity.



Avoid long linear arterial streets where traffic can speed and people do not feel safe walking or cycling. The above examples show overly wide linear streets serving low to medium density residential developments that lack an adequate sense of enclosure. Street width and building heights should be considered together in terms of the function of the street.

4.12 Street Function, Length and Layout

Tertiary Residential Streets

These streets will link residential premises and associated parking areas to arterial streets. Residential streets are designed to serve residential properties and are not intended to carry through traffic, including buses. They will be characterised by a carriageway and footways, which occasionally can be located on one side of the street only provided pedestrians can safely access houses that don't have direct access to a footpath.

Short and curved or irregular streets contribute to variety and a sense of place. However, it is important to ensure that direct and efficient routes are provided for pedestrians and cyclists.

Key Design Techniques (for detailed information please see the ELC Standards for Development Roads)

For urban and residential streets, a maximum design speed of 20mph should normally be an objective (Designing Streets). Speed-controlling features are needed at intervals of around 30-40m in order to achieve speeds of 20mph or less. Straight and uninterrupted links should therefore be limited to this range to ensure that the arrangement has a natural traffic-calming effect. Short forward visibility standards must be applied to influence driver behaviour and encourage low vehicle speeds. This can be achieved with varied deflections in the street and the careful positioning of trees, planters, buildings, lighting columns, reduced street widths with indents for letting cars past etc.

Soft landscaping within streetscapes is an important aspect contributing to attractiveness of the neighbourhoods. Hedges (maintained by a factoring agreement) to front gardens are important as they effectively soften the streetscape. Soft landscaping and street trees add to the aesthetic and character of the area which is an important factor that helps to encourage walking and cycling.



Adequate street curvature and raised table help to achieve design speed of 20mph. Source: ELC

4.12 Street Function, Length and Layout

Street Length and Layout

This refers to the overall relationship between streets and spaces within a whole site including how movement and permeability are managed, and the positioning of buildings and their settings. Public and private space in the housing area will be clearly defined by the relationship of built form to streets. Perimeter buildings will be at the edges of the development blocks and they will be positioned and orientated to define, overlook and present active facades to the public spaces and thoroughfares in front of them.

Street layout will significantly influence vehicle speeds. Research has shown that the largest effect on speeds is associated with reduced lines of sight. The National Roads Development Guide recommends that vertical traffic calming features such as speed cushions and humps are avoided as these may have detrimental effects on disabled and infirm road users and instead raised tables at junctions may be suitable in new low use residential developments. The Guide also includes a number of methods that should be considered in terms of reducing vehicle speeds

1. reduced forward visibility;
2. narrower lane widths;
3. shorter block lengths;
4. block paved or setted road surfaces;
5. presence of on-street parking features within the carriageway;
6. informality in street and junction layout.



4.12 Street Function, Length and Layout

Shared Surfaces

Shared Surface or Level Surface Streets are defined as “A street surface with no level difference to segregate pedestrians from vehicular traffic” (DfT Local Transport Note 1/11, October 2011). Vehicle speed must be physically constrained to 10mph in areas where shared spaces are proposed. This requires traffic calming features at least every 30m. Shared surfaces are most appropriate for streets with low vehicle flows (not greater than 20 vehicular movements per hour or a street serving a maximum of 25 houses).

Where shared surfaces are introduced, design techniques such as carriageway narrowing and horizontal deflection should be used. The layout of buildings adjacent to a shared surface area and the use of appropriate landscaping (e.g. trees, hedges and planters) should enable safe transition when moving from a non-shared surface area. Road narrowing should be sympathetic to the setting if it forms part of the overall landscaping. Bollards, trees or planters will often be required to prevent vehicles from parking on the verges.

When using shared surfaces, special attention and appropriate design techniques must be used to assist users who have restricted movement, a disability, or those with impaired vision. Slight changes in levels, alternating materials and use of planting and boundary definition can all help to guide the user and assist movement. However, it needs to be noted that long-cane users should not have to cross distances of more than 6m without a navigation aid such as a 100mm kerb, railing or building line.



Carriageway narrowing -
The Green at Longstone,
Edinburgh.



Careful placement and orientation of buildings, surfaces and landscaping in shared surface areas reduces traffic speed and improves safety for people. Use of colour and textures assists wayfinding in particular for visually impaired people.



Horizontal deflection
can be achieved by
trees, planters or
street furniture and
can help to reduce
illegitimate parking.

4.13 Movement and Permeability

New developments must be designed to be as accessible as possible, with the choice of travel mode in order of priority being walking, cycling, public transport and then private cars. Designs must create a network of permeable and interconnected streets that allow the free and easy movement of people across a site and beyond into the wider area. Focussing on desire lines will help to establish this from an early stage. Street networks will also need to accommodate vehicular movement, although as a secondary consideration that must not conflict with pedestrian movement. Permeable development design means that people will be encouraged to walk or cycle rather than travel by car by creating direct and safe street layouts and path networks. Streets that allow for vehicular movement must ensure they contribute towards distribution of traffic evenly and not adversely affect the street network beyond the site through reducing localised traffic congestion (and idling traffic) which can generate air quality issues.

Local Development Plan 2018 Policies
T1 – Development Location and Accessibility
T2 – General Transport Impact
T4 – Active Travel Routes and Core Paths as part of the Green Network Strategy
T6 – Reallocation of Road Space and Pedestrian Crossing Points
DP1 – Landscape Character
DP2 – Design
DP3 – Housing Density
DP4 – Major Development Sites
DC10 – The Green Network
NH10: Sustainable Drainage Systems

Key Design Principles and Priorities

All relevant developments must:

- be designed with a focus on the movement and experience of people and not motor vehicles
- consider how active travel routes provide safe and direct connections to key destination points e.g. schools, local facilities, places of interest
- have principle elevations with active frontages onto streets and roads
- have clearly defined legible layouts allowing pedestrians and cyclists to easily find their way throughout and beyond the site
- provide public spaces, streets and paths that are visually attractive, well lit, and free of unnecessary clutter or obstacles
- Incorporate the inclusive design principles to ensure that everyone has unimpeded access to properties and public spaces

Exemplar developments will:

- where appropriate use street furniture and planting as part of speed control strategy and to encourage activity on street

Best practice examples



Windygoul, Tranent – linear park provides a pedestrian and cycling route that is free from traffic in a safe and pleasant environment.

4.13 Movement and Permeability

Movement Network

In designing the movement network in a new residential development, the following user hierarchy should be followed:

1. Wheelchair and mobility scooter users
2. Pedestrians
3. Cyclists
4. Public transport users
5. Other motor traffic

Any major developments will be expected to demonstrate how the hierarchy of the movement framework influences the proposal. This in particular will include consideration of the streets to be treated as Home Zones/ shared surface spaces and the safe routes to school.

A network of multifunctional public spaces should be designed together with the layout of buildings and be well connected to a movement framework that presumes in favour of walking and cycling in appropriate areas.

The creation of multifunctional public spaces within new developments should promote mixed land uses to enable people to have easy access to their daily activities. This approach supports the principle of proximity, continuity and connectivity within the new development and the wider settlement. It also supports the potential for integrated transport (a multi-modal transport system where different modes of transport are efficiently linked with each other).

Public spaces and pedestrian/cycle routes should be overlooked by surrounding buildings and active frontages, and should feel safe and be suitable for use at different times of the day or night.

Pedestrian and cycle routes provided within new developments should:

- be safe and attractive;
- have gentle gradients of less than 1 in 20 (in accordance with Cycling by Design, 2011); and
- be as direct as possible, following obvious desire lines to local destination



Urban designers will aim to create places that allow the safe movement of all users of that space whilst ensuring that an attractive environment enriches people's experience of their daily activities. On many occasions staggered (chicane) barriers are unnecessary and preferably should be avoided as speed reduction measures as they create conditions which are dangerous or unpleasant for cyclists, people with pushchairs, and the users of wheelchairs. Alternatives, such as a use of single row of bollards, surface treatment or signage can indicate the need to reduce speed without limiting accessibility. If staggered barriers are used, the arrangement should be designed to slow cyclists (including tandem cyclists) rather than force them to dismount. Where bollards and barriers are necessary, they should be highly visible so they do not cause a hazard to the user.

4.13 Movement and Permeability

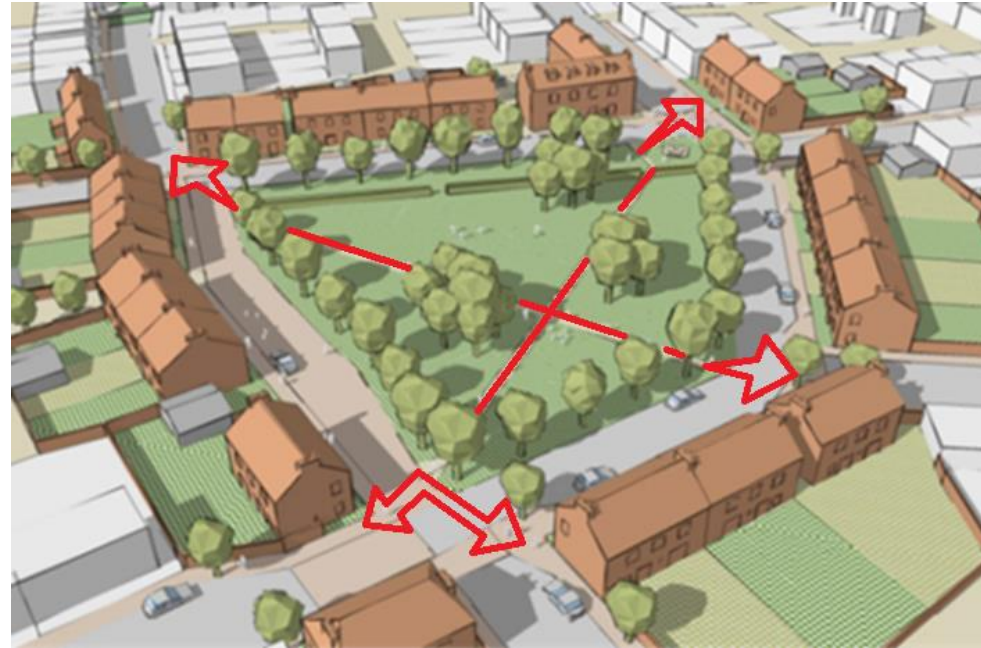
Movement Network

Pedestrians and cyclist should take priority over motorised traffic with paths following desire lines and crossing streets at grade where possible. Major roads should not form barriers to pedestrian and cycle movement and controlled crossings should be used strategically.

A cycle network within new developments should as a whole be more direct than the road network and must avoid steep gradients, be barrier free and overlooked. Foot and cycle routes must be created using a surface that is accessible to all user groups. In order to decide what type of cycle routes is most appropriate, Cycling by Design guidance (Transport Scotland, 2011) proposes the following classification:

- Long Distance Routes: Routes of an inter-urban nature, including the National Cycle Network
- Network routes and links between rural communities/ facilities. These are appropriate for all relevant skill levels and trip purposes are to be accommodated
- Commuter Routes: Radial and circular (circumferential) routes which are designed for utility trip purposes.
- Local Access Routes: Generally local neighbourhood routes which mainly make use of local streets and paths. These are likely to be vital to the overall success of the proposed cycle network providing safe links to local services and facilities and commuter and long distance routes.

Shared paths need to be designed to ensure that the quality of the environment for pedestrians and cyclists is not compromised by sharing the facility. As a general guide, the use of shared pedestrian and cycle routes is not recommended in congested urban environments where pedestrian and cycle use is high. However, the decision to provide a shared facility should always involve considering the views of any Local Access Forum or Panel and groups representing visually impaired people.



Prioritising pedestrians & cyclist movement e.g. by providing quicker routes (desire lines) through the local park. Designers should consider the role that open space can play in terms of encouraging walking and cycling. This is best achieved by open space that forms part of a connected and multifunctional network of green spaces.



