Edinburgh Design Guidance

Foreword
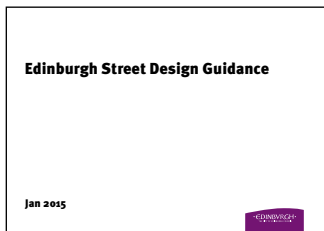
Contents

How does it relate to other guidance?

This document is part of a suite of non-statutory planning guidance:

Edinburgh Street Design Guidance

Jan 2015

Introduction

This updated guidance sets out the Council's expectations for the design of new development in Edinburgh.

Greater emphasis has now been placed on creating places that support the development of a compact, sustainable city. Support for active travel and public transport is reflected in revised parking controls in new developments. Landscape, biodiversity and green infrastructure are given greater prominence to reflect the wider contribution they make to placemaking and wellbeing. The requirement to make provision for electric charging points supports the use of eco-friendly vehicles and is one of the mechanisms that helps to address concerns over air quality.

The Council wants new development to create great places for people to live, work and enjoy themselves. In order to do this, we need to achieve the highest quality of design that integrates successfully with the existing city.

Many recent developments have achieved this aim and some are used as examples in the guidance. These developments establish a standard for the design quality of new development. Where appropriate, the guidance includes examples from outwith Edinburgh.

This guidance is intended for all new buildings but also includes a revision to the parking standards and will ultimately sit alongside a realigned Street Design Guidance. This will allow a holistic, place-based approach to design and development. The examples given show principles and concepts that apply to a range of different building types. These will also include examples of good street design once the Street Design Guidance has been aligned.

The guidance should be used as a point of reference, a basis for the planning, design and communication of new development proposals and a material consideration in assessing planning applications. It aims to:

- Provide guidance on how to comply with the policies in the local plans;

- Support good placemaking by bringing together guidance for streets, spaces and buildings

- Explain the key ideas which need to be considered during the design process;

- Give examples of good quality design; and

- Set out the requirements for design and access statements.

Each section provides guidance on specific topics that should be used as appropriate. It is important that it is read in conjunction with statutory development plans and other planning guidance depending on the type and location of development.

The Council's design-related policies can be broadly divided into themes relating to context, built form and landscape and biodiversity. This is reflected in its structure. Where appropriate, technical guidance is included. A fourth section, related to streets, will be appended to the finalised guidance.

Policy context

Scottish Government policy

A Review of the Planning System, a new National Transport Strategy and the emergence, in November 2015, of Cleaner Air for Scotland – the Scottish Governments policy document on Air Quality, all reflect a changing policy context. A more co-ordinated approach with outcomes that deliver better places is a common theme.

Creating Places and *Designing Streets* are the two planning policy documents for Scotland that relate to design. They set out government aspirations for design and the role of the planning system in delivering these. They are material planning considerations.

Creating Places sets out the six qualities of successful places as:

- distinctive;
- safe and pleasant;
- easy to move around;
- welcoming;
- adaptable; and
- resource efficient.

These guiding principles underpin the approach to delivering good places.

The Development Plan

The SESplan Strategic Development Plan and the Edinburgh Local Development Plan together make up the Development Plan for Edinburgh. This guidance interprets and applies the policies set out in the Local Development Plan and provides more detailed advice.

The Local Development Plan, which was adopted in November 2016, provides the basis for determining planning applications.
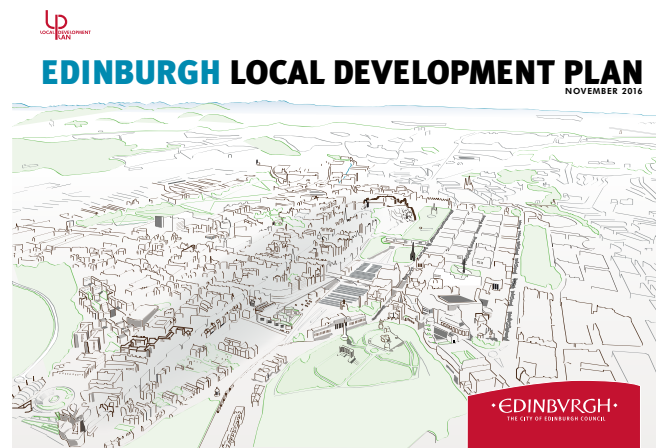
Relationship to other guidance

As shown on page 6, this Design Guidance is one of a number of user-focused pieces of guidance to interpret the policies set out in the Local Development Plan. It is important that, where applicable, these are read in conjunction with one another. For example, when designing a new building in a conservation area, reference should be made to this guidance and the Guidance on Listed Buildings and Conservation Areas.

Edinburgh also has a number of site/area specific planning guidance including Development Briefs.

View to the Pentland Hills from Edinburgh Castle

Tightly packed buildings in the Old Town—Cowgate viewed from South Bridge

A New Town Street: Northumberland Street

Edinburgh

Edinburgh is a unique and beautiful city - recognised by the UNESCO inscription of its two world heritage sites: the Old and New Towns of Edinburgh and the Forth Bridge. Its distinct geography and rich and varied heritage of buildings and urban design combine to create a cityscape of excellence. It is a city that has embraced change, and a city of startling contrast – between its landscape and buildings and in its streets and spaces.

Landscape is vitally important. Containment is provided by the Firth of Forth to the North and the Pentland Hills to the South, but it is the hills within Edinburgh that create some of the most memorable aspects of its setting. Castle Hill, Arthur's Seat, Calton Hill and others create a three dimensional city. Not only do they dominate views throughout the city, but they also create vistas, allowing the city to be seen and understood from a series of different vantage points.

One of Edinburgh's most attractive characteristics – its sense of contrast – is largely a result of its topography. Its hills, ridges and valleys have enabled the development of a series of distinct areas that juxtapose with one another. Nowhere is this interplay between landscape and buildings clearer than in the city centre. Both the Old and New Town are designed around their landforms. In the Old Town, the Royal Mile slopes gently down the Old Town ridge; buildings are tightly packed together off closes that run down to the Waverley and Cowgate valleys. The New Town's more undulating landscape is reflected in its spacious and geometrically ordered streets.

Throughout history, the city has evolved in response to changing needs and growth. In the 18th and 19th centuries, bridges and streets were thrust into the medieval pattern of the Old Town to create links with the wider city and improve the environment by providing more air and light. To meet current needs, confident modern developments sit comfortably alongside some of the oldest buildings in the city. Ironically, this process of change means many parts of the Old Town are younger than large swathes of the New Town.

An Old Town Improvement Street: Cockburn Street

Tenements in Marchmont—Warrender Park Terrace

Suburban housing with view to Edinburgh Castle—Greenbank Crescent

Subsequent developments within the city have had distinctive characters that create not only their own sense of place but contribute to that of the city as a whole. Areas like the Grange, Marchmont and Bruntsfield, Inverleith, Leith, Gorgie and Dalry, have different building forms, but with their height, sandstone walls, slate roofs, vertical windows and architectural motifs they feel very much part of Edinburgh. They have, at all their different scales, what we term, Edinburgh's 'DNA'.

Although the later suburban areas of the city are less distinct, their simple layouts knit well into the wider city. Where streets align with the city's landmark features, their sense of belonging to Edinburgh is amplified.

The public realm of Edinburgh offers a wealth of streets, squares and spaces, gardens and pedestrian spaces which act as settings for the historic buildings and make an important contribution to the architectural character of the area. It can be seen as the glue that binds places together.

This combination of natural and built heritage should be maintained and enhanced. The principles presented here are informed by qualities that make Edinburgh special. They seek to achieve new development that draws on and interprets the past; although the emphasis is strongly on interpretation, creativity and innovation rather than prescription.

The Challenge

The quality of our environment undoubtedly contributes towards Edinburgh's success as an international city to which people and businesses are attracted. For this to remain the case, it is vitally important that we continue to respect our existing built fabric. In doing so, Edinburgh should not become a museum piece. Instead, the city must continue to embrace change so that it can adapt to its evolving needs. This, however, sets up a possible tension—between preservation and change. As many of the examples used in this guidance demonstrate, design led solutions can resolve a range of competing needs.

Where surrounding development is fragmented or of poor quality the aim is to establish a new context that better reflects the DNA of Edinburgh. Here the Council encourages model forms of development that generate coherence and distinctiveness. Both our historic environment and the many modern developments shown in this guidance provide context of quality that should be reflected in these situations.

We can tackle pollution through innovative Placemaking. For example integrating greenspaces into new and existing developments can act as a buffer against noise and air emissions from vehicles, whilst providing open spaces for walking, cycling and nature.

A design process that challenges conventional ways of doing things will be key to creating successful places, particularly for new and emerging suburban areas.

Air quality has become a particular challenge in cities across the world. Considered use of design and placemaking can minimise the impacts of pollution while, at the same time, promote spaces for walking, cycling and nature.

If the aims of this guidance are met, forthcoming developments will be successful in the longer term - meeting the needs of all who use and experience them.

Promoting good design

It is important to achieve the highest quality of design possible. This means committing to good quality at every stage of the design process from start to completion.

Well designed developments can actively help to enhance the environment, manage exposure to air, noise and light pollution and reduce overall emissions. In contrast, other new developments may increase the emission of pollutants that are harmful to human health and impact on the quality of life.

Well designed developments support good placemaking and can actively help to enhance the environment, manage exposure to air, noise and light pollution and reduce overall emissions.

Pre-application advice

The Council encourages and promotes engagement on design issues through pre-application advice. The value of pre-application planning discussions is recognised and considered to be an important part of the planning process. Providing advice prior to the formal submission of a planning application could ensure that the quality of a development is improved and that certainty in the outcome can be increased for the applicant.

Pre-application negotiations between applicants and the Council should provide an opportunity to consider the development in principle and to influence its design so that potential problems are resolved or reduced. Therefore the need for expensive and time-consuming retrospective re-design or mitigation can be avoided.

Some of these discussions will require approval of the design, construction and layout of sites and buildings. Any conditions that are likely to be imposed under pollution controls, such as minimum chimney height, should then be taken into account in the planning application.

Design review

The Council supports the process of design review. Depending on the size, complexity and sensitivity of the site, proposals may be referred to either Architecture + Design Scotland (the Scottish Government's advisory body on urban design matters) or the Edinburgh Urban Design Panel. This should be done at the pre-application stage.

Architectural quality and competitions

Together, the Council's policies and guidance aim to raise the urban design quality within the city. Architectural quality is also vitally important. For particularly important or sensitive sites or for some nationally important uses, architectural competitions may be the best way of ensuring the highest architectural quality.

Community and place

Good design needs to take account of community needs and community aspirations. The Review of the Planning System and the Community Empowerment Act require that the community become more involved in helping to deliver better places. Use of tools like The Place Standard show how local needs can be incorporated into development briefs and other planning processes.

View from Meadows of new housing

1. Context, Placemaking and Design

This chapter sets out the Council's expectations for how development relates to its context, a key theme throughout this document. High quality design supports the creation of good places and has a positive impact on health and wellbeing. The highest standards of design can be achieved through being distinctive, safe and pleasant, easy to move around, welcoming, adaptable and sustainable, as set out in the Scottish Government's Creating Places and Designing Streets in order to create new vibrant places.

The key aims are for new development to:

- Demonstrate an understanding of the unique characteristics of the city and the context within which it is located;
- Demonstrate an understanding of the historical development of the site;
- Reinforce its surroundings by conserving and enhancing the character and appearance of the landscape and townscape; including protecting the city's skyline and locally important views;
- Ensure that adjacent development sites are not compromised and there is a comprehensive approach to layout;
- Provide appropriate densities depending on their existing characteristic;
- Incorporate and use features worthy of retention, including natural features, buildings and views; and
- Demonstrate a good understanding of the existing water environment on site and provide a creative response to manage future surface water.

1.1   Appraising the landscape and townscape

Survey and analyse the character of the wider landscape and townscape surrounding a development site.

Survey the existing scope of visibility and the amenity value of these views within the city and surrounding landscape.

Evaluate changes to character and views that will result from development and use the findings to inform design review and finalised proposals.

Survey and analyse the historic environment and use findings to inform design proposals.

For a proposal to respond positively to its context, it is essential that it is designed with a good understanding of its site and the surrounding area and the wider city. This will help the development of a sound concept around which the design is structured. The council expects a multi-disciplinary team consisting of architect/urban designers, landscape architects and flood engineers (historic experts if required) to be used to develop a concept and bring forward a masterplan. Schemes with a poor understanding of context will be refused.

All design should begin with a site survey and area appraisal. The scope and length of this survey and appraisal should be appropriate to the nature and scale of the development proposed and its location in the city.

An appraisal should consider the wider context, as well as the immediate surroundings. Even small developments can have significant impacts when sited in sensitive locations.

Where surroundings are of poor landscape or townscape quality, the appraisal should be used to identify opportunities for how the proposal could make improvements.

Information required in a site survey and appraisal	
Landscape	Geology, topography, landform, existing vegetation, including Trees *(section 3.5)* ,use of landscape by people, historical /archaeological assets, description of local landscape character and key landscape characteristics of site and context and analysis of the above
Ecology	Extended Phase One Habitat Survey and Ecological Assessment, to identify habitats and Protected species within the site and opportunities for linkage with adjacent habitats. See Biodiversity *(section 3.4)*
Hydrology, drainage, services	Locations of services and utilities (above and below ground). Water features and flood extents (including culverted river courses) See Water Environment *(section 3.8)*
Townscape	Listed buildings, focal points, landmarks, architectural style, feu pattern & building line, conservation area appraisals
Streets / Movement	How the site relates to the wider network of streets, footways and cycle routes and how these streets and routes are used. Consideration at different scales: structural, layout and detail.
Views Survey	Visual Assessment (see following pages) The extent to which the site is visible, whether the site is in a protected view or other important local or city view. Whether there are views to landmark features or other important features from site.
Microclimate /Air Quality	Sunpaths for winter & summer, prevailing wind in terms of shelter of urban blocks and tree planting, aspect and micro-climate in relation to solar gain & planting proposals. Existing air quality issues.
Planning / other designations	Is the site in the World Heritage Site? The ariport exclusion zone? A site of importance for nature conservation? The extent to which it meets requirements of Council's Open Space Strategy etc.

Historic environment

The historic environment includes ancient monuments, archaeological sites and landscape, historic buildings, townscapes, parks, gardens, designed landscapes and other features.

Sites within the two World Heritage Sites (WHS), The Old and New Towns of Edinburgh and the Forth Bridge require particular consideration. Historic Environment Scotland's 'Managing Change in the Historic Environment World Heritage' provides advice. There are management systems in place for both of the WHS.

The proposals should explain the impact on the Outstanding Universal Values within the Environmental Impact Assessment.

It is also important to understand the setting of historic assets. Historic Environment Scotland's (HES) *Managing Change in the Historic Environment Guidance Note on Setting* provides advice. Their guidance on *New Design in Historic Setting* explains the process of design that can help deliver exciting contemporary interventions that energise and enhance our historic areas.

Conservation Area Character Appraisals explain the special architectural and historic interest for much of the City's conservation areas. Edinburgh also has a heritage of listed buildings. If these fall within or adjacent to the proposals their significance and setting should be surveyed and appraised.

Where a site is of known or suspected archaeological significance a programme of archaeological works will need to be agreed with the Council. As the archaeology may influence the extent of development, this should be done at the site appraisal stage. On some sites, excavations may be required.

Historic Environment Scotland's *national Inventory of Gardens and Designed Landscapes in Scotland* describes landscapes of national importance. Proposals should assess the effect the development will have on the Gardens and their setting. Proposals that potentially will affect Local and Regionally important landscapes also require assessment.

Landscape character

Characterisation is a way to describe and understand the distinct patterns of elements which combine to create a 'sense of place', including geology, landform, soils, vegetation, land use, urban form, architectural style and experiential qualities.

A landscape character assessment can assist in defining objectives to protect, manage or restructure the landscape.

Edinburgh's unique and diverse landscape contributes to the city's identity and international renown. The wider landscape context is described in the *Lothians Landscape Character Assessment* and revealed in more detail in the *Edinburgh Landscape Character Assessment.* Special Landscape Areas have been identified as being of particular quality and their *Statements of Importance* (need hyperlink) also provide relevant information.

These should be referred to as part of the site landscape appraisal, helping to ensure developments interact with surroundings and aspire to shaping high quality future landscapes. The urban edge for example should be designed to conserve and enhance the special character of the city. See *page 23* for technical information and requirements.

Visual assessment

Visual assessment is a method to help understand the changes to views that would be experienced by people in the short, medium and long term should the development go ahead.

It is an essential tool to explore design options and explain the visibility of new proposals and how they will be viewed in relation to existing built and natural features.

In some instances the use of balloons or scaffolding structures will be required to allow people to understand the visual impact.

Findings should be presented in **Environmental Impact Assessments**, Design Statements or Landscape and Visual Appraisals and follow the approaches set out by the document 'Guidelines for Landscape and Visual Assessment' most recent edition.

This process should identify all the views within the landscape or townscape from a range of distances and orientations from the proposed development and take into account how this will be viewed by people. Vantage points that should be assessed include popular hill tops, paths and greenspaces, visual corridors along streets and roads, bridges and residential neighbourhoods. See *page 20* for technical information and requirements.

Site appraisal

These drawings and images illustrate some of the ways a site can be be appraised—in this case the gap site next to the City Art Centre. Information like this helps build up an understanding of a site—it does not prescribe the way it must be developed.

Views to site from Princes St Gardens, Roof of Princes Mall & North Bridge

Views to site

Site sits within herringbone pattern of Old Town streets and closes

Buildings and routes

Site shaded by tall buildings to south, east and west

Site sheltered by buildings to west

Sun path from east to west

Prevailing wind

Microclimate

gable windows on art centre

Important nearby features

Variety of building heights—generally falling from east to west

Vertical emphasis to windows

Site

Building heights and form

Cockburn Street

Station

Market Street

Site

Site section

Technical guidance

Landscape Character

Technical checklist

Determine the relevant study area in relation to the proposed development. Agree with planning authority.

Describe and categorise the surrounding landscape and townscape based on the predominant topography, land use, eras of settlement and patterns of form, scale and enclosure. Refer to existing sources of information as necessary.

Identify sensitive receptors within the study area, such as designated sites, listed buildings and scheduled sites, existing trees and woodland and describe key characteristics of site.

Provide a succinct written appraisal assessing the landscape/townscape effects of the proposal. Describe and evaluate change to character by considering how aspects of the proposal relate to its surroundings and whether change will weaken or enhance existing character. Where relevant incorporate design mitigation measures.

Additionally, designed landscapes will require an historic landscape assessment to be provided.

The Parish Church

Essential Character

- Underlying structure of access ways.

- Development and open spaces reinforced by traditional building forms.

- Predominance of a limited number of building types within the historic core.

- 'Beaded' pattern of development and open space along Ravenscroft Street.
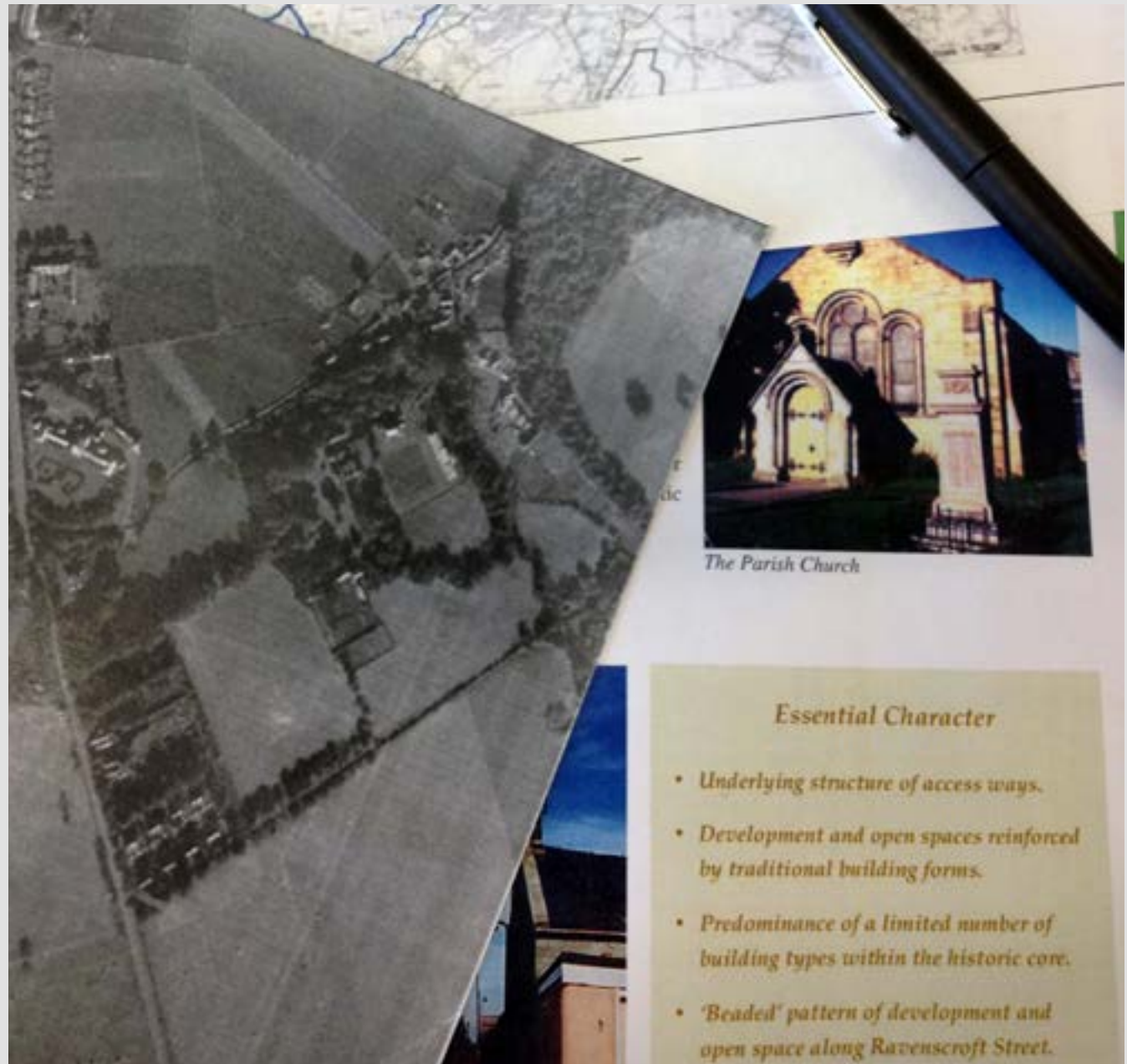
Technical guidance

Visual Assessment

The Landscape Institute's 'Guidelines for Landscape and Visual Impact Assessment' sets out the recognised approach. It should be read in conjunction with the Landscape Institute Advice Note 01/11—Photography and Photomontage in Landscape and Visual Assessment and Visual Representation of Wind Farms (Scottish Natural Heritage 2014) . The visual assessment should assess city and local views as well as protected skyline views. Views within any cultural heritage assessments or assessments of setting should be to the same standard as the visual assessment. They are likely to be the same views. See *City skyline and views (page 21).*

The requirements set out in the technical checklist should be confirmed and agreed at an early stage.