A segregated cycleway – Musselburgh town centre, a visualisation included in the draft Musselburgh's Active and Sustainable Travel Masterplan

4.13 Movement and Permeability

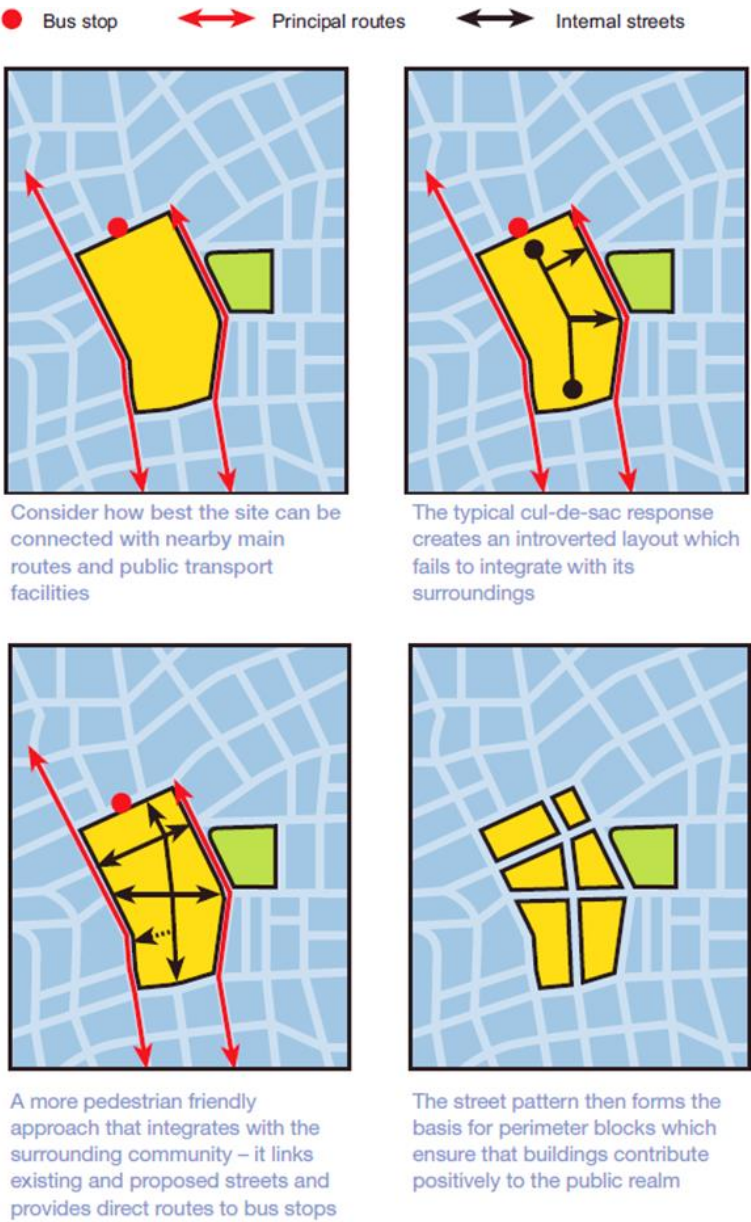
Movement Network

Path networks for non-motorised traffic must be created using a surface that is accessible to all user groups. It will be appropriate to consider a hierarchy of paths from 4m-wide shared use commuter routes that are mostly required to accommodate significant pedestrian and cycle flows (primary); to 3m-wide shared use paths aligned with carriageways (secondary); to 2m-wide footways shared use areas (tertiary) and windust recreational routes which mostly will occur in rural areas. Cycle routes must be designed using Cycling by Design guidance (Transport Scotland, 2011)* and ELC’s existing or future standards for developing roads.

Providing segregated cycle paths located away from streets and motorised traffic may not always be possible or even preferable as accommodating cyclists within the street network reinforces the perimeter block form and also helps to achieve a greater sense of security from being seen by drivers and from buildings facing onto streets. In all circumstances cyclists should be safe when accommodated within the carriageway (whether within or outwith the trafficked road carriageway).



Segregated and recreational cycleways will play a part in forming the entire walking and cycling network, but cycle and pedestrian paths within the streets are likely to constitute the main part of this network.



Source: The Urban Design Compendium

* Unless replaced by the revised edition

4.13 Movement and Permeability

Permeability and Wayfinding

Development should be based on a permeable movement framework, which builds on pedestrian desire lines and is connected, where possible and appropriate, with adjacent street networks.

Street layouts must provide enough accesses through neighbourhood blocks to ensure they are sufficiently permeable to be served by narrow, traffic calmed streets which will give access to individual residential blocks. Visual connections to the surrounding area with views of landmarks or the inclusion of art (or distinctive street furniture) can help people to orientate themselves within a neighbourhood.



Incorporating art within the building – Malta Terrace, Glasgow.



Haddington West Road, boundary treatment – using a unique design can help with wayfinding and also it enforces a sense of place drawing from its historic context.



Pedestrian/cycle paths can further improve permeability within new residential developments. These segregated paths must be appropriately overlooked from nearby residential properties and should be additional to any footpaths that are required as part of the street network.

Pinkie Farm Musselburgh (first from the bottom) – pedestrian & cycling link between new development and existing street network.



This narrow passage between the properties whilst improving permeability, is visually unattractive and does not help to create a safe and pleasant environment.

4.14 Setbacks

The setback of buildings from the street is a key determinant of neighbourhood character. Setbacks should be determined by the density and character of the area. Generally setbacks will be smaller (up to 2 metres) where a more urban, higher density, pedestrian friendly character with lower traffic speeds is to be created, with larger setbacks (up to 3 metres) where a more open, green, lower density character is to be created. A setback of 1 metre should be seen as a minimum to ensure that windows do not open up over adoptable highway.

For south-facing housing along east-west aligned streets, there may be a case for larger setbacks and hence larger front gardens for solar gain capture. However, it will be more preferable to ensure that the building’s orientation and design ensure that solar gain is maximised. Also, in these situations it would be better to provide longer gardens to ensure there is no additional overshadowing.

Local Development Plan 2018 Policies

Cultural Heritage and the Built Environment SPG
DP2: Design
DP4: Major Development Sites
DP9: Development Briefs

Key Design Principles and Priorities

- All relevant development must:
- Ensure that setbacks of buildings from a street respect the existing or preferred neighbourhood character and make efficient use of the site.
- In all but exceptional cases, the frontage should be no less than 1 metre (to allow for opening windows, canopies, steps, planting, bins etc).
 - The preferred approach for larger homes (that are likely to accommodate children is a minimum 2 metres setback (unless justified by the proposed street type eg mews)
 - Under no circumstances should parked vehicles (whether allotted to the property or not) be less than 1.5 metres from the windows of a habitable room. This is to ensure a minimum level of amenity and freedom from disturbance/nuisance from vehicles starting up or being loaded.
 - where there are no footpaths (i.e. level surface streets) setbacks should be a minimum of 1.5 metres.
 - within a more built up area, building lines and setbacks should be more consistent, in general not varying in depth along the length of a street by more than approximately 2 metres. In lower density areas, building lines and setbacks can vary more.
 - Setbacks greater than 3 metres should be discouraged as they will put pressure to allow on plot parking to the front. If setbacks greater than 3 metres are deemed acceptable then sufficient planting should be provided to help soften the impact cars may have on the streetscape.

4.15 Building Heights, Scale, Form, Massing and Proportions

Building heights together with the scale, form, massing and proportions must be considered closely in relation to development density in order to achieve a site layout that contributes both towards the character and the amenity of residential areas. Particularly in larger developments, building heights should be varied in order to add visual interest and break up the overall mass of the development. Streets, blocks and individual buildings should reflect the human scale and assist sensory functions such as movement and legibility.

Street design requires careful placement of development blocks and individual buildings including forward lines, roof heights, horizontal and vertical proportions, and street corners.

Ensuring these issues are considered will help to achieve individuality and variety in the built form and that new developments can be created without detrimental impact on adjoining or nearby development. In particular, developments that are within or close to heritage assets or historic cores will require additional detailed consideration and sensitive design.

Local Development Plan 2018 Policies

Cultural Heritage and the Built Environment SPG

- DP2: Design
- DP4: Major Development Sites
- DP9: Development Briefs

Key Design Principles and Priorities

To ensure that the height of buildings respects the existing or preferred character of the area

- Development should be of a height and scale consistent with its particular setting and location and generally respect the character of East Lothian's residential areas.
- The maximum height of buildings must not exceed the maximum height specified in the masterplan or design brief that applies to the area.
- If buildings are proposed to be higher than the prevailing building heights the higher floor(s) should be sufficiently setback so as not to detract from the existing neighbourhood character.
- Changes of building height between existing buildings and new buildings should be graduated.

4.16 Building Orientation and Microclimate

To ensure that streets and spaces are safe, have natural surveillance, and are pleasant places to be, the orientation of buildings including principal elevations, access, windows and gardens, must all be carefully designed. It is an important design principle to maximise the number of houses that face the street or open spaces. Streets and spaces must also be protected and sheltered from the weather where possible, avoiding creating wind tunnels or areas that have no shading from sunlight. Building orientation must therefore be considered when determining the type and character of streets that will be formed within development. The primary means of access for all dwellings should be from the street as this promotes on-street activity and supports passive surveillance.

The way in which a new building sits within its plot, or site, is a critical factor in terms of how well it fits in with its neighbours and contributes to the overall character of the street. Orientation is also a key factor when ensuring individual houses maintain some privacy for its occupants and avoiding conflict between buildings such as overshadowing or lack of daylight.

Another key consideration for orientation is to maximise solar gain (including for renewable energy such as solar panels) and natural heat and daylight into buildings. Orientating as many houses as possible so that the elevation with greater numbers of windows or roof plane for capturing solar energy or photovoltaics faces within 30 degrees of the southerly direction, is an important consideration. In order to achieve this streets should preferably be aligned east-west. There must however be no detrimental impact on the overall site layout in order to achieve this, as it is important to avoid very linear or strict street layouts that lack variety. Other issues such as early morning or evening sun glare can be addressed by careful positioning of the buildings or the inclusion of street trees. Developments will be expected to balance taking advantage of orientation and topography for solar gain against maintaining a good level of variety in street layout and the privacy and amenity of neighbouring properties.

Key Design Principles and Priorities

All relevant developments must:

- Maximise natural surveillance and observation of streets and open spaces by fronting buildings onto them
- Avoid high boundaries to the front of dwellings
- Ensure building alignment, where this is important to the area’s character, is protected.
- Where buildings are located on a corner plot, ensure that both elevations have windows or doors and avoid blank gables
- Maximising opportunities for solar gain by orientating blocks within 30 degrees of the east-west axis.

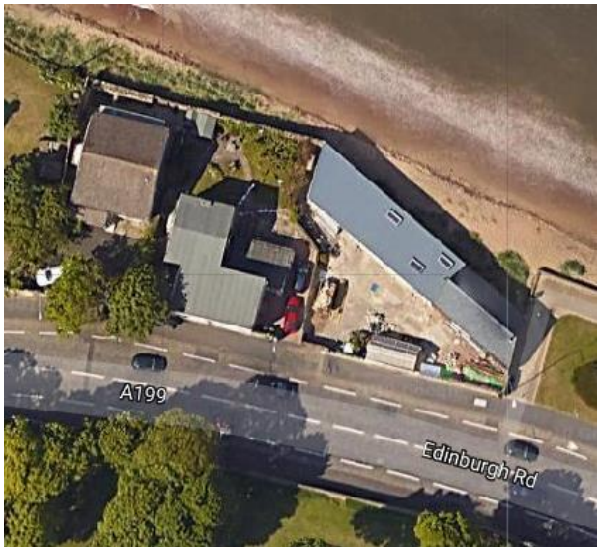
Local Development Plan 2018 Policies

Development Briefs SPG
Cultural Heritage and the Built Environment SPG

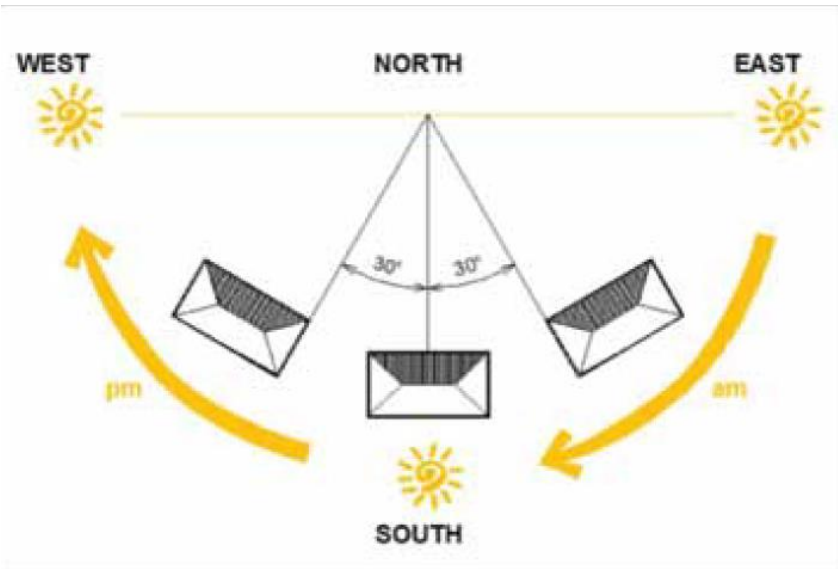
DP2 – Design
DP4 – Major Development Sites
Any relevant design brief
Any relevant conservation area Management Plan

4.16 Building Orientation and Microclimate

Best practice examples



Musselburgh seafront home maximises its location for solar gain.



Pinkie Farm, Musselburgh – the layout of new streets responds the existing context and includes longer streets on an east-west axis which helps to maximise solar gain. New dwellings should be constructed to take advantage of sunlight to provide a pleasant living environment and to maximise solar gain. This can be achieved by positioning main living areas, conservatories and rear gardens to generally face south, south-east or south-west where practicable. North-facing gardens may need to be longer than south-facing gardens.

4.17 House Types

Architecture and in particular residential developments have a relatively long life cycle and a lasting impact on the character of places. Development viability has always been one of the key determining factors in the overall quality, design and provision of the type of new housing. Achieving viability must not come at the expense of good quality well-designed and attractive houses and site layouts. There are many examples of visually attractive and environmentally sustainable developments created at low cost, both contemporary architecture and more traditional styles.

The site appraisal will establish a context for any development and must be used to guide the architectural style of a new place. This means that a particular type of housing deemed to be suitable for one site will not necessarily be appropriate for another place. Bland, repetitive and uninspired housing styles where the proposed development's design and appearance has no relationship with the site location or context is a barrier to achieving placemaking principles East Lothian Council will resist proposals that do not make a valuable contribution towards high quality places.

Local Development Plan 2018 Policies

DP1: Landscape Character

DP2: Design

DP3: Housing Density

DP4: Major Development Sites

Key Design Principles and Priorities

All relevant developments must:

- use the findings of the site appraisal to establish an architectural context, and consider using traditional, modern or a blend of styles
- achieve true variety in house types through layout, configuration, only use a range of houses types that are clearly distinguishable from each other (using colour, texture, materials, horizontal or vertical proportions, window style, roof planes, ridge heights, dormers, chimney stacks/flues)
- create a range of streetscapes using various styles and house types (terraces, semi-detached, bungalows, flats, maisonettes, detached)
- use uniformity cautiously as an architectural detail and limit this to areas within a site where it can be appropriately designed into the layout as one of a range of styles

Exemplar developments will:

- only use traditional and locally sourced materials in house types

Best practice examples



Image source: 18/01038/AMM Longniddry South Phase One, Site B - Planning & Design Statement (September 2018)



Image source: <https://www.dwh.co.uk/new-homes/york/h639301-rowntree-derwenthorpe-york/>

4.17 House Types

Terraced

The positive contribution of terraced housing to built form can either be derived from the original strong architectural form and uniformity of adjoining buildings, or as a result of slight variations in appearance that are designed in from the start (or result from occupiers making subtle changes and personalisation over time).

Terraced housing is a strong architectural form that can work very well on both small and large sites. On larger sites, it is important to only create pockets of terraces as, by virtue, they naturally create linear street layouts. If used too frequently, there can be a detrimental effect on the overall site character and quality. It is therefore best to create short terraces that for example, front onto a street, and then contain a different type of housing behind or adjacent to it. Terraces can also be used to create visual interest on sloping areas where roof lines will vary.

Managing parking for terraces will be a key factor as vehicles cannot be concealed to the side and front parking must not be allowed to dominate the street scene. Where rear parking is to be provided, this must not result in vast areas of rear parking serving too many properties.



A section of terraced housing in a large development. An attempt has been made to create variety using changes in render colour and to break up the terrace by limiting the number of adjoining houses. The issue is that there are too many of the same houses grouped together creating an overly linear street. The house type is also simplistic architectural form meaning variety is difficult to achieve where other house types all have similar roof planes, massing and orientation.



Short sections of identical terraces function well when used as strong street frontages that lead to alternative housing to the rear or side. Note the strong building style with architectural details meaning the original building is of merit.

4.17 House Types

Bungalows

Many properties within East Lothian are of a bungalow style and have high architectural value. They are often found in groups (such as terraces) forming old mine workers or fishermen's cottages, both in small or large settlements. Single storey buildings in general are also often be found in many rural parts of East Lothian where they are part of a group of buildings relating to agricultural use, farmsteading layouts, and mills, often used as storage buildings.

Providing bungalows in new developments will not only add to the variety and mix of houses and help to retain some of the historic character of East Lothian, they also importantly offer a choice for potential occupants who either do not wish to have an upper floor level, or people who are physically impaired meaning a bungalow is a more practical choice for them. Bungalows can help reduce the visual impact of development.

Bungalows can easily be incorporated into groups of houses particularly where there is a larger (perhaps detached) house located at the ends of a street forming a feature building with bungalows on either side to accentuate this effect. Due to the difference in height and massing, it is important to ensure that bungalows do not become dominated and overshadowed by neighbouring larger properties.



Bothwell Gardens, Dunbar. Source: Google Maps

Flats

Flatted properties offer multiple benefits including increasing the density on development sites, allowing parking to be easily concealed, and also the generally higher vertical proportions of the buildings meaning they can add variety to the streetscape. They also provide potential occupiers with a choice of property where they do not wish to have a garden to maintain and space is all contained over one level. Blocks of flats must be carefully positioned on development sites so that they can have active frontages. Care must be taken to ensure that these buildings are not placed in areas that will obscure important views to/from a site, identified at site appraisal stage.



Prestonpans. Source: ELC



The Hedges, Tranent. Source: Google Maps

4.17 House Types

Semi-detached

Where semi-detached houses are being provided, it is important to determine from the outset whether the semi-detached block is to comprise of two identical properties (interspersed with different properties) or if the two properties forming the block will differ more significantly in appearance. Creating a semi-detached block with two different houses contributes more towards variety, and provides occupants with a more individual property.

Semi-detached properties also provide an opportunity to conceal parked vehicles in-curtilage to the side of houses. Garages must therefore be set back from the principal elevation to achieve this.



These semi-detached houses are the same design however their appearance is improved by architectural detail on the roof, windows and porch. Parking to the side conceals vehicles from the street scene. Image source:

https://www.persimmonhomes.com/images/homes-for-sale-regents-place-chellaston_91690.jpg?width=840&height=570

Creating variety in semi-detached housing by using two similar but different adjoining properties
(Source right <http://d3exkutavo4sli.cloudfront.net/wp-content/uploads/2017/12/JPbombales-9707-compressed.jpg>)

4.17 House Types

Detached

Detached housing in East Lothian takes many forms, but in general housing of this type in the area has been of a very recognisable architectural style or period, set within fairly generous garden ground, include a garage or driveway for off-street parking, and are surrounded by strong boundaries such as stone walls and/or trees and hedges. The benefits of detached housing to the occupants are well known including increased room sizes, more garden ground, improved separation distances and privacy, and more room within plots for garages or off-street parking. More recent detached housing has seen a shift away from recognisable architectural features on such properties where they have simply become larger versions of the semi-detached or terraced housing on the same site. There has also been a reduction in the amount of garden ground, reduced separation distances between properties, open front gardens and reduced defensible space, and either integral garages or garages that are not subservient to the main house resulting in car dominance. Whilst market influences are an important consideration in the type of detached housing being provided, they must not be the only driver. Good placemaking does not prevent profitability.

As with all house types, achieving the right mix over a site is the key issue. The provision of detached housing must not result in a site containing large areas of repetitive architecture and layouts. Detached housing should contain architectural detailing that not only sets it apart from similar neighbouring detached houses, but also from other house types within the same site. Sites can contain some areas of detached housing that form more linear streets, however this house type must not influence street layout over the whole site. This can easily be addressed by increasing the variety in layouts of small groupings of houses, orientation of buildings towards streets and open spaces, and careful consideration of access and reducing the visual impact of parking.



Recent detached housing has been designed in such a way that means the traditional benefits of this type are being lost and they are not contributing to placemaking to the extent that they could.

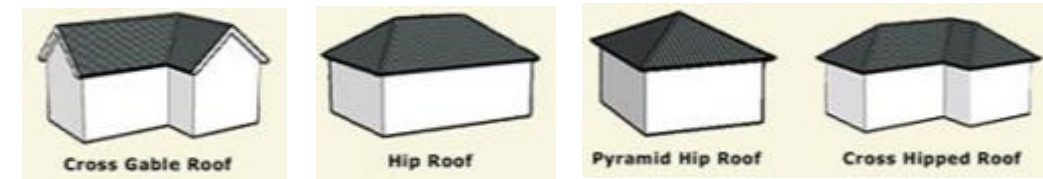
The above examples indicate the importance of architectural detail and boundary treatment on detached housing. The development on the left appears bland and uninteresting. This is as a result of poor use of uniformity where one house type with a limited variety of architectural treatments and materials is placed in a linear manner with deep front gardens that include driveways without any boundary treatment on a relatively straight street. The development on the right in Inveresk has much greater visual interest and positive contribution to the built environment. Here the uniformity is a positive feature where the houses have more architectural detail and high quality boundary treatment adding visual interest. Building placement and orientation is also much more varied and non-linear.

4.18 Architectural Details

The use of architectural details on house types and other specific design elements greatly contributes towards the quality of the built environment, and can help to define the individual character of buildings, streets and neighbourhoods. Detailed design elements can be used to help a development to form its own identity or help a development to respect the context of an area including existing built form, building styles, materials and other detailing that defines individual places. Simple house types can be significantly improved by appropriate use of architectural details, colour, texture etc. There are almost endless

Roof Design, Gables and Dormers

Roof design helps to form both horizontal and vertical proportions. Moving away from a simple 'box' house type and using varied roof types is strongly encouraged. Mixing of house types with alternative roof design improves variety on the street. Dormer windows either at first floor level or roof mounted create additional variety. Consider roof design in relation to parking (reducing the visual impact) and neighbour amenity such as overshadowing and privacy. Gables must not be neglected as often a house can create a double front with side elevation facing the street.



Blank gables mean occupants have maximum privacy but the street suffers as there is no natural surveillance or interesting detail.



A gable with multiple windows including ground floor bay window significantly improve this house type as it adds a double front to the building.

possibilities for creating good housing architecture. This part of the Design SPG will therefore focus on the basic principles and can be used as a guide to what may be appropriate for East Lothian, and how to improve overall development quality and house types. When considering how to design house types that would integrate well within East Lothian, specific reference can be made to other guidance such as Development Briefs SPG, Cultural Heritage and the Built Environment SPG, Countryside and Coast SPG and Farmstead Design Guidance SPG.



Cross gable roof together with changes in height help to improve the street character.



Roof mounted dormers help to add variety and to reduce the emphasis of vertical proportions on high pitched roofs.



Note the use of first floor dormers that protrude above the eaves, the contrasting stone on the gable and painted outside window lining. A very effective use of detailing on a simple well proportioned house type.

4.18 Architectural Details

Gables and Rake

The gable can be used to add variety and natural surveillance to the street. In particular they need to be carefully designed where houses have more than one elevation directly fronting the public realm. The rake is another part that can be used to create contrasting



Porches and Canopies

Porches or canopies help to add individuality to the front elevation of buildings and add an additional dimension to the street scene. They also help to define the principal elevation and entrance to a building.



Chimneys

These are an important part of East Lothian's traditional housing character and a very recognisable feature on various architectural styles that have emerged over time. Chimneys help to improve the vertical proportions of housing (in particular on mono-pitched roof designs or where layouts such as cross gables are not used) and can be either ridge mounted or adjoined to the side elevation extending above the roof line.



Windows, Lintels and Sills

Use of contrasting colour and materials on the edge of windows and lintels or sills creates positive variety and can be used to reflect traditional building styles.



Colour and Texture

Use of coloured render or areas of stone cladding or exposed brick on houses can give them unique character and brightens up the street scene. Harling also adds another level of texture and helps to differentiate buildings from one another.



Quoins and Rustication

Traditional detailing such as ground floor rustication or use of quoins on the corners of walls enhances the character and appearance of individual buildings or groups of buildings and can create a special development (or part of a development) that retains and respects context and location.



4.19 Grouping Houses and Other Buildings

East Lothian has many examples of groups of houses that are very successful in how they look and function. These often relate to the agricultural or other former use of land, with many farm steading layouts and properties arranged around small green spaces or semi-formal courtyards. Houses can be grouped together to form distinctive and attractive layouts, and can help to increase density where required.

The design of new housing developments needs to consider how to create variety in layouts through grouping some properties together. The most successful developments create a mixture of typical linear street layouts interspersed with more intimate building arrangements such as courtyards and small spaces. The location of these within a site must relate to its overall function and relationship with surrounding areas or settlements, and also how the site functions overall in terms of movement, permeability, and public/private areas.

Developments must avoid bland layouts where each property is located next to the same (or very similarly designed) house type. Many housing layouts will naturally harmonise if positioned appropriately, each benefitting from a similar level of privacy and outlook. Groupings of houses must ensure that there are no individual properties that have significantly reduced amenity compared to others.