Protecting new views
The view from Edinburgh Park Station towards Arthur's Seat & the Castle (right) has similar qualities to the view towards the Castle from Carrick Knowe railway footbridge. It should be protected.


Protecting an incidental view
Although the glimpsed view to Edinburgh Castle from the West Port is not a key view, care should be taken to protect it. Limiting the height of buildings to maintain a view

Limiting the height of buildings to maintain a view
The height of buildings in the Bio-Quarter has been limited to maintain views towards the Edmonstone ridge. This helps to reinforce the landscape setting of the city by providing visual containment contributing to the sense that Edinburgh is a compact city.
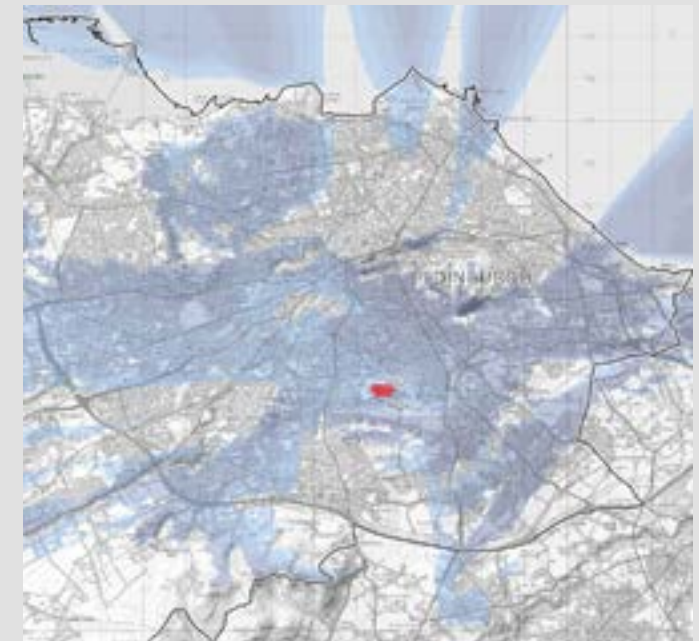
Zone of theoretical visibility
Use of computer generated mapping to determine a site's zone of theoretical visibility i.e. the area across which a proposed development may have an effect on visual amenity, can inform the selection of viewpoints for visual assessment.

Technical checklist

Map the site's visual envelope or prepare a computer generated Zone of Theoretical Visibility (ZTV).

Identify viewpoints representing different visual receptors, from a range of distances and orientations from the proposed development. Any relevant protected views may be included.

Confirm viewpoint location with planning authority.

Identify night time views, if required.

Prepare baseline site photography using equivalent of a 50mm focal length, usually set at 1.8m level

It may be helpful to subsequently confirm site photography with planning authority

Present the proposals alongside baseline photography, by means of an accurately constructed 3d CAD model, including 'wire line' views and rendered photomontages.

'Before' and 'after' views should enable direct comparison in the field, and should therefore be printed at the appropriate perspective, resolution and size with details recorded on the title block.

Provide a written appraisal assessing the visual effects of the proposal, and where relevant

1.2 City Skyline and Protected Views

Conserve the city's skyline, by protecting views to landmark buildings and topographical features.

Protect the setting of the Forth Bridge by protecting the characteristics of the key views.

Protected views

The topography of Edinburgh has shaped the way the city has evolved. The setting of the city, between the open hills and the Firth of Forth, and the impact of volcanic hills and ridges which define the built form, together create a very strong sense of place. This sets up views to and from many key features around the city and allows the city to be defined by its topography rather than the height of its buildings. The way buildings have used the topography of the city also defines what is special about Edinburgh; the distinctive and contrasting patterns of the Old and New Town are recognised in the World Heritage Site status. In order to protect this aspect of Edinburgh's character, the city's most striking visual features and views to them from a number of public vantage points are identified. The landmark features which are to be protected include:

- The Castle, Castle Rock and Tolbooth St John's Spire
- Calton Hill
- The Old Town spine
- Arthur's Seat and the Crags
- The New Town
- Coastal backdrop and Firth of Forth
- Open Hills
- The Forth Bridges
- St Mary's Cathedral Spires
- Fettes College
- Craigmillar Castle

One mechanism for protecting the views has evolved from a study of views and skylines undertaken for the Council. Essential to implementing the guidance is an understanding of the concept of 'sky space'. Sky space is the space around the city's landmark features that will protect their integrity. Once the sky space is 'pierced' by a development, it has started to impact on a protected view. Although there is a general presumption against breaking the sky space,

Contains Historic Environment Scotland and Ordnance Survey Data © Historic Environment Scotland © Crown copyright and database rights 2018 Ordnance Survey [100057073]

Title:
Forth Bridge Viewpoints

Scale:
1:60,000 @ A4

Projection:
British National Grid

Key

● Viewpoints

▬ Forth Bridge

if a development can demonstrate that it adds to the city's skyline in a positive way and enhances the character of the city, it will be supported subject to it meeting other relevant policy considerations. It should also be noted that a development can have an adverse effect on the skyline, not by breaking it, but through being too large in its built form or by failing to recognise the importance of rooftop detailing and modulation. Technical guidance is provided on the following page.

The Forth Bridge and its setting are also recognised as creating a very strong sense of place. It was inscribed as World Heritage Site in July 2015 reflecting the innovation in engineering, construction and materials which created an iconic structure which remains in its original use. The scale and power of the Forth Bridge creates a visually dominant landmark and the several layers of designated land and shore around the bridge ensure that it is protected at an appropriate level. In general, development in the North West and particularly in and around Queensferry and Port Edgar must take into account possible impact on the Forth Bridge. To help further safeguard its setting, a viewshed analysis identified a total of 10 key views; 4 of which lie within the City of Edinburgh. The protection of these key views and their characteristics will be a key planning consideration.

Other important views

It is important that other views to landmark features and important views to landscape and built features including statues and monuments in and around the city are also protected.

New views can be incorporated within new development. The following pages set out the Council's expectations for incorporating existing views.

Technical guidance

Assessing the impact on key views

The bottom of the sky space can be measured and is calculated from Ordnance Datum, so once the height of any proposed development is known, it will be possible to assess its impact on any feature by the extent to which it pierces the bottom of the sky space.

Each feature listed has different sky space around it depending on the nature of the feature. The amount of sky space around a feature will be sufficient, not just to protect a view of the feature, but to protect its context or setting. In some cases, the sky space can be accurately defined, while in others it will be more a matter of judgement. Views to the landmark features from any key view are in the form of view cones. The diagram to the right illustrates how view cones take account of topography and how proposals in different parts of the view cone might impact on a particular view.

Impacts on key views will vary depending on the nature of what needs to be protected in the key view itself, the location of the proposal and its height and form. Explaining in detail all circumstances in which the key views can be affected is beyond the scope of this guidance. However, it is possible to highlight some issues;

- Some areas are more sensitive to even small increases in height in relation to existing development due to their prominence in key views and exposure to sky space. An example of this is development in the area between Princes Street and Queen Street, where even the addition of an extra storey could impact upon views.

The concept of view cones and sky space
This diagram shows that depending on a building's position, its height and the topography surrounding, elements of a building (here shown in red) can sit in the sky space around a landmark building or feature. Note that the sky space sits to the side, above and below the landmark feature.
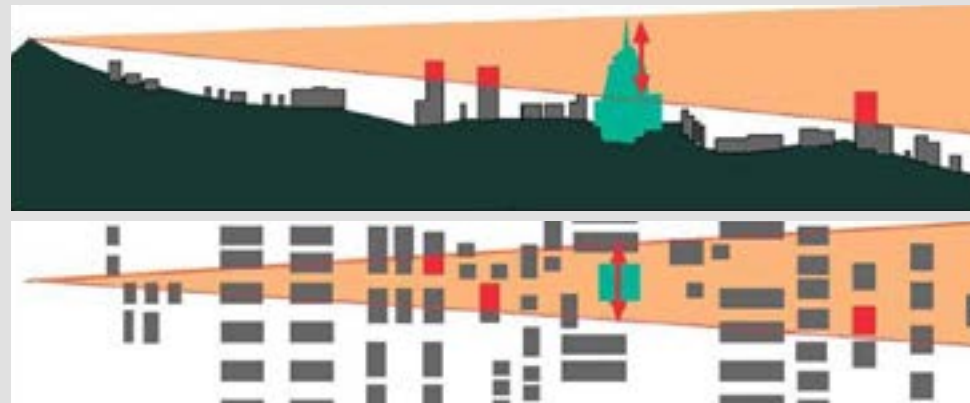

- In other areas, there may be scope for taller buildings but care needs to be taken that impacts on key views are fully considered. For example, some parts of the Port of Leith may have the capacity for buildings which exceed building heights typical of the immediate context. However, these areas may be very near parts of the docks within which similar development could have an adverse effect. An assessment of the suitability of these or any other proposed locations for high buildings, in terms of their contribution to the strategic development of the city, will be required.

Key views that are to be protected are set out on the following pages. These are to be kept under review.

The design of any high building must be of exceptional quality and it must demonstrate an understanding of its context and impact if it is to be considered. The application should be accompanied by:

- Sight and height levels.
- An analysis of the context including a strategic justification for the proposed location.