Local Development Plan 2018 Policies

DP1 – Landscape Character
DP2 – Design
DP4 – Major Developments

HOU3 - Affordable Housing Quota
HOU4 - Affordable Housing Tenure Mix
OS3 – Minimum Open Space Standards for New General Needs Housing Development

Key Design Principles and Priorities

All relevant developments must:

- create a mixed and varied layout of housing that uses different scale, massing, form and orientation to groups buildings
- use spaces between groups of buildings to form high quality public realm and accessible and useable open space for recreation and play
- use heritage to influence the grouping and layout of housing

Exemplar developments will:

- develop a site layout that utilises traditional or historical building forms and groups of buildings that are positively influenced by the former land use

Best practice examples



Image source: <https://www.homeaway.co.uk/p2734909>

4.19 Grouping Houses and Other Buildings

Amenity

Grouping houses together can mean that occupants are relatively close to one another. This requires careful design and attention to the amenity of all occupants that are adjacent or close to one another. The aim should be to ensure all occupants have the same (or very similar) levels of amenity such as accessibility, parking, daylight, outlook, privacy, shade, shelter, public space and private space. Consider level changes, orientation (including doors and windows), boundary treatments, lighting and planting and their effects on all occupiers of individual properties.



Image source:

<http://www.mikhailriches.com/project/goldsmith-street>

Public Spaces

Grouping houses together often means that provides opportunities to create high quality public realm and public spaces between buildings where traffic is not present or very minimal. The layout of buildings can be used to create safe and intimate spaces where people can spend time outdoors, children can play safely, social interaction can occur, and other shared activities such as social events or community gardens.



Nungate Gardens, Haddington

Image source: <http://www.mikhailriches.com/project/goldsmith-street>

4.20 Affordable Housing and Tenure Mix

The Council seeks to ensure that new residential developments offer a range of housing options to cater for a large cross section of the population. Large-scale residential developments will be expected to include a wide mixed tenure, containing private market housing, social housing, rented accommodation and shared ownership properties to respond to the objectives of the East Lothian Local Development Plan, the Council’s Housing Need Assessment and the wider objectives of the East Lothian Council. Larger housing sites are expected to accommodate a range of house types to help people, where their housing needs change and they wish to downsize or occupy a different type of property, to remain within the same development site. This will help to sustain communities and support the long term social cohesion.

Scottish Planning Policy and Planning Advice Note (PAN) 2/2010, Affordable Housing and Housing Land Audits make the point that affordable housing ought to be, as far as possible, indistinguishable from the general mix of other houses on a site. This means that in terms of style and layout, developments should be ‘tenure blind’, with any affordable housing being so well integrated within the site, and with other private market housing, that it does not result in separate communities forming. It should also not be concentrated around the periphery of the development or located in parts of the site that are subject to highest environmental issues such as noise. These requirements are equally applicable to new house building initiatives undertaken by the Council and other social housing providers.

Local Development Plan 2018 Policies and Guidance

Affordable Housing SPG
HOU3 - Affordable Housing Quota
HOU4 - Affordable Housing Tenure Mix
DP2: Design
DP3: Housing Density
DP4: Major Development Sites

Key Design Principles and Priorities

All relevant developments must:

- provide affordable houses that are designed to blend with houses for market sale;
- ensure that affordable housing sites are integrated with market housing and in the case of large-scale developments are distributed evenly throughout the entire site;
- provide a full range and choice of house types and sizes in both market and affordable tenures;

Exemplar developments will:

- be indistinguishable from other housing within the same development

Best practice examples



The market housing and affordable housing are indistinguishable in this development in Haddington.

4.20 Affordable Housing and Tenure Mix

The Council has approved supplementary planning guidance to assist with the implementation of Policies HOU3 and HOU4 and to allow developers and landowners to assess the implications of providing for affordable housing at an early stage. Delivery mechanisms for provision of the affordable housing must be agreed with the Council. All matters of design must be discussed and agreed with the affordable housing provider for whom the properties are being delivered. However, as a minimum, developments must comply, both internally and externally, with level 1 Housing for Varying Needs design criteria to ensure they address the requirements of the Scottish Government and Local Authority. The trigger at which the transfer of serviced land for affordable housing provision will be sought shall be proposals consisting of 5 or more dwellings.

Developers will be expected to work in partnership with the Council, and where relevant RSLs, to ensure housing needs are met including in terms of tenure and house type and size. There will be a need to work collaboratively on master planning.



Affordable Rent Scheme at Muirsketh Rd Glasgow. Scottish Design Awards 2019 highly commended in Affordable Housing Category
Credit: ELC

4.21 Parking

It is impossible to separate good parking from good urban design and therefore very careful consideration needs to be given to car parking in the design process. Cars can have a dominant effect and negatively impact upon the character and function of the urban form, use of streets and spaces, and the overall design quality and appearance of a development.

It is essential to find a solution to parking and an arrangement of spaces to serve occupants and visitor that does not end up dictating the overall layout of streets, building blocks and individual plots. As a general principle parking must be provided in a way that does not result in **the visual intrusion of cars on the street**.

The Council's requirements for parking for residential development are provided in the Standards for Development Roads document. Generally, 1.5 spaces per house with 5 or fewer habitable rooms and 2.25 spaces per house otherwise will be required. The minimum design module for car parking bays should be 5 metres x 2.5 metres and for driveways 6 metres by 3 metres.

Local Development Plan 2018 Policies

T1 – Development Location and Accessibility
T2 – General Transport Impact

DP1 – Landscape Character
DP2 – Design
DP3 – Housing Density
DP4 – Major Development Sites

OS3 – Minimum Open Space Standard for New General Needs Housing Development
OS4 – Play Space Provision in new General Needs Housing Development

Best Practice Examples

A one-size fits all approach to parking will rarely be possible and may not be helpful in achieving the best overall design outcomes. The following sections provide best practice examples and outline some of the considerations that should be taken into account when designing parking solutions that are well integrated within the overall development. In order to achieve this aim a mix of parking solutions will usually be required and the developers will need to demonstrate how their overall car parking strategy has been influenced by this guidance.

Key Design Principles and Priorities

All developments must:

- provide sufficient car parking that is overlooked, but discretely located to ensure streets, front gardens and public spaces are not dominated by cars
- have parking and turning areas that do not restrict pedestrian and cyclist movement
- incorporate landscaping as part of any significant on-street parking provision

Exemplar developments will:

- incorporate street furniture, planting and parking spaces within shared surface areas



Haddington, Mill Wynd – rear parking court

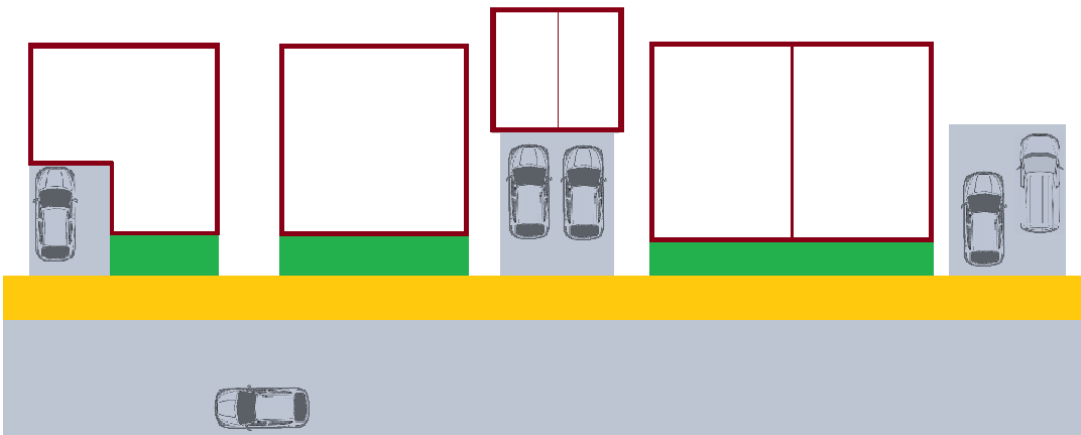
4.21 Parking

Off-street parking

1. Parking to the side of buildings (carports, drives, garages, small parking courts)

In most residential developments cars will usually be accommodated within the curtilage of the properties. In order to reduce the visually dominant impact of the vehicles, parking should be provided to the side or behind the building line. Parking should not be provided in the front garden and for this reason the houses should be set back no more than 3 metres from the street as this will discourage front garden parking. This approach will help to limit the number of retrospective applications from residents looking to turn their front gardens into parking areas.

The distance from the house to the side boundary should be a minimum of 3 metres to allow for a car to be parked and at least 900mm wide pedestrian route past a parked car to be provided. There should only be a single width driveway crossover provided for each dwelling fronting a street. The location of crossovers should not undermine the retention of on-street parking spaces, provided these were required as part of the overall parking strategy.



Where garages are provided, they should be set back a minimum of 6 metres from the heel of the footway. Detached or integral garages should be subservient to the main building and therefore should be behind the front building line. Integral garages within L-shaped house types can effectively reduce the visual impact of the parked car which is largely hidden behind the front of the house (see the example on the left). The council may chose to apply the above standards more flexibly, depending on the context of the site e.g. in mews courts, short semi-private access roads or access lanes. Any relaxation of the above standards should not lead to inappropriate parking on footway.

4.21 Parking

Off-street parking

1. Parking to the side of buildings (carports, drives, garages, small parking courts)



Examples of appropriate side parking (from left Dovecot Grange, Haddington, Ibris Place, North Berwick, and Fentoun Green, Gullane)



Mosaics, Oxford; source: <https://mosaicsoxford.co.uk/>



Muirskeith Road, Glasgow.

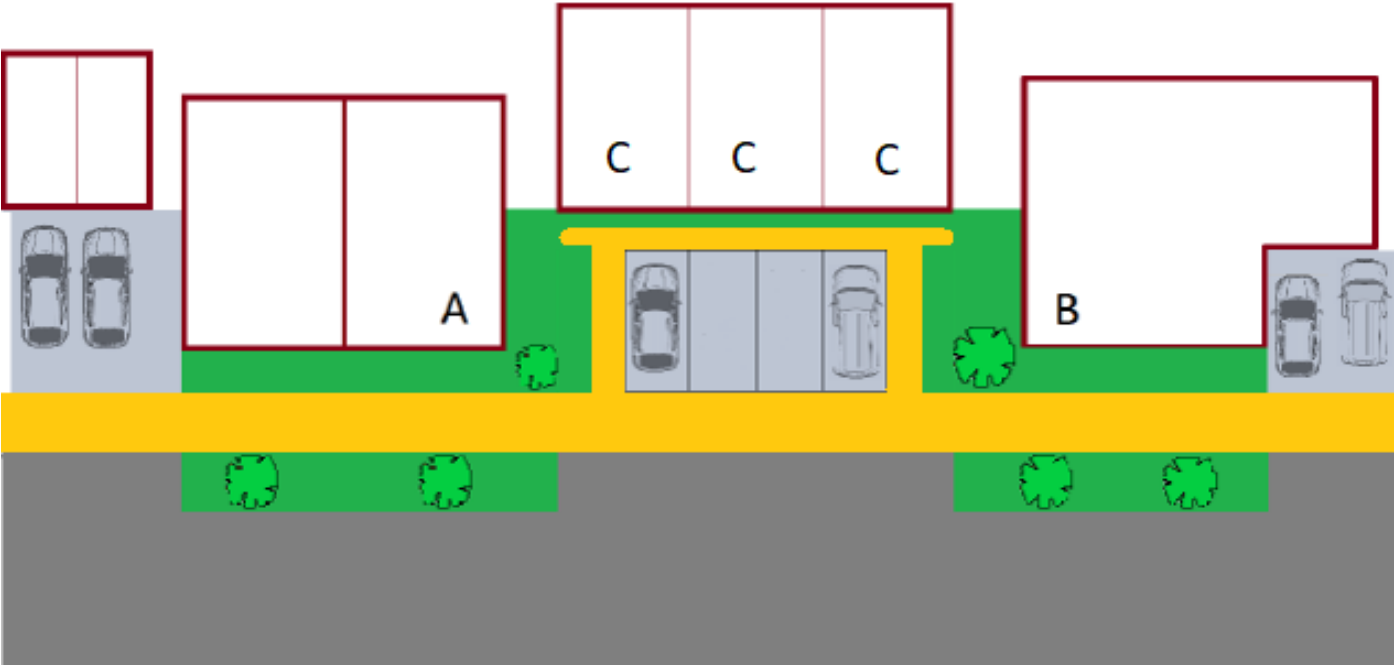
4.21 Parking

Off-street parking

2. Small parking courts to front of the house

This is only acceptable in exceptional circumstances where it has been proven by masterplanning that rear or side parking cannot be provided.