- Environmental modelling that addresses pedestrian wind safety issues related to:
- Wind force (relative velocities related to a base line study of surrounding area)
- Wnd safety (turbulence, suction, lift)
- Thermal comfort (Wind chill)
- Noise level
- Air quality
- Streetscape aesthetics (impact of any mitigating measures).
- Photomontages showing the impact of the proposal on key views.
- A helium balloon test may be required, where the true height of the building is described by a series of markers attached to a cable suspended by a balloon filled with helium, so that a true understanding of the impact in the surrounding area can be gained.
- A statement demonstrating that there is an understanding of the impact of the development and showing how the development enhances its context.
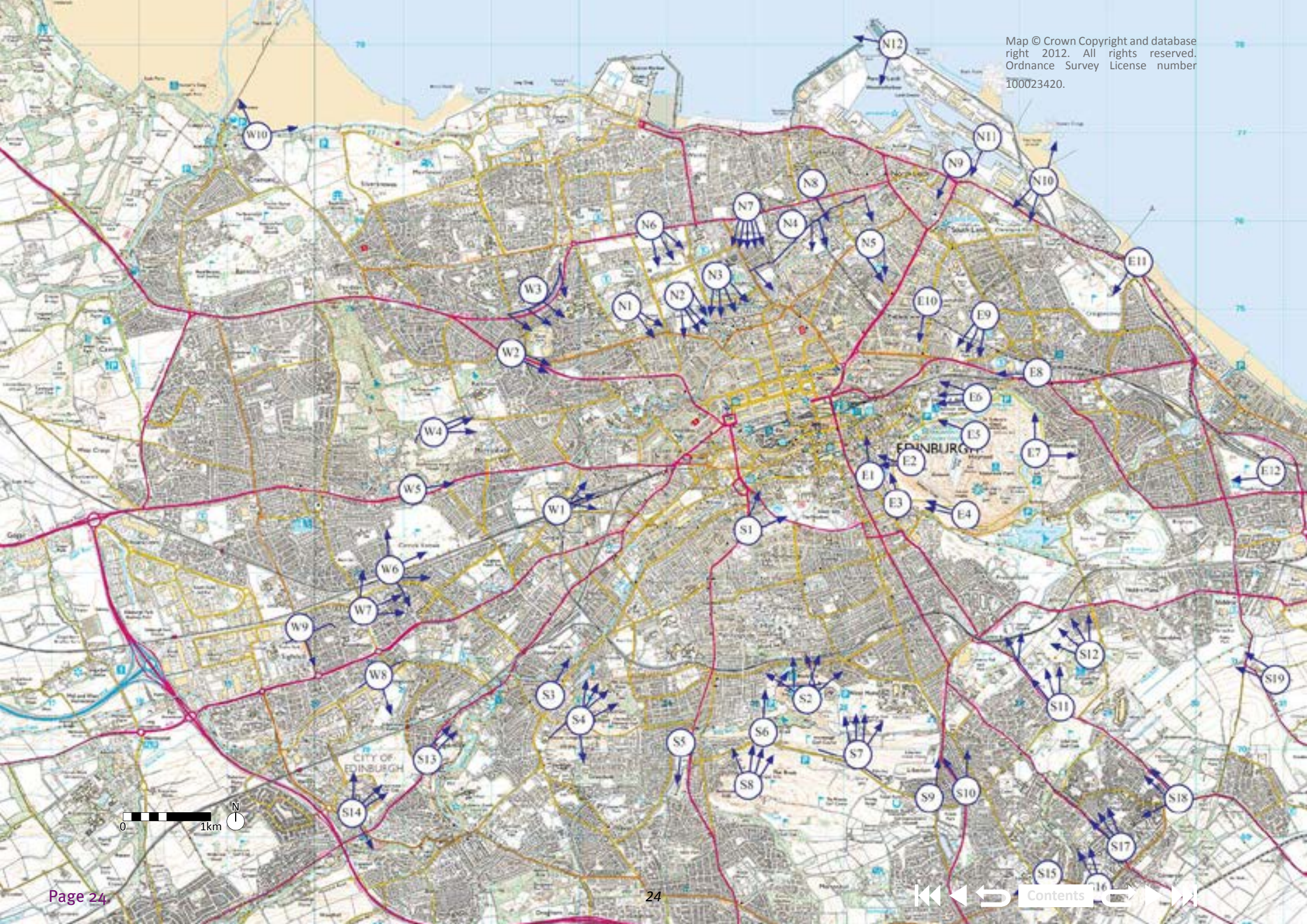
Technical guidance

List of Key Views in the North, West, East and South of the City

N1a   Carrington Road - Arthur's Seat
N1b   Carrington Road - Charlotte Square dome, Castle & Hub spire
N2a   Inverleith Park - Arthur's Seat
N2b   Inverleith Park - Charlotte Square dome, Castle & Hub spire
N2c   Botanic Gardens, west gate - along Arboretum Place to Castle
N2d   Inverleith Park - St Mary's spires and west Edinburgh skyline
N3a   Botanic Gardens - Arthur's Seat
N3b   Botanic Gardens, in front of Inverleith House - Castle, Hub spire and Charlotte Square dome
N3c   Botanic Gardens - Pentland Hills
N3d   Botanic Gardens, in front of Inverleith House - St Mary's spires
N4a   Eildon Road - Arthur's Seat
N4b   South Fort Street - Salisbury Crags
N4c   Newhaven Road and Warriston Path - Calton Hill
N5a   Pilrig Park and Pilrig Street - Arthur's Street
N5b   Pilrig Park - Calton Hill
N6a   Ferry Road & Merchant Maiden Playing fields - Arthur's Seat
N6b   Ferry Road at Merchant Maiden Playing Fields - Castle, Hub spire and Charlotte Square dome
N6c   Ferry Road at Merchant Maiden Playing Fields - St Mary's spires
N7a   Ferry Road at Goldenacre - Arthur's Seat
N7b   Ferry Road at Goldenacre - Salisbury Crags
N7c   Ferry Road at Goldenacre - Pentland Hills
N7d   Ferry Road at Goldenacre - St Marys' spires
N7e   Ferry Road opposite Clark Road and Eildon Street - Castle and Old Town skyline
N8   Newhaven Road and Victoria Park - Arthur's Seat
N9   Constitution Street, north end - Calton Hill monuments
N10a   Inchkeith Island, Arthur's Seat - Arthur's Seat, Inchkeith Island
N10b   Leith Docks - Calton Hill
N11a   Leith Docks - Arthur's Seat
N11b   Leith Docks - Calton Hill and Hub spire
N12a   Leith Docks, west end - Castle and Hub spire
N12b   Leith Docks, west end - Forth Bridge
W1a   Western Approach Road raised bridge - St Mary's spires
W1b   Western Approach Road raised bridge - Castle
W1c   Western Approach Road raised bridge - Arthur's Seat
W2a   Queensferry Road, west of Craigleith Road junction - Castle and Arthur's Seat
W2b   Queensferry Road, west of Craigleith Road junction - St Mary's spires
W3a   Telford Road, east of old railway bridge - Arthur's Seat

W3b   Telford Road, near old railway bridge - Castle and Hub spire
W3c   Telford Road, old railway bridge - St Mary's spires
W3d   Telford Road - Pentland Hills
W4a   Corstorphine Hill - Calton Hill and New Town Monuments
W4b   Corstorphine Hill, south east end - Castle and Arthur's Seat
W5   Corstorphine Road, south of Zoo - Castle & St Mary's spires
W6a   Carrick Knowe railway footbridge - Corstorphine Hill
W6b   Carrick Knowe railway footbridge - St Mary's spires
W6c   Carrick Knowe railway footbridge - Castle
W6d   Carrick Knowe railway footbridge - Arthur's Seat
W6e   Carrick Knowe - Pentland Hills
W7a   Saughton Road south of railway bridge
W7b   Saughton Road, south of railway - Castle and Hub spire
W7c   Playing field east of Broomhouse Community Centre - Arthur's Seat
W8   Longstone - Pentland Hills
W9   Sighthill and Broomhouse - Pentland Hills
W10   Forth Bridge World Heritage site
E1a   Pleasance - Salisbury Crags
E1b   Pleasance Calton Hill
E2a   Salisbury Crags, south side - Pentland Hills
E2b   Salisbury Crags, Radical Road - St Mary's spires, Castle, Hub spire
E2c   Salisbury Crags, Radical Road - Corstorphine Hill
E2d   Salisbury Crags, Radical Road - Calton Hill
E3   Queen's Drive - Calton Hill
E4a   Queen's Drive, Powderhouse Corner - St Mary's spires
E4b   Queen's Drive, Powderhouse Corner - Castle and Hub spire
E5   Holyrood Park, Whinny Hill, Lonw Row - Calton Hill
E6a   Holyrood Park, Meadowbank Lawn - Castle and Old Town
E6b   Holyrood Park, St Anthony's Chapel - Castle and Old Town
E6c   Holyrood Park, Meadowbank Lawn and St Anthony's Chapel - Calton Hill
E7a   Holyrood Park, Dunsapie Loch - the sea
E7b   Holyrood Park, Dunsapie Loch - Inchkeith Island
E8   London Road, Meadowbank - Calton Hill
E9a   Lochend Park, upper level and Lochend Road South - Arthur's Seat
E9b   Lochend Park - Arthur's Seat and Salisbury Crags
E9c   Lochend Park, upper level - Calton Hill
E10   Easter Road - Salisbury Crags
E11   Seafield Road, Craigentinny - Arthur's Seat
E12   Magdalene Field - Arthur's Seat
S1a   Bruntsfield Place - Castle
S1b   Bruntsfield Links, south side - Castle
S1c   Bruntsfield Links and Meadows - Arthur's Seat & Salisbury Crags
S2a   Blackford Hill crest - Castle, spires and Firth of Forth
S2b   Blackford Hill, Royal Observatory - Castle, spires & Firth of Forth
S2c   Blackford Hill - the sea with Inchkeith Island
S2d   Blackford Hill - Arthur's Seat and Salisbury Crags
S2e   Midmar Drive - Arthur's Seat and Salisbury Crags
S2f   Blackford Hill Crest - Corstorphine Hill