Parking provided at the front of properties, but within their curtilages will constitute allocated parking spaces. Small parking courts located at the front of properties is convenient for residents and can be overlooked from nearby houses. In order to create a sense of enclosure and reduce visual impact of cars, adjoining buildings should be set forward (house A & B in the example below). Also, landscaping or street furniture can help mitigate visual dominance of parked cars.



Front parking dominates the street scene. Prominent integrated garages have detrimental impact on the streetscene.

4.21 Parking

Off-street parking

3. Rear parking courts

Rear parking courts can reduce the visual intrusion of cars on the street scene. Where rear parking courts are proposed these should be small enough to allow for proximity to the residents who use it. Residents' parking spaces should generally be situated no more than 30 metres walking distance from the nearest entrance to the dwelling they serve.

The preferred size for such courts would be 6-12 spaces. Rear parking courts can be the subject of anti-social behaviour unless designed with sufficient natural surveillance from the properties. The parking courts should be designed as positive and welcoming places, with attractive and secure boundary treatments as well as carefully planned landscaping.

Where rear parking courts are included it is essential to ensure that they are well used by residents and that on-street parking is carefully managed. If on-street parking is not encouraged, then the street should be appropriately designed to prevent this. If it is required, on-street parking must be carefully designed into the streetscape so as to avoid indiscriminate parking on verges or pavements.



An example of a small rear parking court with a coach house ("Bridge over unit") that makes a clearer definition that the rear court is private.

Rear parking courts

- Have no more than about 12 spaces. Larger courts may be appropriate for apartments, but where there are two rear parking courts adjoining each other, they should have a 1.8 metres solid structure (preferably brick/stone wall) separating them (or be separated by an impenetrable landscape feature e.g. hedging/shrubbery). However, it is preferable to avoid parking courts adjacent to each other in order to remove the need for a barrier between them.

4.21 Parking

Off-street parking

Rear parking courts (cont.)

- Have single point of access to the highway – this may be gated (e.g. electronic lockable gates operated by key code), through access arches (coach houses) or drive-through. Appropriate use of road surface materials and vertical features (brick/stone gate pillars, landscaping etc) at the entrance will be required to symbolise the move from public to private space and to give residents a sense of 'ownership';
- Are overlooked by kitchens or habitable rooms (passive surveillance see Secure by Design guidance). Boundary treatments should allow overlooking and whenever possible blank walls should be avoided. The boundaries of houses that abut parking courts should be a maximum 1.5 metres high with an additional 300 mm visually permeable trellis/railings on top;
- Have adequate lighting with no overspill to dwellings; when possible low level lighting should be provided; plans should be provided to demonstrate that all areas are covered by the correct level of light;
- Have sense of place and feel secure to users;
- Have direct access to dwellings e.g. through rear gardens with gates that are lockable from both sides (this is to encourage residents to use their parking as much as possible);
- Are high quality in design terms - materials, planting etc.



Image credit: Secure by Design Interactive Guide (<http://interactive.securedbydesign.com/residential/>)

1. Secure gated access to rear parking court
2. Small parking areas are provided adjacent to users properties
3. Parking spaces are well overlooked by residents using the car park.
4. Accesses into rear parking courts should be located opposite to the fronts of dwellings in order to provide overlooking of the access

4.21 Parking

Off-street parking

4. Garages, carports and drives with rear access



Rear access parking helps to remove cars from the frontage street view. This would entail vehicular access to garages, carports and / or drives from the rear of a property.

Access to garages, carports or drives provided in this way should generally be by short, factored, access lanes or private shared drives rather than along public streets. It will not generally be acceptable to have long sections of rear boundary walls or fences facing onto public streets. Any design proposals should aim to ensure there is a clear definition between public and private space.

Integral garages with rear access can potentially result in the blank rear elevation of the garage facing the frontage. This problem can be dealt with by including a room, typically an office or study, in part of the garage to animate the street elevation



A hypothetical site layout where the rear access to garages and in-curtilage parking is via a short access lane.

4.21 Parking

Off-street parking

5. Undercroft and “drive-through” parking

These are parking solutions that are closely integrated with the buildings.

Undercroft parking will usually be more popular with flatted developments in town centre locations. Undercroft parking allows for the provision of car parking on the ground floor of the street frontage of flatted development and can lead to reduced natural surveillance. Therefore, designing undercroft parking requires careful consideration to ensure it achieves an active frontage (either within the building that accommodates undercroft parking or in adjoining/surrounding buildings) such as accommodation and other uses facing the street. Undercroft parking can also be provided together with individual single flats/houses (it is a variation of so called “flats above garages” FOGs).

“Drive-throughs” allow parking either within the building and/or within the rear garden. The advantage of “drive-throughs” to hardstanding or garages in the rear garden is that continuity of frontage can be maintained whilst retaining on-plot parking. Therefore this parking solution can be appropriate to support terrace developments. Access via “Drive-throughs”/coach houses to hard standing within the rear garden can create blank frontages. In order to prevent this “drive-throughs” are best incorporated within wide frontage dwellings where kitchens or living rooms can be provided fronting the street at ground floor level.

Where the future installation of gates or doors would lead to the loss of a parking space, permitted development rights for those gates or doors will be removed.



Undercroft parking
- Flats above
parking (FOP) in
Gullane, Cala
Homes.



“Drive-throughs”
Howitt Drive
Milton Keynes –
small landscaped
area provides a
point of visual
interest/buffer

4.21 Parking

On-street parking

It is noted that locating parking courtyards to the rear of buildings may encourage parking on the footways to the front of buildings, and opportunities for this should be designed out. The street should be designed to encourage on-street parking to take place in designated areas only. This is particularly important on streets which are likely to be used as bus routes, which can accommodate parked cars provided parking spaces are designed in. The problem arises with indiscriminate parking on bus routes.

On-street parking can be provided in various arrangements: right angled, echelon and parallel parking are the main types and their application will need careful consideration in order to provide a positive response to the development layout. The location of on-street parking spaces will require more thought than in a traditional layout (defined by on-plot parking) to minimise the psychological and physical barriers of parked vehicles.



Although on-street parking bays should be visible from a habitable room they should not be directly in front of the main living room of a dwelling. On-street parking bays should not interrupt footways i.e. pedestrians should not have to detour from their desire line to avoid them. Where on-street parking is provided this should be designed to avoid confusion and indiscriminate parking by residents and/or visitors.

Large areas of uninterrupted on-street parking will not be acceptable. In all situations street trees and landscaping should be integrated to soften the visual impact of parked cars within the streetscape.

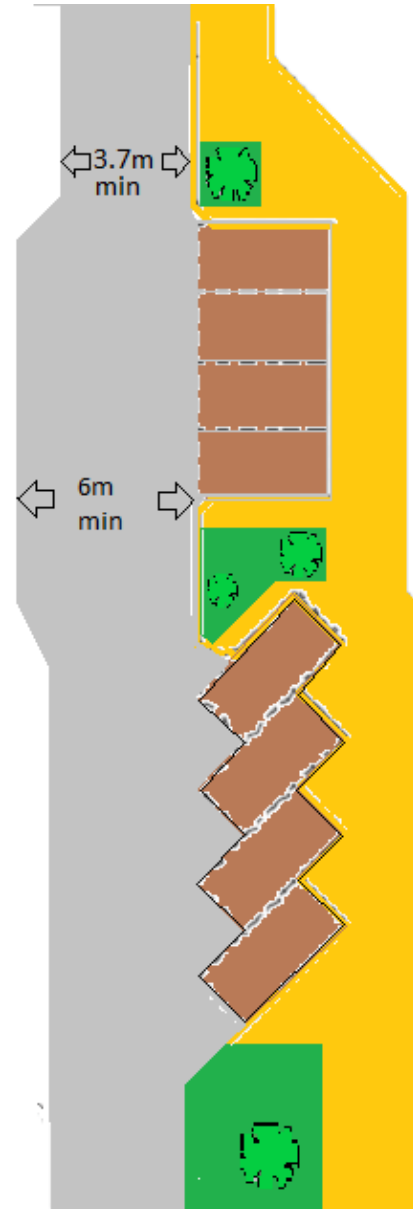
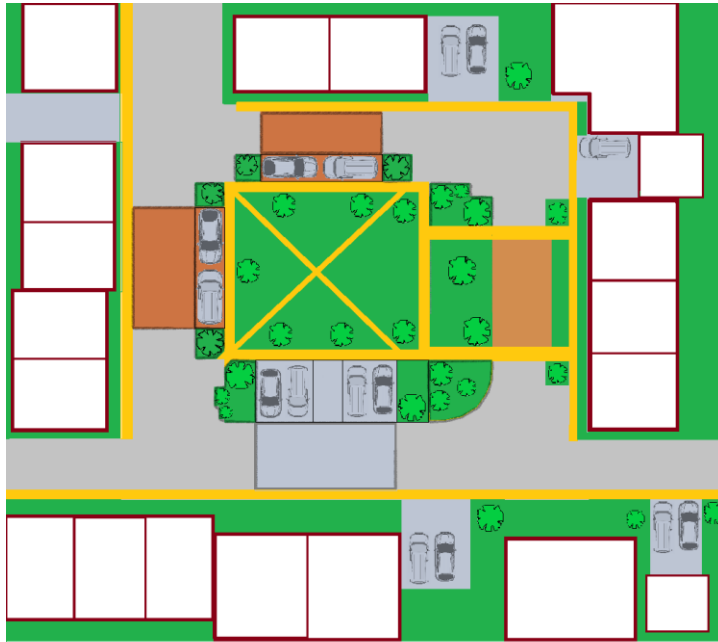


Parallel parking should consist of a minimum of two bays to allow for dual use by larger service vehicles. Landscaping should also be used to break up the possible visual dominance of the cars.

Parallel parking can either occur adjacent to the carriageway or within the carriageway. When parking is located within the carriageway, it can assist with speed restraint by reducing forward visibility. Some form of planting at each end of the parking would help to further reinforce the speed restraint effect. Also, low maintenance groundcover planting can be used as an alternative to grass since it can help prevent unauthorised parking on the road verges.

4.21 Parking

On-street parking



End-on and parallel parking around the edges of a formal urban square or play area. Shared surfaces can be considered to improve accessibility to open space.

When right angled parking is used this will require the wider street (minimum of 6m) to enable reversing. Compared to end on (right angled) echelon parking allows the street to be narrower as less room is needed to reverse out of the parking space, but takes up additional space to the ends, which is unusable footpath and provides a small planting area.

Car parking spaces at different angles can be designed in as a measure to improve the overall environment of the street for the pedestrian as well as slowing traffic down.



Rowanhill Park,
Port Seton



Blink O'Forth
Prestonpans



Musselburgh
Echelon Parking

4.22 Electric Vehicles (EV) Charging

The advancement of technology associated with E-mobility means that over the next decade the UK stock of EVs could reach between 2.7 and 10.6 million (National Grid, Future Energy Scenarios, July 2018). The Scottish government has pledged to phase out the need for petrol and diesel cars and vans across Scotland by 2032. Therefore, there is increasing demand for infrastructure to support the growth of EVs. The East Lothian Local Development Plan supports the principle of introducing electric vehicle charging points around both existing and proposed community facilities such as schools and retail areas, including from developers as part of new developments that contain such facilities or areas.

Local Development Plan 2018 Policies

T31 - Electric Car & Bus Charging Points

Key Design Principles and Priorities

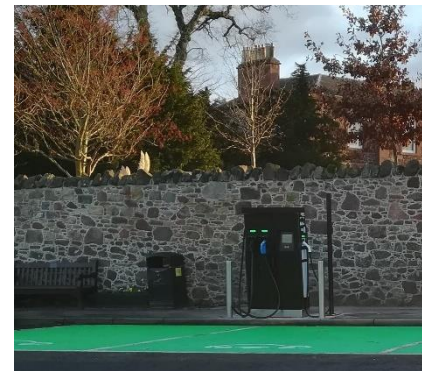
All relevant developments must:

- demonstrate that electric vehicle charging points, including those around both existing and proposed community facilities such as schools and retail areas, have been fully considered and discussed with ELC

Exemplar developments will:

- include at least one dedicated EV charging space per dwelling and;
- on developments with more than 49 dwellings, also include at least one Rapid charge point

Best practice examples



Loch Rd Tranent , Hawthorn Rd Prestonpans and Station Rd Haddington. Source: ELC

4.23 Cycle Storage, Safety and Security

It is widely recognised that providing well-located, safe and secure cycle parking and storage is a major factor in encouraging people to cycle as an alternative to using the private car.

Cycle parking needs to be considered at the outset and should be within a covered, lockable enclosure. For individual houses, this could be in the form of a shed or garage. For flats, either individual lockers or cycle stands within a lockable, covered enclosure would be required. The cycle parking should be secure, easily accessible, well-lit and convenient to use. If cycle parking is provided on upper floors, such as in flats, lifts that can take bikes should be provided. Where appropriate cycle parking should be designed to accommodate facilities for electric charging infrastructure.

Local Development Plan 2018 Policies

T1 – Development Location and Accessibility

T2 – General Transport Impact

T4 – Active Travel Routes and Core Paths as part of the Green Network Strategy

DP2 – Design

DP3 – Housing Density

DP4 – Major Development Sites



Key Design Principles and Priorities

All relevant developments must:

- in the case of individual market houses – ensure that the opportunities are there to provide safe and convenient storage of bicycles;
- in the case of flatted development –
 - a) provide either space inside a block of flats to secure bikes or provide separate cycle stores elsewhere within the development's curtilage. When provided separately, cycle storage should be located close to building entrances to enhance convenience and security for users and be covered, secure and well lit;
 - b) provide storage for 1 cycle per dwelling;
- in the case of Housing Association/RSL proposals –
 - a) provide storage for 1 cycle per dwellings of 1 to 3 rooms;
 - b) provide storage for 2 cycles per dwellings of 4 or more rooms.

Exemplar developments will:

- provide cycle parking as part of the wider green network or the larger areas of open space, destination parks or play areas;
- provide convenient cycle hire facilities in areas of higher residential densities and/or within transport interchanges. These facilities should make it easier for resident to choose a bicycle as their preferred option of travel to work or to a public transport hub
- provide good-quality cycle parking and/or changing facilities at public transport hubs/interchanges

4.23 Cycle Storage, Safety and Security

Areas that are likely to become leisure destination points such as larger parks or larger play areas can support active travel and should include appropriate cycle parking provision.

New development proposals should consider how cycling can be coupled with public transport in order to provide an alternative to the private motor vehicle. The door-to-door capability of cycling should be considered alongside the existing or proposed dedicated public transport corridors.



Intricate cycle parking - Seven Sisters Country Park, Sussex.
Credit: Waymarking



Insufficient cycling infrastructure results in inappropriately placed cycles (Cambridgeshire)

4.24 Boundary Treatment

Site Boundaries

One of the most important ways that a new development can integrate well into its landscape or townscape context is the way in which its boundaries are treated. The new boundary for the development should reflect high quality boundary features in the locality (preferably using the same or similar materials) which will help to provide the sense of welcome to the new development and retain a sense of place. Developers must therefore provide appropriate and carefully considered boundary treatment to ensure a successful development. There are many good examples throughout East Lothian.

One of the most common boundary treatments in East Lothian is the stone wall. Stone is a very common building material, looks very attractive and can form a strong part of the welcome to a new development. The selection of stone, the mortar used and the way in which the wall is constructed will all play a part in the overall quality of the boundary wall and it can be easy to get it wrong, for example by random rather positioning of stones rather than in courses or the wrong selection of cope. The right wall will fit seamlessly into the overall landscape context for the site.

Other boundary treatment that can be appropriate to the landscape context of the edge of a development can include simple, unfussy fences and hedges, commonly beech though other types may also be suitable. The key to selecting suitable boundary treatment is to look at what lies within the local area and in particular to tie in to any existing features in the local area. New developments where there is no local landscape context can propose boundary treatment that fits with the building materials or landscaping used on or around the buildings on the edges of the development site. A mix of boundary treatment used on the on the edges of larger development sites can also be appropriate but only where they respond to the landscape context of that part of the site, for example a woodland edge.

Local Development Plan 2018 Policies

CH2: Development Affecting a Conservation Area
CH9: High Street/Inchview, Prestonpans
DP1: Landscape Character
DP2 Design
DP4: Major Development Sites

Good use of beech hedging to define edge of site selected to compliment the soft landscaping on the opposite site of the road (North Berwick).

Key Design Principles and Priorities

- Boundary treatment on the edges of a site must link appropriately to existing boundary treatment adjacent to the site.
- The selection of boundary treatment should be of high quality and is expected to match what exists in the local area for example, by using the same type of stone and form of existing boundary walls in the locality.
- The entrances to a new development should be designed to provide a sense of welcome. Many good examples exist some using the simple orientation of buildings and boundary walls and others using artworks to mark the entrance.

Exemplar developments will:

- Have boundary edge treatment that fits seamlessly into the local context using locally common materials
- Connect to any suitable existing boundary treatment e.g. an existing stone wall using matching materials
- Provide a strong sense of welcome by the form and materials used at the entrances to the development

Best practice examples



Very effective landscape edge comprising soft landscaping at a site adjoining an A class road (Wallyford)

4.24 Boundary Treatment

Site Boundaries



Prestonpans

The new housing development is designed to fit into its local context by provision of a new stone boundary wall that complements the old stone wall on the opposite side of the main road. The new wall also provides enclosure to the houses and a neat and attractive boundary feature.



North Berwick

The entrance to this housing site is marked by a built feature doocot which helps to present a sense of welcome to the development as well as marking the entrance.



Tranent

The use of beech hedge as a boundary treatment within this housing site softens the townscape as well as providing containment and visually reducing the visual impact of vehicles.



Dunbar

A strong boundary treatment formed by a distinctive wall provides an attractive edge and sense of welcome to the new housing beyond.

4.24 Boundary Treatment

Plot Boundaries

Plot boundaries help to define the individual private garden or amenity space on each house from the public realm. In particular, front boundary treatment that separates privately owned land from streets, can greatly add character and variety to a development. Common boundary treatments include low walls or fences but also changes in level. Front boundaries formed only by thin planting must be avoided. Side and/or rear boundaries can be formed using higher walls or fences. Consider carefully side or rear plot boundaries that form the edges of public footpaths or those that lead to/from rear parking courtyards. Generally rear gardens should be separated by 1.8m high boundaries. However, high boundaries must not result in poorly overlooked or dark areas that do not feel safe for users. Developers should consider the location and frequency of street facing details such as entrances, boundary markers and fence posts. This can help the development respond to the street and neighbourhood context.

Local Development Plan 2018 Policies

DP2 - Design

DP5 - Extensions, Alterations to Existing Buildings

DP7 – Infill, Backland and Garden Ground Development

Best practice examples



Key Design Principles and Priorities

All relevant developments must:

- clearly distinguish public space from private space using appropriate boundary treatments including walls and fences and avoid the use of planting used in isolation to define (in particular) front boundaries;
- use boundary materials of a type, height and depth appropriate to their location and function;
- avoid continuous and monotonous lengths of blank wall or fencing onto the street;
- limit the length and height of retaining walls along street frontages;
- carefully design soft landscaping or planted elements, fences and walls to provide privacy and security while maintaining views along the street edge.

Exemplar developments will:

- balance appropriate views into any adjacent public realm whilst maintaining privacy for building occupants.

4.25 Materials

Streets, Footways and Public Spaces

The selection of surface materials for roads, footways, civic spaces and off road paths within a new development has a strong impact on the overall look of the development.

As well as enhancing the public realm – the spaces between buildings - within a development surface materials must be long lasting and suited to their particular level of use. The Council’s Roads Services teams will adopt many if not all surface materials ensuring that they are properly repaired in future and it is important that the materials used are acceptable to the Council as well as the developer.

While many different materials can be used for different types of surfaces, as a general rule the use of a limited palette of materials usually works best visually. If the same material (e.g. tarmac) is used for all roads, footways, private driveways and paths this leads to large expanses of the same material and should be avoided. However the use of too many materials or colours of material can also result in an over fussy and visually excessive public realm. Surfaces over which vehicles run can be either asphalt or block paving. Footways with kerbs should be either block paving or tarmac. Resin bonded paths are a good surface for paths within landscaped areas or open space. Parking courts can be either block or tarmac but block paving is usually more visually appealing. Linked paths within a development are often best in tarmac. Civic spaces or feature areas are best in natural high quality materials which should also be used in developments within sensitive areas such as conservation areas.

Local Development Plan 2018 Policies and Guidance

Cultural Heritage and the Built Environment SPG

Farmsteading Design Guidance SPG

Policy CH2: Development affecting Conservation Areas

DP1: Landscape Character

DP2: Design

DP4: Major Development Sites

DP7: Infill, Backland and Garden Ground Development

RCA1: Residential Character and Amenity

Key Design Principles and Priorities

All relevant developments must:

- Use materials that are long lasting and robust
- Avoid the blanket use of tarmac for all roads, footways, private drives and paths
- Use high quality and preferably, natural materials in feature areas and civic spaces
- Consider alternatives to asphalt/tarmac for paths within landscaped and open spaces i.e. materials more suited to a lightly used pedestrian area that is to be attractive to people to use such as resin bonded gravel or similar.
- Consider different materials or surface colours that are appropriate to delineate build outs or visitor parking areas where the use of surface materials assists in lowering the speed of vehicles

Exemplar developments will:

- Use a limited palette of varying surface materials that complement the new housing development with materials selected to tone with the colours within the new development
- Use high quality natural materials for any civic spaces within the development or throughout the development if located within a conservation area

Best practice examples

Colour of block paved road surface materials used tones with building materials of different houses (North Berwick - right).



Contrast in road surface material in block and asphalt footway gives clear definition. Colour selected tones with building colour (Dunbar - left).

4.25 Materials

Use of Stone

The external use of natural stone on new housing development is rare in new housing developments, yet in developments elsewhere in the UK it can be seen more often. Building stone is still quarried across the UK and different types of stone can often be matched to local sandstone types used traditionally used in East Lothian. For example Catcastle Grey, a stone quarried in northern England has many similar properties and is a good substitute for Peppercraig stone commonly used on older Haddington buildings and other quarried stones can be a good geological match for use in Dunbar and North Berwick where red stone predominates.

The external stone finishes that are common to each of East Lothian's towns are as follows:



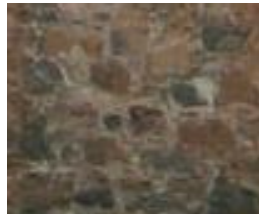
Musselburgh
– darker grey sandstone



Tranent
– predominantly darker grey sandstone similar to Musselburgh



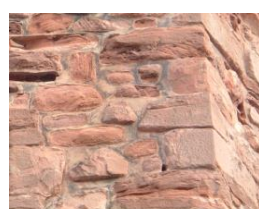
North Berwick
– red/brown sandstone



Prestonpans
– a range of sandstones including red, yellow and grey tones



Haddington
– yellowish, pale brown sandstone



Dunbar
- red/pinkish sandstone

Where new developments use stone it should always match the predominant sandstone colour of the local area to help the development fit into the area in which it is located.

Best Practice Examples:



North Berwick

This development of flats for elderly persons was built in an area of the town where red sandstone is a feature of local buildings and boundary walls. Accordingly the feature element of the development was clad in red sandstone and a new red rubble boundary wall built to surround the development. This was in accordance with the Council's Development Brief for the site.



Haddington

This award winning housing development is located within a Conservation Area. Nevertheless it provides a good example of the selective use of pale brown natural stone on the exterior of properties throughout the development to ensure it presents an appearance that is appropriate for its location within Haddington.

External Walls

The right selection of building materials is very important to ensure that a new development fits visually with the place in which it is located. The indigenous building materials of East Lothian reflected the very varied geology with each local area having its own colour of local sandstone which gives towns and villages their own identity. Where stone is used on the exterior of new houses it should always reflect the traditional colour of the local stone. The use of reconstituted stone can be suitable provided it follows the same principles.

External render is also a common external wall material in most areas. Borne out of the traditional lime harling and lime washing of walls, it developed into wet dash (small stones mixed in to mortar to form a thick coating) and dry dash (where small stones are visible having been thrown on to wet mortar) harling or smooth harling (without stones) as the use of cement became more common. Modern wall coatings are permanently coloured renders and can come in a variety of colours. Where a harl is either painted or permanently coloured the colour should reflect or complement the colours in the local area to ensure that the new development fits well in to its local urban context. Houses to the edge of a new development may be visible in longer views of the new houses. Colour selected for external walls on the edge of a settlement must relate to the local landscape context to avoid being too dominant. Darker more muted colours are more likely to be suitable than bright white or cream colours. A mix of stone and render on exterior walls can be successful and fit within the local context depending on how and where the each element is used. New developments should have a co-ordinated scheme of external finishes.

The use of brick as an external material is not common to East Lothian and is not generally suitable for whole elevations. Use of brick as an external wall material should be kept to a minimum where its use is functional rather than aesthetic, for example it may be a suitable material for a base course. Similarly, timber cladding on the exterior of houses is not generally suitable for whole elevations, but may be appropriate if used sparingly as an aesthetic feature.