S3   Colinton Road - St Mary's spires
S4a   Craiglockhart Hills - St Mary's spires
S4b   Wester and Easter Craiglockhart Hills - Castle and Hub spire
S4c   Wester Craiglockhart Hill - Salisbury Crags
S4d   Wester Craiglockhart Hill - Arthur's Seat and sea
S4e   Craiglockhart Hills - Pentland Hills
S5   Braidburn Valey Pentland Hills
S6   Braid Hills Drive West - Castle, Hub spire & Barclay Church spire
S7a   Braid Hills Drive East - Castle, Hub spire & distant mountains
S7b   Braid Hills Drive, east end - Calton Hill
S7c   Braid Hills Drive, east end - the sea
S7d   Braid Hills Drive, east end - Arthur's Seat and Salisbury Crags
S7e   Braid Hills Drive, east end - Pentland Hills
S8a   Buckstone Snab - Castle, Firth of Forth and distant hills
S8b   Buckstone Snab - the sea
S8c   Buckstone Snab - Arthur's Seat
S8d   Buckstone Snab - Corstorphine Hill
S9   Liberton Drive along Alnwick Hill Road to Arthur's Seat
S10a   Liberton Cemetery - Arthur's Seat and Salisbury Crags
S10b   Junction of Liberton Brae and Kirkgate - Castle
S11a   Old Dalkeith Road, by Craigmillar Castle - Castle
S11b   Old Dalkeith Road, by Cameron Toll - Salisbury Crags
S11c   Old Dalkeith Road, south of Cameron Toll - Arthur's Seat and Salisbury Crags
S12a   Craigmillar Castle - Inchkeith Island
S12b   Craigmillar Castle, upper battlements - Castle and Hub spire
S12c   Craigmillar Castle - Salisbury Crags
S12d   Craigmillar Castle - Arthur's Seat
S13a   Lanark Road, Dovecot Park - St Mary's spires
S13b   Lanark Road, Dovecot Park - Castle and Hub spire
S14a   Clovenstone Community Woodlands - Corstorphine Hill
S14b   Clovenstone Community Woodlands, west side - St Mary's spires
S14c   Clovenstone Community Woodlands, west side - Castle and Hub spire
S14d   Clovenstone Community Woodlands - Pentland Hills
S15   Captain's Road - Pentland Hills
S16a   Hyvots Bank, Gilmerton Dykes - Castle and Hub spire
S16b   Gilmerton Dykes Street - Arthur's Seat and Salisbury Crags
S17a   Gilmerton Road, near junction with Ferniehill Road - Castle and Hub spire
S17b   Gilmerton Road - Salisbury Crags
S17c   Gilmerton Road - Arthur's Seat
S18a   Junction of Old Dalkeith Road and Ferniehill Road and Moredun Park Road - Castle and Hub spire
S18b   Moredun Park Road - Arthur's Seat and Salisbury Crags
S18c   Ferniehill Road, east end - Pentland Hills
S19   A68, near Wester Cowden - Castle, Hub spire and Old Town
S20   A68, near Wester Cowden - Arthur's Seat

Technical guidance

List of Key Views in and around the City Centre

C1a   Castle Ramparts - Calton Hill
C1b   Castle Ramparts - Inchkeith Island
C1c   Castle Ramparts - Arthur's Seat
C1d   Castle Ramparts - Pentland Hills
C2a   Camera Obscura - Calton Hill
C2b   Camera Obscura and Castle Esplanade - Pentland Hills
C2c   Junction of Ramsay Lane and Castlehill - Firth of Forth
C3a   North Bank Street - Corstorphine Hill
C3b   Milne's Close - Firth of Forth
C4a   Royal Mile, Lawnmarket - the sea
C4b   Royal Mile, North/South Bridge junction - the sea
C5a   North Bridge - Calton Hill
C5b   North Bridge - Firth of Forth
C5c   North Bridge - Salisbury Crags
C6   Jeffrey Street and Cranston Street - Calton Burial Ground monuments
C7a   Waterloo Place and Regent Terrace - Arthur's Seat and Salisbury Crags
C7b   Carlton Terrace Tron spire - along Regent Terrace
C7c   Royal Terrace, east end - Greenside church tower
C8a   Calton Hill - Arthur's Seat and Salisbury Crags
C8b   Calton Hill - Pentlend Hills
C8c   Calton Hill - Castle, Hub spire, St Giles crown and Tron spire
C8d   Calton Hill - along Princes Street
C9   Waterloo Place and Princes Street - St Mary's spires
C10   Waverley Bridge - Castle and National Gallery
C11a   Junction of Queen Street and North Castle Street - east along Queen Street
C11b   Junction of Queen Street and Dublin Street - west along Queen Street
C11c   Dublin Street - east along Albany Street
C11d   Junction of George Street and Frederick Street - east to St Andrew Square column
C11e   Junction of George Street and Frederick Street - west along George Street
C12   East half of George Street - Firth of Forth Central
C13   George Street at Charlotte Square - Firth of Forth
C14   Princes Street - Calton Hill
C15   Queensferry Street - along Melville Street to St Mary's spires
C16a   Dean Bridge - north to Rhema church tower
C16b   Dean Bridge - Firth of Forth
C16c   Dean Bridge south-west view
C16d   Dean Bridge - Corstorphine Hill and Dean Gallery towers
C17   West Maitland Street - along Palmerson Place
C18   Queensferry - Road Fettes College
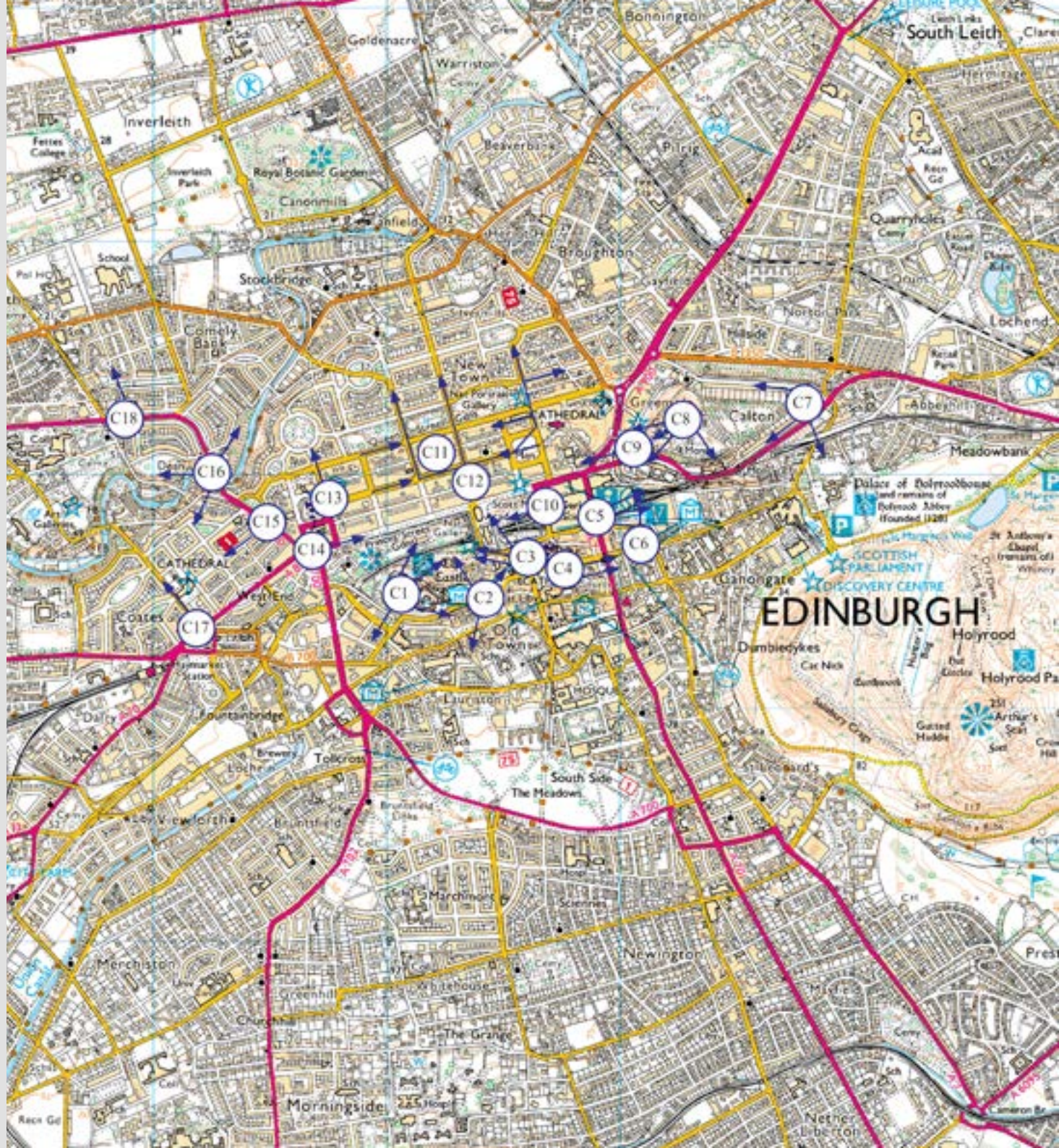
1.3　Assessments and Statements

Provide Landscape and Visual Appraisal/ Assessment for most applications. The extent of the assessment is dependent on the scale of the development.

Design statements are expected for some local planning applications

Design and Access Statements are expected for all major planning applications as well as other significant or complex proposals

Provide an Environmental Impact Assessment (EIA)for applications with significant environmental impacts.

Provide landscape and visual Appraisal/ Assessment for most applications. The extent of the assessment is dependant on the scale and location of the development.

Provide a Conservation Plan, Historic Landscape Assessment and Assessment of the Setting of Listed Buildings, or Assessment on the Outstanding Universal Value (OUV) of a World Heritage site as required when working in an historic environment.

All development should communicate the visual and landscape / townscape change by the use of appraisals or assessments. The appraisal required depends on the scale and context of the change. In certain local applications this will be a stand alone document, in other cases this assessment will be within a design statement. Where Design and Access Statements are required the landscape and visual information should normally be in a stand alone document. In development with a significant visual or landscape/environmental impact the findings should be presented in an Environmental Impact Assessment.

The appraisal should show existing views, and existing natural and built features. Sections 1.6, 1.7 and 1.8 set out the Council's expectations for these matters.

Key townscape principles, such as height, form, scale, spatial structure and use of materials are set out in the Designing Buildings chapter.

The different appraisals include:

Design Statements

Design statements are required for local developments in the following areas:

- the World Heritage Site;
- a conservation area;
- a historic garden or designed landscape;
- the site of a scheduled ancient monument;
- or the curtilage of a category A listed building.