Local Development Plan 2018 Policies

Cultural Heritage and the Built Environment SPG
Farmsteading Design Guidance SPG

DP2: Design

CH2: Development Affecting Conservation Areas

Key Design Principles and Priorities

All relevant developments must:

- Use building materials that ensure the development fits within the context of the site and is appropriate to the settlement in which it is located
- Use roofing material that is most commonly used in the settlement and is of a colour that fits with the local area

Exemplar developments will:

- Use natural stone, slate or clay external materials that reflect the traditional local materials common to the settlement in which the development is located
- Use exterior colours that ensure it reflects its local context

Best practice examples



Use of stone on gable walls enlivens the overall street scene, tones with the render on other parts of each building and gives a greater sense of place (North Berwick).

4.25 Materials

Roofs

The roofs of buildings in new development are often the most visible elements particularly in longer views. Bright or lightly coloured roofing materials can stand out in longer views and may not be appropriate for the area. Darker roof materials tend to blend in visually within most towns and are usually preferred for that reason. Whilst having regard to this general principle it is important to avoid a monotony of colour. The selection of roofing material must be very similar to the roofing material commonly used in the settlement to ensure that the new development fits in to its local urban context. The use of natural slate or other very similar product is encouraged.

In some communities, usually smaller settlements, orange clay pantiles predominate and can be an acceptable alternative type of roof covering.

The pitched roof is a traditional form that has endured and most new houses have pitched roofs. Traditionally these were provided with ridges, skews and chimneys. Houses with roofs without such features tend to look very plain and less visually interesting, particularly in large developments where roofs are very similar. New developments in which some or all the houses have skews or chimneys are generally more visually interesting and often fit better with the local townscape.

Solar power generation from roofs is becoming more commonplace. While products such as solar slate are commendable by being effectively invisible on roofs, the more common material is the solar panel. Because of their standard colour solar panels will usually look better against darker roofs. Solar panels always look better on a roof where they are laid in the same regular pattern rather than in random shapes across a roof and this should be considered at the early in the design process.

Key Design Principles and Priorities

All relevant developments must:

- Include the colour of roofing material which do not stand out visually in views
- Materials used should reflect similar materials and colours traditionally used in the settlement in which the new housing is to be located.

Exemplar developments will:

- Fit seamlessly into the existing townscape by selection of roofing materials that are similar to commonly used roofing materials in the local area.
- Have chimneys, skews, ridges or dormers that provide visual interest to the roofscape of both the individual house and the development as a whole.
- Have any solar generation equipment located discreetly on roofs

Best Practice Examples

The otherwise plain roofs of these houses are enlivened by the presence of a simple dormer and chimney.



Neat and regular solar panel blocks fitted appropriately to dark coloured roofing material (North Berwick).



4.26 Daylight, Sunlight, Overshadowing

Access to daylight and sunlight is a vital part of a healthy environment. Sensitive housing layout and design is required in order to maximise sunlight and daylight to new developments while not overshadowing or blocking light to habitable rooms of existing neighbouring properties and their gardens.

A series of technical calculations can be undertaken to determine whether the proposed development has the potential to negatively impact the existing levels of sunlight or daylight on neighbouring properties. Applicants may be required to submit detailed sunlight/daylight assessments.

Guidelines and specific assessment methods for assessing natural light are set out in The British Research Establishment's guide "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice" from The Building 2nd Edition by P J Littlefair (2011)" and these should be used, when required, to support proposals.

Local Development Plan 2018 Policies

DP2 - Design

DP5 - Extensions, Alterations to Existing Buildings

DP7 – Infill, Backland and Garden Ground Development

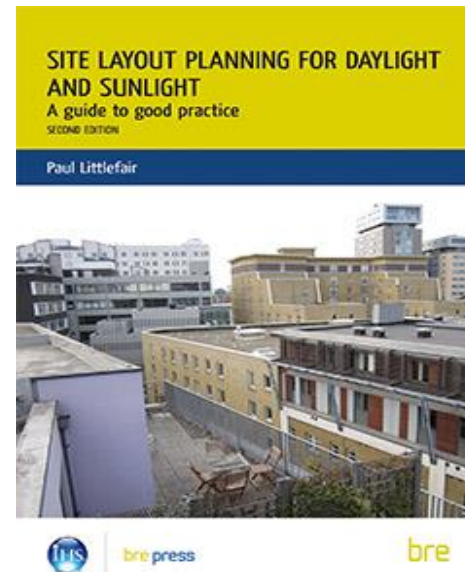
Key Design Principles and Priorities

All relevant developments must:

- achieve good natural lighting through site layout;
- be designed to maximise passive solar gain;
- provide adequate daylight and sunlight to rooms and rear gardens;
- ensure there is no unacceptable loss of daylight to habitable rooms of existing neighbouring properties;
- not cause an unacceptable loss of sunlight to neighbouring properties and their gardens

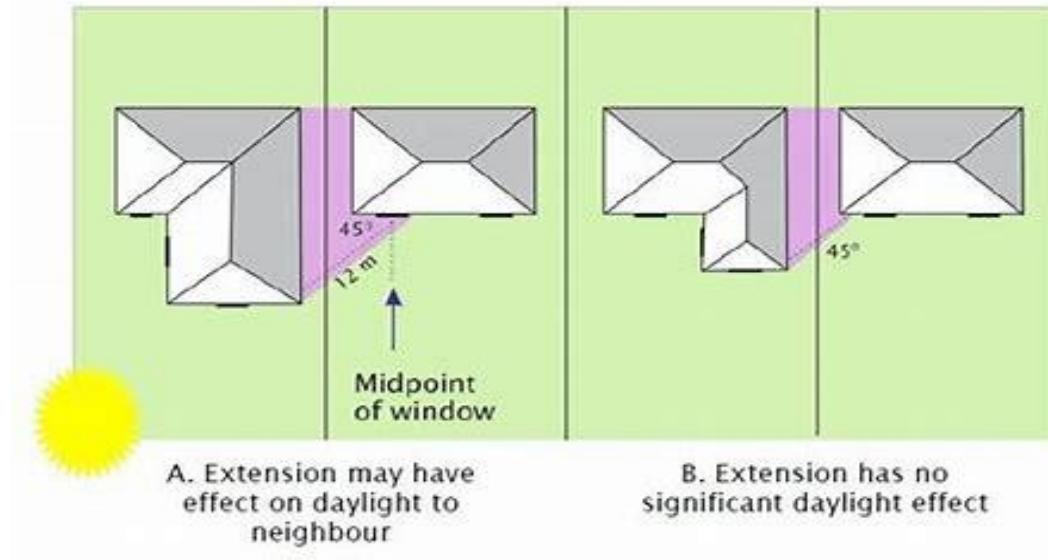
Exemplar developments will:

- maximise sunlight and daylight both within buildings and in the open spaces between them.



4.26 Daylight, Sunlight, Overshadowing

45° Assessment - used where a window would be next to a development but not directly facing it.

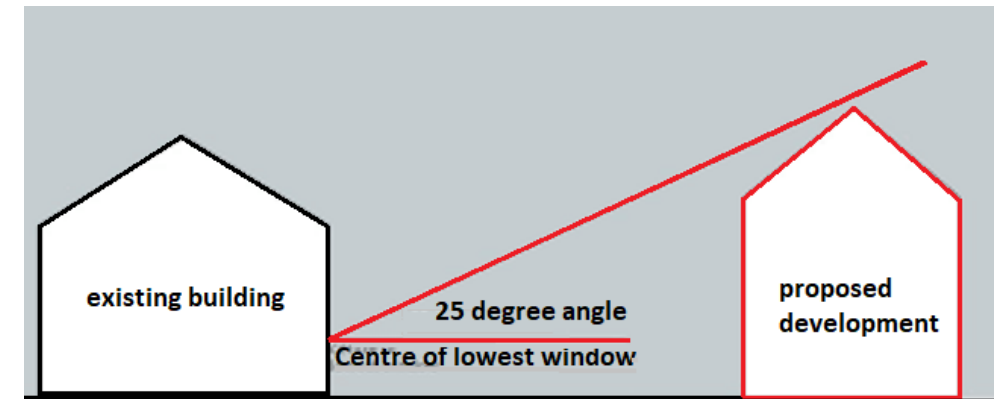


It will rarely be possible to completely avoid overshadowing, but it can be minimised by:

- locating taller buildings to the north of the site or to the south of the road intersections or open space such as car parking which need less or no sun;
- locating low rise buildings such as bungalows on the south side of the site;
- locating semi-detached and detached housing to the south of the site to allow some penetration of sunlight between houses;
- using low pitched and hipped roofs or constructing the first floor as part of the roof space;
- designing planting with appropriate species and heights in mind.

25° Assessment - used where neighbouring windows directly face a development. This approach should be used when the new development directly faces the affected window. Suitable daylight for habitable rooms is achieved when a 25 degree vertical angle taken from the centre of the lowest windows is kept unobstructed.

The recommended distance between the buildings is dependent on the opposing property ridge height. If the building opposite has a high ridge, the loss of daylight will be more notable than if the building has a lower ridge height.



4.27 Separation Distances, Privacy and Overlooking

The provision of adequate space between buildings is an important element in achieving a high standard of design and layout. In particular, spaces between habitable rooms and rear boundaries should be maintained in order to provide minimum levels of privacy for residents. Individual dwellings must be sited and designed in order to provide the maximum amount of privacy for occupants.

In designing new developments sensitive consideration should be given to maintaining the outlook and levels of privacy for both occupants of existing dwellings and new dwellings. New dwellings close to plots boundaries, in particular flats, can be intrusive when viewed from existing gardens or from within existing dwellings.

In assessing whether or not a proposed new development would result in harmful overlooking and therefore loss of privacy to existing neighbouring residential properties it is the practice of the Council, as Planning Authority, to apply the general rule of a 9 metres separation distance between the windows of a proposed new building and the garden boundaries of neighbouring residential properties and an 18 metres separation distance between directly facing windows of the proposed new building and the windows of existing neighbouring residential properties.

Local Development Plan 2018 Policies

DP2 – Design
DP3 – Housing Density
DP5 - Extensions, Alterations to Existing Buildings
DP7 – Infill, Backland and Garden Ground Development

Key Design Principles and Priorities

All relevant developments must:

- ensure reasonable privacy for dwellings within their proposed layout
- protect the privacy of existing dwellings
- ensure a satisfactory level of outlook by minimising dominance/overbearing
- demonstrate how habitable rooms within each dwelling are provided with an adequate level of privacy in relation to neighbouring property and the street and other public spaces

Exemplar developments will:

- Use groups of buildings and a mixture of house types, together with innovative design techniques, to provide maximum amounts of privacy and amenity for occupants.



Angled oriel windows help to increase privacy. Barns Place, Oxford (RIBA South Regional Award 2017).

Source:
<https://www.habhousing.co.uk>

4.27 Separation Distances, Privacy and Overlooking

The council recognises that adherence to minimum distances can discourage innovative design and reinforce use of standard layouts and may consider relaxation of these distances where it can be satisfactorily demonstrated that innovative solutions can be employed to retain privacy and protect amenity of existing and new residents.

The council may also chose to apply the above standards more flexibly, depending on the context of the site e.g. conservation area where rear distances are often less than those detailed.



The design of these town houses provides roof terraces whilst protecting the privacy of their occupiers. Selkirk Drive Milton Keynes.

Source: Google Maps

4.28 Garden Ground, Extensions and Alterations

Houses

Provision should be made for private gardens where family housing is proposed. In determining the appropriate garden size, consideration should be given to the need to ensure that the privacy and residential amenity are not compromised through overlooking or overshadowing from adjoining properties. The overall design concept for the development will determine the setting for houses, including the level of private back garden provision. However, it is expected that developments will provide a mix of different garden sizes for family houses. Gardens must also be of sufficient size in order to accommodate potential extensions to properties and any outbuildings such as sheds that users may wish to erect. This will allow some garden ground to remain within the plot and ensure that neighbouring properties are not subject to unacceptable overshadowing, overbearing or overshadowing when alterations to properties are undertaken (subject to planning controls).

Where gardens include existing mature trees, gardens will need to be larger to provide space for trees. Wide frontage houses provide the opportunity to create larger and better shaped garden spaces that in turn can support greater adaptability and flexibility for residents. Smaller gardens will usually be more appropriate for houses with 1 or 2 bedrooms or houses located opposite or adjacent to public or communal open space.

Local Development Plan 2018 Policies

Cultural Heritage and the Built Environment SPG

DP2: Design

DP4: Major Development Sites

DP9: Development Briefs



Flats

Within flatted developments, each apartment must have access to private or communal open space. This can be provided in the form of private gardens for ground floor flats, balconies, roof gardens or terraces, or communal space.

All apartments should provide space to dry clothes either within the apartment or within a communal facility.

Where possible, ground floor apartments should have their own small private garden.

The appropriate level of provision should be determined by having regard to the particular context of the development and the overall design concept. Generally developments within lower density areas should normally seek to provide more private open space than those located in more urban environments.

Key Design Principles and Priorities

All relevant developments must:

- provide private open space for family housing that can support adaptability and offer choice for potential residents;
- provide usable private or communal open space in the form of gardens, patios or balconies for flats. Its layout and design should offer privacy for dwellings adjoining the space.

Exemplar developments will:

- include fruit trees or other appropriately sized trees within rear gardens or propose incentives for house buyers to plant such trees within their gardens

4.29 Waste and Recycling

The good design and layout of new buildings are crucial to effective and sustainable waste management. Early consideration must be given and design solutions found for managing waste on any site including storage and collection of bins and recycling boxes. Specific provision should be made for space to allow for the segregation and storage of waste.

Policy W3 (Waste Separation and Collection) of the Local Development Plan requires all new residential development to include appropriate provision for waste separation and collection to meet the requirements of the Waste (Scotland) Regulations and address the waste hierarchy. This should include:

- a. For all scales of residential development, appropriate and well-designed provision for storage of domestic kerbside collection bins and boxes;
- b. For all major residential developments, recycling facilities of an appropriate scale and at a suitable location;
- c. Appropriate access roads and sufficient space for servicing by collection vehicles.

In larger scale residential development applicants may be required to make opportunities available for recycling facilities such as paper banks and textile banks. A scheme for the provision of recycling facilities at a suitable location and appropriate to the scale of the development must be submitted for further approval. This facility should be implemented prior to the occupation of the tenth dwelling house on any of the plots.

Local Development Plan 2018 Policies

DP2 – Design
DP4 – Major Development Sites

W3 - Waste Separation and Collection

The Big Belly ‘smart’ bin can take eight times the amount of waste of a normal bin, North Berwick.
Credit: Google Maps

Key Design Principles and Priorities

All relevant developments must:

- ensure that the design and materials of refuse storage areas are integrated with the design of the houses, car or cycling parking areas and use materials that will look good for years to come

Exemplar developments will:

- Use integrated design approaches to accommodate car/cycle parking with refuse storage areas in order to minimise their visual impact on the streetscene and reduce street clutter;
- maximise opportunities for integrating on-site renewable technologies with the design of the refuse storage compounds
- use smart waste bins (e.g. bigbelly bins) with sensory technology to improve the efficiency of waste collection of street litter bins and where appropriate of communal waste bins



Also, where appropriate and agreed with the Council’s Waste Management team, smart waste bins may be provided in new developments. These bins include sensors that send data via a mobile network to staff to indicate when bins are almost full. The information collected this way would allow staff to prioritise collections at busier spots as some bins may not need to be emptied as often as others. Also, the data gathered this way can help to identify any improvements required in the collection of bins and routes.

4.29 Waste and Recycling

If waste storage areas are visible from the public realm then they must be made of appropriate materials that not detract from the visual appearance of the buildings or the wider setting.

The location and positioning of waste and recycling bins must be considered at the outset of the design of the layout and housing. In East Lothian, all domestic properties require an appropriate storage area for 2 x 240 litre bin (1 for general waste and 1 for garden waste and access to wheel the bins from the storage area to the kerbside where they must be presented for collection. Equally, they must have appropriate storage for 3 kerbside boxes for dry mixed recycling and 1 kerbside food caddy. The road and pavement from the bin collection point to the refuse collection vehicle must be at maximum 10 metres and a hard standing surface. It must have a level gradient and a smooth surface; use dropped kerbs where appropriate.

For flatted developments communal waste bins must be stored at the nominated collection point. Where this is not possible East Lothian Council will expect the Factor to present and return these containers to and from the nominated collection point and for this to be built into the title deeds/Factor agreement.

For larger development proposals early discussions with the Council's Waste Management team will be needed to establish requirements for refuse and recycling facilities, particularly as to how they may affect street design.

New streets should not need to accommodate larger waste collection vehicles than can be used within existing streets in the area and swept-path analysis can be used to assess layouts, but quality of place should not be undermined by provision for vehicles. A minimum street width of 3.7 metres between kerbs is required to provide unconstrained access for refuse collection vehicles, but more importantly to meet the requirements for emergency vehicles which are generally dictated by those for large fire appliances. Providing for these will also cater for refuse collection, police vehicles and ambulances. The requirements for access by the Fire Service are included in Building Standards.



Windygoul, Tranent. Bin storage areas provided to the front of the properties. Credit: ELC



Park Garden, Musselburgh. Waste storage integrated with a wider landscape and car parking layout. Credit: Google Maps



Laburnum Arch Court, Prestonpans

Appendices



Appendix 1 – Glossary

Accessibility - the ability of people to move round an area and to reach places and facilities, including elderly and disabled people, those with young children and those encumbered with luggage or shopping.

Active frontage - the frontage or edge of a building or space that has windows and doors as opposed to blank walls, fences and garages.

Adopt (highway) - add to the Local Roads Authority's list of public roads.

Air Quality Management Area - an area where the local air quality is unlikely to meet the Government's national air quality objectives. Once an AQMA has been declared, the Council has to carry out further work to monitor the air quality in the area and identify what action can be taken to improve it. An order declaring an air quality management area came into effect on 13 November 2013. The air quality order covers the area around the High Street (A199), Musselburgh from its junction with Newbigging and extending westwards to the junction with Bridge Street and Mall Avenue.

Arterial Residential Streets - streets which are designed appropriately to carry larger volumes of traffic, and which may be able to accommodate bus routes.

BER (Building Emission Rate) - building emission rate for the proposed building (other than dwellings) is calculated based on its actual specification and is expressed in terms of its annual CO2 emissions of the proposed building expressed in kg/m2. BER is expressed in annual kg of CO2 per m2

Biodiversity - the variability in living organisms and the ecological complexes of which they are part.

Blue infrastructure - the water environment which is an important contributor to the network of blue and green corridors for the alleviation of flood risk, wildlife, recreation and the amenity needs of the community.

Carriageway - part of a road constructed for use by vehicular traffic. Auxiliary traffic lanes, passing places lay-bys and bus bays are included.

Character - the combination of features and structures that distinguish one place / structure from another providing a distinct and recognisable pattern of elements to give a place identity.

Combined heat and power (CHP) - is a highly efficient process that captures and utilises the heat that is a by-product of the electricity generation process. By generating heat and power simultaneously, CHP can reduce carbon emissions by up to 30% compared to the separate means of conventional generation via a boiler and power station.

Curtilage - the area of land immediately surrounding a house or other building and is reasonably associated with the enjoyment of that building, e.g garden area.

Cycle Lane/Cycleway - part of the carriageway intended for use by cyclists only. Part of the road, but separate from the carriageway. Pedestrians and cyclists may share a cycleway or they may be segregated from each other.

Density - the floorspace of a building or buildings or some other unit measure in relation to a given area of land. Built density is expressed as number of units per hectare for residential development.

Design and access statement - Submitted with a planning application, the statement sets out the design principles that the planning applicant has adopted in relation to the site and its wider context.

Desire line - an imaginary line linking facilities or places which represents the most convenient (shortest) route for pedestrians to take. The desire line may develop into an informal path that pedestrians prefer to take to get from one location to another rather than using a sidewalk or other official route. The street network of a development should generally be arranged to reinforce pedestrian desire lines.

Appendix 1 – Glossary

DER – (Dwelling Emission Rate) - represents the estimated annual CO2 emissions per m2 of the floor area and is used for the purpose of building regulation compliance.

Detention Basin - a vegetated depression that is normally dry except following storm events, constructed to store surface water temporarily in order to attenuate flows. It may allow suspended solids to settle out or infiltration of surface water into the ground.

District Heating - a system for distributing heat generated in a centralized location through a system of insulated pipes for residential and commercial heating requirements such as space heating and water heating.

Drainage (system) – a single unit or collection of drainage units including pipes, SUD system elements and drainage products, used to convey or store surface water runoff and foul flows.

Dwelling Density (Net) - net dwelling density is calculated by including only those site areas which will be developed for housing and directly associated uses, including access roads within the site, private garden space, car parking areas, incidental open space and landscaping and children's play areas, where these are provided.

EIA (Environmental Impact Assessment) - is the assessment of the environmental consequences of a plan, policy, program, or actual projects prior to the decision to move forward with the proposed action. EIA helps to ensure that an authority giving development consent for a project makes its decision in the full knowledge of any likely significant environmental effects on the environment

Green infrastructure - a network of multi-functional green space and other green features, urban and rural, which can deliver quality of life and environmental benefits for communities (provide a range of ecosystem services).

Heritage assets (designated) - listed buildings, scheduled monuments, registered parks and gardens, registered battlefields, and the settings of all of these

HRA (Habitats Regulations Appraisal) - Under the Habitats Regulations, all competent authorities must consider whether any plan or project will have a 'likely significant effect' on a Natura site (Special Areas of Conservation and Special Protection Areas). If so, they must carry out an 'appropriate assessment'.

In-curtilage parking - parking within a building's site boundary, rather than on a public street or space

Landscape and Visual Assessment (LVIA) – the process of evaluating the effect of a proposal upon the landscape. There is an important distinction between visual effects (the human view or perception) and the landscape effects (which occur whether or not anyone can see them).

Legibility - The degree to which a place can be easily understood and traversed, i.e. how easy it is to find your way around.

Local distinctiveness - The positive features of a place and its communities which contribute to its special character and sense of place.

Massing - The combined effect of the height, bulk and silhouette of a building or group of buildings.

Passive solar design - a building designed and orientated to make the most of the sun's warmth

Passive Surveillance - The discouragement to wrong-doing by the presence of passers-by or the ability of people to be seen out of surrounding windows. Also known as natural surveillance.

Quoins - The cornerstones of brick or stone walls. Quoins are also common in some brickwork corners that are alternately recessed and expressed

Rake - the diagonal outside facing edge of a gable, sometimes called a raking cornice or a sloping cornice. Rake is equivalent to slope which is the ratio of the rise to the run of the roof

Appendix 1 – Glossary

Rustication - a type of decorative masonry achieved by cutting back the edges of stones to a plane surface while leaving the central portion of the face either rough or projecting markedly.

SAP (Standard Assessment Procedure) - is the methodology used to assess and compare the energy and environmental performance of dwellings. Its purpose is to provide accurate and reliable assessments of dwelling energy performances that are needed to underpin energy and environmental policy initiatives.

Scale – the impression of a building when seen in relation to its surroundings, or the size of parts of a building or its details, particularly as experienced in relation to the size of a person.

SEA (Strategic Environmental Assessment) – the process used by public bodies and private companies operating in a public character, such as utility companies, to assess, consult on, and monitor the likely impacts their plans, programmes and strategies will have on the environment.

Setbacks - The distance from the edge of the street to the front of the building, also known as private defensible space.

Service Strip - reservation for Statutory Undertaker services (gas, water, etc) normally located within confines of footway or verge.

Shared Surface - area intended for unsegregated use by both pedestrians and vehicles.

Streetscape - the appearance of a street; the street and all the elements associated with it.

Street furniture – structures in and adjacent to the highway which contribute to the street scene, such as bus shelters, litter bins, seating, lighting, railings and signs.

SuDS - Sustainable Drainage System - physical structures built to receive surface water runoff including constructed wetlands, detention basins, infiltration devices, permeable surfaces retention ponds and swales.

Swept path analysis - a swept path analysis is the calculation and analysis of the movement and path of different parts of a vehicle when that vehicle is undertaking a turning manoeuvre.

TER (Target Emission Rate) - The target CO2 emission rate sets a minimum allowable standard for the energy performance of a building and is defined by the annual CO2 emissions of a notional building of the same size and shape to the proposed building. TER is expressed in annual kg of CO2 per m2

Tertiary Residential Streets - narrow, traffic calmed streets which will give access to individual residential blocks. These streets should be designed appropriately to carry reduced volumes of motorised traffic with lower traffic speeds. These streets will provide an attractive environment for pedestrians and cyclists and generally will be characterised by low to medium movement function and medium to high place function.

Urban grain - is the pattern of building plots, street blocks and streets in urban areas. A fine urban grain has small plots and street blocks with frequent junctions.

(Useable) open space - provides passive and active recreational areas for people and helps to enhance the aesthetic and environmental quality of neighbourhoods. It should be capable of delivering functions it was designed to provide.

Vernacular – the way in which ordinary buildings were built in a particular place, making use of local styles, techniques and materials and responding to local economic and social conditions.



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