Design Statements are not required for:

- Development of existing dwelling houses
- Changes of use
- Applications for planning permission in principle

Planning Advice Note (PAN) 68 - Design Statements shows how to prepare a design statement. Key headings are set out in the table overleaf.
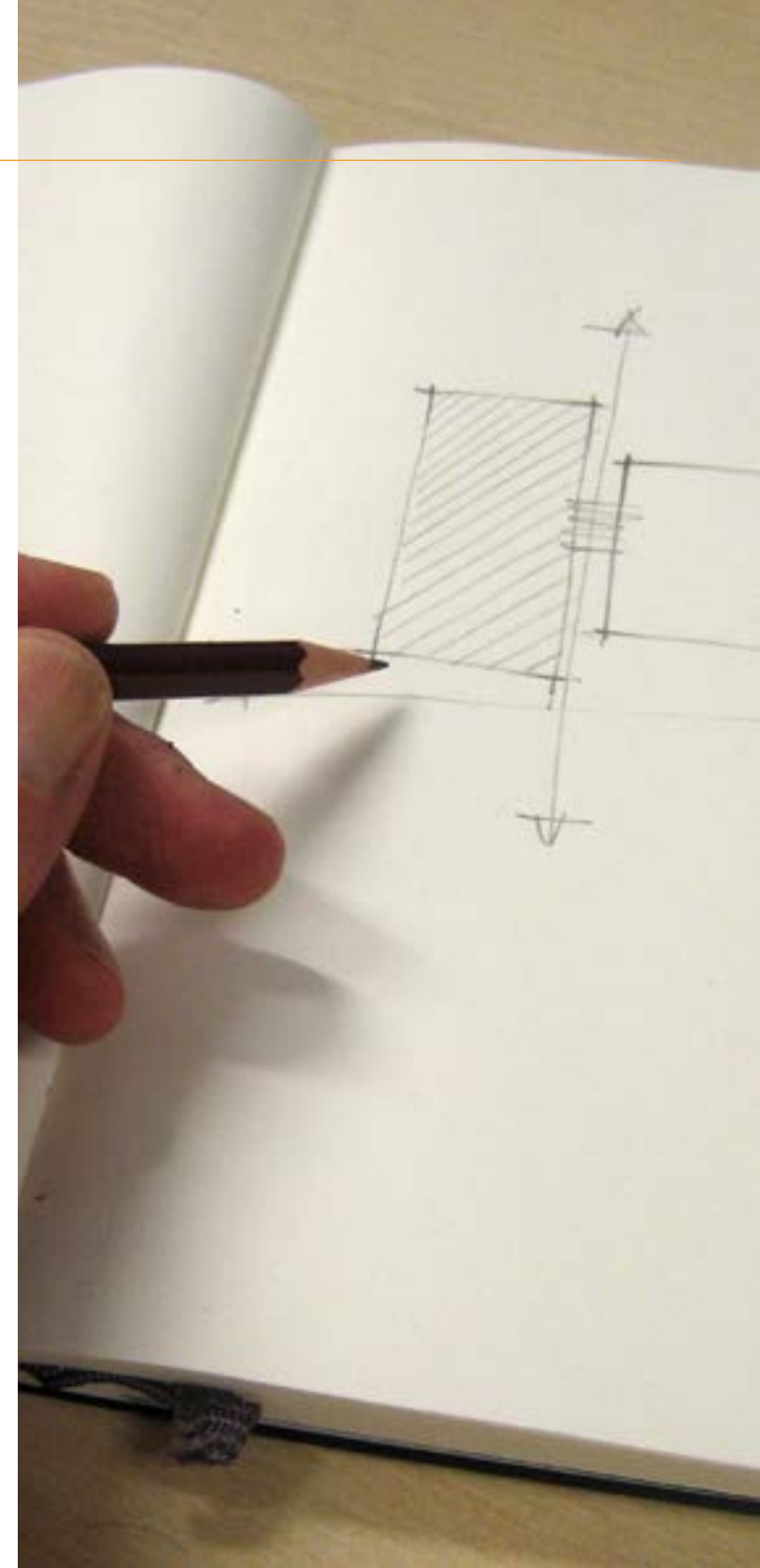
Design and Access Statements

Design and Access Statements will be expected for all major planning applications as well as complex or significant local planning applications.

The Design and Access Statements are the same as a Design Statements except that they include a written statement about how issues relating to access to the development for people with disabilities have been dealt with. The statement must explain the policy or approach adopted access. The table below sets out the requirements.

Information required in a Design Statement	
Background information	Name of scheme; Name of applicant; Name of architect / developer / urban designers / etc. Description of client brief; Date
Site details	Location and site plan; Description; History including planning history; Ownership
Site and area appraisals	See section 1.1
Policy context	Relationship of proposal to national and local planning policies and guidance
Public involvement	Outcome of consultation and public involvement
Programme	How will the project be phased?
Concept	Diagrams illustrating key concepts and ideas that underpin the proposal.
Design solution	A explanation of the design solution, including site layout and parking provisions, and how the solution has taken account of factors above, including, site and area appraisal, policy context, public involvement and concept

Information required in an Access Statement	
Policies	Policies relating to such access in the development plan have been taken into account; and
Specific issues	Any specific issues which might affect access to the development for disabled people have been addressed. This should explain how the applicant's policy / approach adopted in relation to access fits into the design process.
Access to and through the site	Developers should consider setting out in the statement how access arrangements make provision both to and through the site to ensure users have equal and convenient access.
Maintenance	It must describe how features which ensure access to the development for disabled people will be maintained. The publication Designing Places notes that the arrangements for long-term management and maintenance are as important as the actual design. Therefore, issues regarding maintenance will help inform the planning authority in coming to a view on how best, possibly through agreements or conditions, such features are to be maintained in the longterm.
Consultation	It must state what, if any, consultation has been undertaken on issues relating to access to the development for disabled people and what account has been taken of the outcome of any such consultation

The *Edinburgh Access Panel* advises how to improve accessibility for people with disabilities in the built environment. Its advice should be sought early in the design process.

In certain complex cases the Architectural Design and the Landscape Design should be presented in separate statements.

Proposals within either WHS require some type of assessment. The extent and location of this should be agreed with the planning authority, however it will usually be within an EIA for large complex development. Views presented to explain impacts on the Outstanding Universal Values should follow the guidance in Section 1.1 visual assessment.

Sites which contain listed buildings should provide an assessment of the setting of the listed building including an assessment of the landscape setting if appropriate, identifying key characteristics and views that create the character and define the setting. This should be presented following Historic Environment Scotland's advice. The location of the assessment should be agreed with the Planning Authority. Section 1.1 set out the Council's expectations for positioning new development within historic sites.

For sites listed in *Historic Scotland's national Inventory of Gardens and Designed Landscapes in Scotland*, or the Council's local survey records, a historic landscape assessment written by a chartered landscape architect should be submitted.

Where a Conservation Plan is required these should be written by an accredited Conservation Architect or Architectural Historian and should set out the important characteristics and evolution of the buildings and the landscape.

1.4   Coordinate development

Have a comprehensive approach to development and regeneration.

Comply with development frameworks or master plans that have been approved by the Council.

Develop masterplans with a multi-disciplinary team.

On larger sites, prepare and adhere to master plans that integrate with the surrounding network of streets, spaces and services.

On smaller sites, make connections to surrounding streets and spaces

Integrate new developments with ecological and landscape features and the Green Network

A comprehensive approach to development is important if well designed and cohesive networks of streets and spaces (including the green network *(section 3.2)* are to be created. It is particularly important on sites which could be big enough to become neighbourhoods in their own right.
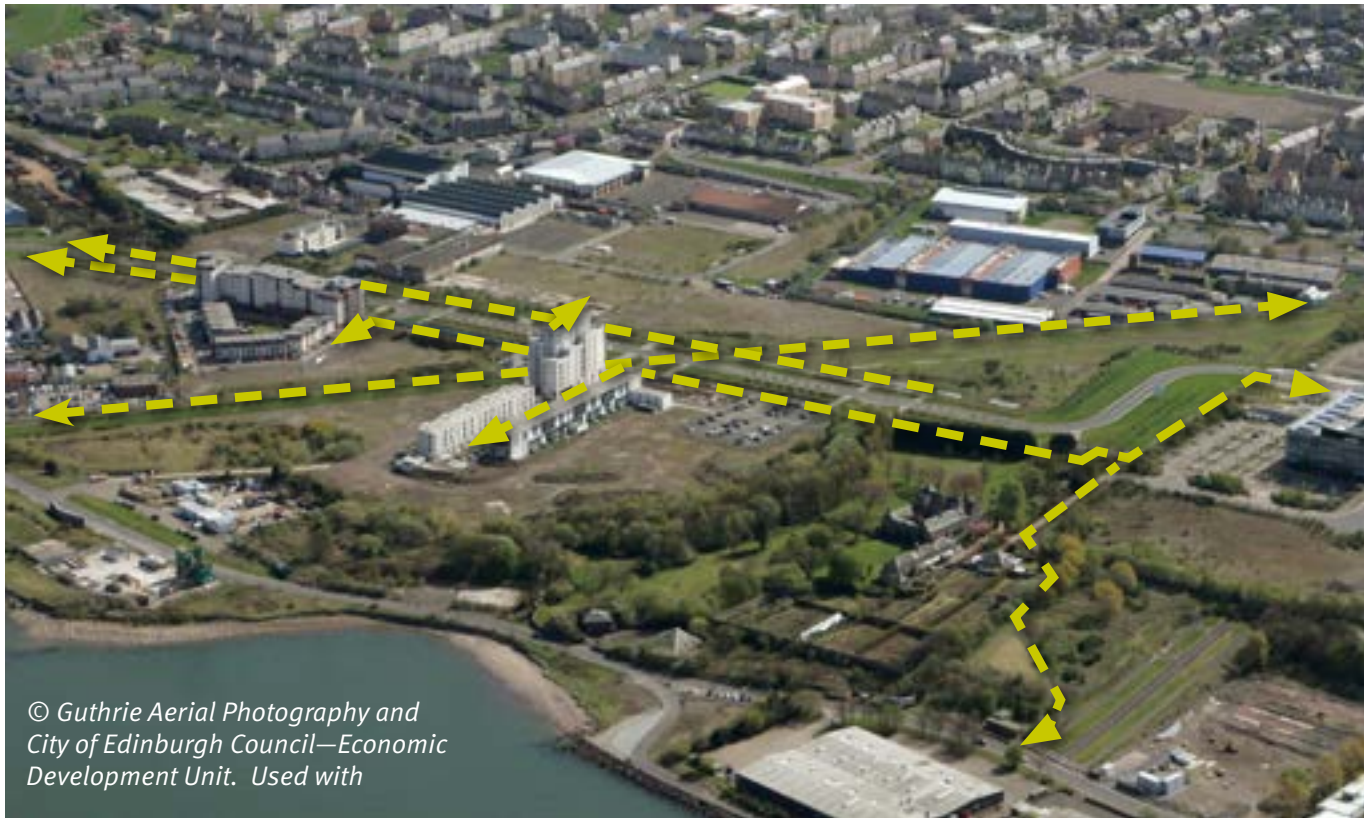
It is also important with smaller developments where there is a possibility that neighbouring sites will be developed in the future. Here, applicants may be asked to demonstrate sketch layouts of how neighbouring sites could be developed. This will help ensure that the future development of neighbouring sites is not compromised.

It is expected that proposals will comply with the principles in this guidance and be prepared by a multidisciplinary team of consultants including architect/urban designers and landscape architects and flood engineers. It requires that streets must consider place before movement—a key part of establishing suitable urban layouts. An important aspect of this is to create streets and spaces that reflect the unique character and distinctiveness of Edinburgh. The Council wants new development to provide streets and spaces that are attractive for all potential users of them. Opportunities for travel should be prioritised in the following order: walking, cycling, public transport then car.
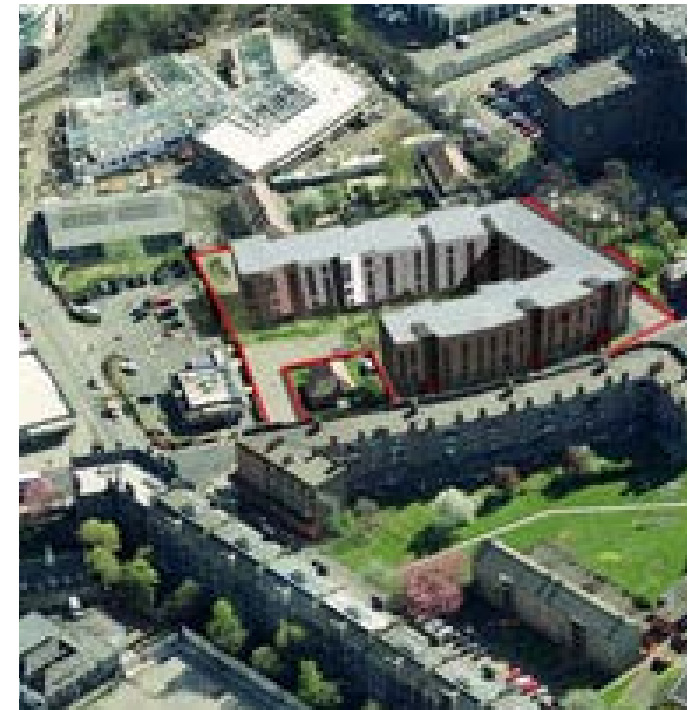
Maintaining development potential
This new tenement housing development will allow the neighbouring land and buildings including the drive through restaurant to be redeveloped in a similar pattern. This will help create a cohesive network of streets.

© Guthrie Aerial Photography and
City of Edinburgh Council—Economic
Development Unit. Used with

New cycle routes
A new cycle route at West Granton Road helps connect this development into the wider area. It is designed so that in the future, new development can overlook it. This is important to help make the route safe.

Creating a masterplan and following it

A series of masterplans and frameworks were created to guide the development of the former industrial land and gas works site at Granton (pictured above). This allowed infrastructure like roads, cycle routes, avenues, parks and squares to be put in place early. All the new buildings that have followed have fitted into this structure. This means it is likely that the aims of the masterplans of creating a high quality new district for the city will be met.

In addition, this development contains a mix of uses. These include housing, a new college, supermarket, and business space. Mixing uses within new development sites helps them to become more interesting, vibrant and sustainable places. This is because people will use them throughout the day and night and because greater mix of uses helps create more sustainable transport options.

This new housing at Saltire Street in the masterplanned area has a view to the sea

The office at Waterfront Avenue has a square in front and the space for a future public transport hub.
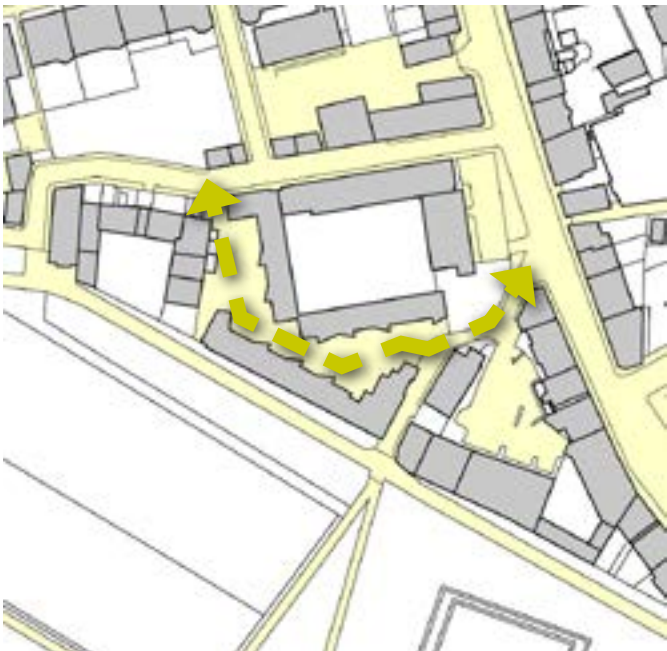
Shared surface for new student housing—Boroughloch
Because there is very little need for car parking and therefore access for cars, this development was able to be designed around a shared surface street. Due to the limited amount of vehicles and since it is well overlooked, it is attractive for pedestrians and cyclists.

Bridge for pedestrians and cyclists—Westfield Avenue
This new bridge connects the development to the Water of Leith Walkway and areas beyond.

Making connections to roads and cycle routes—Paddockholm
This development was built on the site of a former suburban station. It makes connections to the cycle route and road at either end of it.
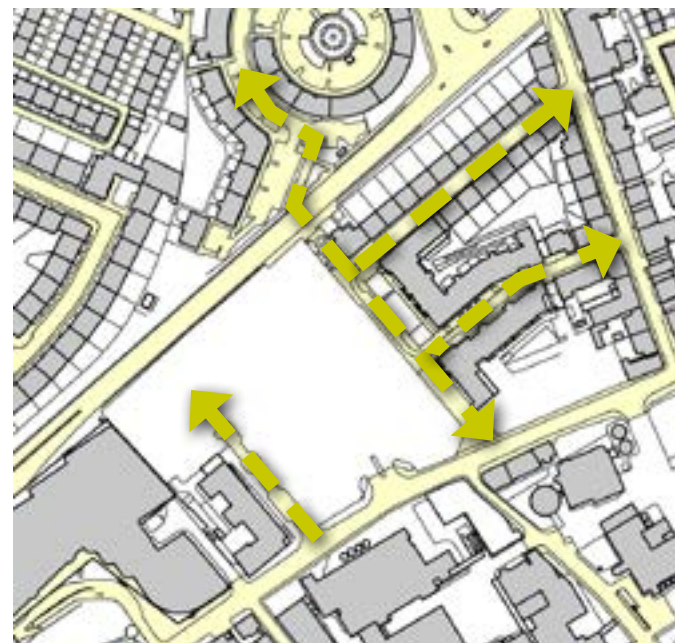
Shared surface in housing—Cakemuir Gardens.
The houses come right up to the edge of the carriageway. The tight space that results means that motor vehicles have to move around slowly. This helps make the space safe for pedestrians and children playing.

Pedestrian route in the city centre—Multrees Walk
This shopping and office development creates an attractive street. The shops and little square within it make in an interesting space to pass through. The Council will seek more routes like this where opportunities arise.

Connections outside the city centre—Brandfield St.
An important new connection has been made through the former brewery site. It is made as accessible as possible through the inclusion of the ramp. Landscape and overlooking contribute to its attractiveness.

1.5   Density

> **Increased density can be achieved on sites where the surrounding density is lower provided that:**
>
> **there is a strong urban design rationale for the increase in density; and,**
>
> **the increased density would not have adverse impact on neighbouring amenity or valuable natural heritage features**

High density development helps Edinburgh be a compact and vibrant city. Having higher densities allows land to be used more efficiently, helps regeneration and minimises the amount of Greenfield land being taken for development. Higher densities also help maintain the vitality and viability of local services and facilities such as schools and local shops, and encourage the effective provision of public transport.

New development should achieve a density that is appropriate to the immediate site conditions and to the neighbourhood. This is particularly important in Victorian and Edwardian villa areas. Here the form of any new building and its positioning should reflect the spatial characteristics, building forms and heights within the area. Back-land development must be designed to ensure that any proposed building is subservient to surrounding buildings and it does not have an adverse impact on spatial character.

The appropriateness of high density housing to a particular site will depend on site context and on the way in which the development addresses the issues of open space, (including impacts on landscape character and trees), unit mix, daylight, sunlight, privacy, outlook, house type, car parking requirements, waste management and the design and site layout of the development itself. Density should be a product of design, rather than a determinant of design. Where there is a failure to meet the Council's expectations in relation to these factors, this would indicate that the proposed density is too high and that the quantity of development on the site should be reduced or the design re-configured.

Where appropriate, higher density low rise building types like colony housing, or terraced housing could be inserted into some low density low rise areas without adverse impact on amenity or character. There can be a rationale for a modest increase in building heights (and density) at nodes like transport intersections of arterial and other significant roads as the change in height can help signal the importance of the location and assist navigation.

High density development is encouraged where there is, or it is proposed to have, good access to a full range of neighbourhood facilities, including immediate access to public transport network (i.e. within 500m of development). The map on the following page illustrates where these areas are within Edinburgh.

In new suburban developments, the Council encourages the efficient use of land and a mix of housing types. Introducing housing types like flats, colonies, 4 in a block, terraces, mews houses and townhouses for example, can help to increase densities on sites that are otherwise conceived for detached and semi-detached housing.

Density in suburbia
In these examples, the street layout is similar. The left hand example has fewer houses and so is less dense. The Council encourages the approach on the right hand side where houses are terraced and semi detached as opposed to all detached houses. The right hand layout is more likely to help sustain services like shops since there will be more people to use them.more people to use them.

Terraced housing—Wauchope Terrace
Terraced housing is one way of delivering houses with front doors and back gardens that makes efficient use of land.

Mixing houses and flats—Fala Place
Having a mix of houses and flats, helps create a good range of dwelling types—which is good for social sustainability—and makes good use of land.

Flats in villa areas—Succoth Place
These flats integrate well into an existing villa area due to their scale and refined architectural design.

Examples using some of these density measures follow. For these examples, car parking values were simply determined by establishing how many cars actually park on the relevant street. In relation to perpendicular on-street parking, a value of 2.5m is suggested, whilst for parallel parking, a length of 5m is suggested to accommodate cars.'

Stockbridge colonies

115	Dwellings / ha
0.96	GFA / site area
0.34	Footprint / site area
2.8	Average number of storeys
0.5	Car parking / dwelling
179m²	GFA per car parking space

Marchmont tenements

99	Dwellings / ha
1.32	GFA / site area
0.33	Footprint / site area
4	Average number of storeys
0.8	Car parking / dwelling
170m²	GFA per car parking space

Lochrin Place tenements

164	Dwellings / ha
1.89	GFA / site area
0.35	Footprint / site area
5.3	Average number of storeys
1	Car parking / dwelling
115m²	GFA per car parking space

Maps © Crown Copyright and database right 2012. All rights reserved. Ordnance Survey License number 100023420.

Technical guidance

Westfield

172	Dwellings / ha
1.23	GFA / site area
0.24	Footprint / site area
5	Average number of storeys
0.4	Car parking / dwelling
165m²	GFA per car parking space

Margaret Rose Avenue

23.6	Dwellings / ha
0.43	GFA / site area
0.20	Footprint / site area
2.1	Average number of storeys
1.7	Car parking / dwelling
106m²	GFA per car parking space

21st Century Homes - Gracemount

69	Dwellings / ha
0.65	GFA / site area
0.23	Footprint / site area
2.9	Average number of storeys
0.8	Car parking / dwelling
119m²	GFA per car parking space

Maps © Crown Copyright and database right 2012. All rights reserved. Ordnance Survey License number 100023420.

1.6   Incorporate existing views

Where views to interesting or landmark features exist, incorporate them into new development.

This is particularly important in public areas, such as streets, squares and open space.

Sometimes a view might not be apparent on a site, for example because there is a building in the way. Site analysis will help establish whether a new view can be made. If it can, it should be incorporated into the design.

Private views are not generally protected through the planning system.

Notwithstanding this, there are some circumstances where views can be provided for new development and will be seen as contributing positively to the amenity of the development. Such circumstances include sites where it is unlikely that the view can be interrupted by subsequent development and where the view is to a landmark feature.

The height and massing of buildings can have a significant impact on views. The section on height and form contains specific guidance on this matter.

View to Craigmillar Castle—Castlebrae Wynd
The street is lined up to create the view to the castle.

Publicly accessible view
A publicly accessible view to Edinburgh Castle was created from the roof level of the Museum of Scotland.

Creating new views - Jackson's Entry off Canongate
Views to Salisbury Crags are framed by the retained historic buildings and the new development that resulted from the masterplan.

1.7   Incorporate natural and landscape features

Respond to existing variations in landform.

Protect and incorporate existing trees that are worthy of retention into the design of new open spaces.

Retain and incorporate other existing natural features into the design to reinforce local identity, landscape character, amenity and optimise value of ecological networks.

Address the coastal edge and watercourses positively and protect flood plains.

De-culvert watercourses and integrate them with the site layout and function.

Define the urban edge to conserve and enhance the landscape setting and special character of the city.

Existing landscape features can contribute strongly to the quality of new development. Wherever possible these should be integrated into the design. The Council will take particular interest in the retention of historic features and existing habitat.

Watercourses should be addressed positively by incorporating them into accessible green networks, and ensuring security through natural surveillance and appropriate design such as active frontages. Waterside sites can present an unique opportunity for innovative design. Flooding issues should be fully understood.

In some instances, public access is inappropriate in some areas because of the need to protect wildlife habitat. For example, the south side of the Union Canal is of particular habitat value and care should be taken to ensure protection of its biodiversity value. Similarly, the biodiversity of the Water of Leith benefits from a lack of public access to some of its banks. In redevelopment of sites along the Water of Leith a 15m setback or substantial ecological mitigation will be required to maintain the ecological potential of this strategic blue/green network.

The design of the urban edge should form a clear transition between the urban area and surrounding countryside. The retention, enhancement and integration of existing trees, shelterbelts and hedgerows helps integrate development with the character of the surrounding countryside and provide opportunities to extend habitat networks *(see section 3.5)*. Existing trees should be located in open space as opposed to residential gardens.

Retaining trees
New mature trees were planted alongside this retained tree in the Grassmarket.

(photo of retaining woodland and deculverting).

Where suitable landscape features do not exist it may be necessary to create a substantial woodland edge. These should provide the necessary space for native woodland habitat to achieve maturity and accommodate multi-user paths and links to the wider countryside.

Integrating trees—Glasgow Road
Trees from the former Gogarburn Hospital site were carefully integrated into the development

In some situations, where new residential and civic architecture will enhance the townscape, or the urban edge adjoins recreational facilities or greenspace, a permeable edge of parkland trees and active travel routes may be considered.

Topographical features such as ridges and valleys also combine to provide natural barriers, which can help to direct development to the most appropriate locations whilst contributing to the setting and identity of the city.

Archaeological Interpretation
The archaeological remains of the Flodden Wall are below these markings in the hard landscape of the Grassmarket. Their retention helps the understanding of the history of the city.

New connections—Westfield Avenue
As well as providing an attractive frontage to the Water of Leith, this development provides a new footbridge over it. This greatly improves access within the area.
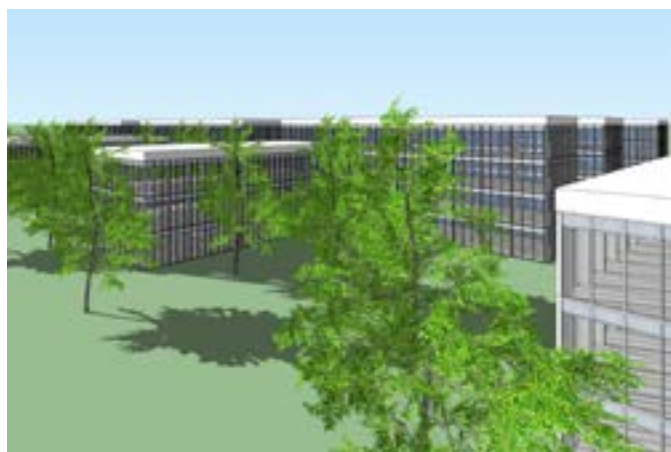
A soft edge between development and landscape
By creating 'fingers' of buildings, landscape can be brought into the development, blurring the edge between the two.
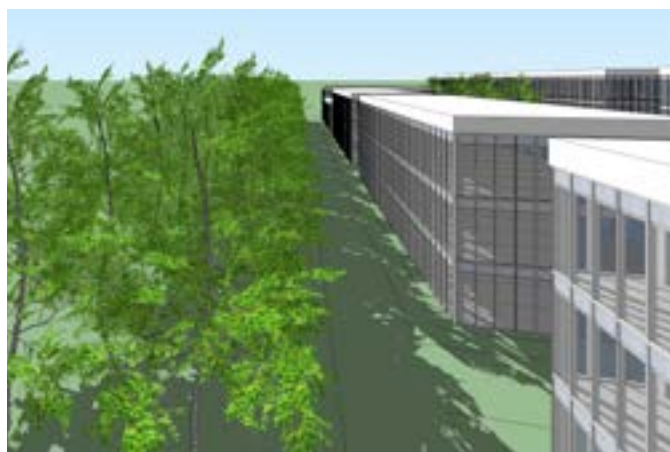
A strong edge between development and landscape
Where development forms a strong urban edge it is important to create an equally robust landscape edge.

Frontage onto the Union Canal—Fountainbridge
As well as providing mooring space and so promoting the Canal's recreational use, the development at the end of the Canal provides an attractive frontage with bars and restaurants facing onto it.

1.8   Incorporate existing built features

Incorporate existing buildings and boundary elements (even if they are not listed or in a conservation area) where they can contribute positively to new development.

Re-use elements from existing buildings, particularly where there is an historical interest. Protect and enhance existing archaeology.

Where there are known or suspected archaeological remains within the landscape surveys, evaluation and desk top studies should be carried out, in consultation with the Council's Archaeological Service. The evaluations may highlight features to be considered in any design proposal and the formulation of future mitigation strategies. In some cases this should be explained by the use of interpretation or provided with an enhanced landscape setting. *(see section 3.2 - Open Space)*

Incorporating a boundary wall—Hart Street
This stone wall was re-used and incorporated into the new house

Transforming a building's use—Anderson Place
This bond building was transformed into flats

Boundary walls in villa areas—Newbattle Terrace
Boundary walls are extremely important to the character and appearance of villa areas. The size and number of new openings to them should be minimised.

Reusing building materials—Holyrood Road
Stone from the partially demolished Queensberry House was used in the walls in the exterior of the Scottish Parliament

Reusing an existing building—East Market Street
The shell of this building was transformed into a gallery.

2. Designing Buildings

This chapter sets out the Council's expectations for how features within the built form relate to its setting. The overall composition of streets is shaped by how individual buildings work together, creating the unique visual character through repetition, variety and focal points within the street scene.

The key aims are for new development to:

- Have a positive impact on the immediate surroundings, wider environment, landscape and views through its height and form, scale and proportions, materials and detailing, positioning of the buildings on site, integration of ancillary facilities, health and amenity of occupiers.

- Repair the urban fabric, establish model forms of development and generate coherence and distinctiveness where the surrounding development is fragmented or of poor quality.

- Achieve high standards of sustainability in building design, construction and use and be adaptable to future needs.

- Support social sustainability by designing for different types of households.

- Address the street in a positive way, to create or help reinforce sense of place, urban vitality and community safety.

- Balance the needs of pedestrians, cyclists, public transport users and motorists effectively and minimise the impacts of car parking through a design-led and place specific approach.

- Enhance the environment, manage exposure to pollution and reduce overall emissions.

2.1   Height and form

Match the general height and form of buildings prevailing in the surrounding area.

Where new developments exceed the height of neighbouring buildings ensure they enhance the skyline and surrounding townscape.

Ensure new high buildings conform to the section 1.2 on City skyline and views.

Policy References

- *Edinburgh City Local Plan - Des 3 a), Des 10*
- *Rural West Edinburgh Local Plan - E 41, E42*
- *Edinburgh Local Development Plan - Des 4a, Des 11*

The Council wants new development to integrate well with existing buildings and spaces. This means new buildings that are clearly higher than their neighbours should be avoided. This helps protect the visual character of areas where there are uniform building heights. It also helps protect key views.

The height of the part of the building where the external wall meets the roof (the eaves) is at least as important to the perception of height as the height of the top of the roof (the ridge). This means that new buildings should sit within the form set by the eaves and ridge of neighbouring buildings. This is particularly important in situations where there are established building heights, for example tenement streets, mews streets and villa areas.

Well-designed architectural features that rise above this height, and which would contribute to the visual interest of the city's streets and skyline and not adversely affect key views, may be acceptable in exceptional circumstances.

Existing high and intrusive buildings will not be accepted as precedents for the future. They should be replaced with more sensitively scaled buildings when their redevelopment is in prospect.

The impacts of height in relation to aerodrome safety should be considered.

The right height—Fountainbridge
The height of the modern building is very similar to its historic neighbour. This helps to integrate it into its surroundings.

Too low?—Pitt Street
This recent development above could have been improved if its eaves height had matched those of it neighbours. The effect is that the building appears too small.

Matching heights in villa areas
It is important that new buildings in villa areas have similar heights to their neighbours. In this example, the modern building in the middle of the image is designed so that the height of its main walls matches the eaves heights of the buildings on either side.

Making a new landmark—Gardner's Crescent
The height of the office is justified by it creating a landmark to highlight the end of the Union Canal which also serves to terminate views from Gardner's Crescent. This situation is considered exceptional. Care has been taken to ensure that this building contributes positively to local skyline views with its three dimensional form - particularly at the top levels. It should be noted that this site is less sensitive than the example below where the architecture of surrounding streets is much more ordered. Note that landmarks do not necessarily need to be high buildings.

Integrating into a street and key view
The set back of the upper floors and the materials chosen help integrate the buildings in the centre of the image into view from the Castle Esplanade.

Matching the height of existing mews—Circus Lane
This newly built house matches the eaves and ridge heights of the adjacent historic mews buildings.

A landmark for the wrong reasons—Walker Street
The office tower has a negative impact on views from surrounding streets due to its inharmonious height & form.

Villa—Merchiston Park
The height and massing of this villa, which are similar to surrounding buildings, help to integrate it.

2.2   Scale and proportions

Harmonise the scale of buildings including their size and form, windows and doors and other features by making them a similar size to those of their neighbours.

Where the scale of proposed new development is different to that of surrounding buildings, ensure there is a compelling reasoning for the difference.

Policy References

- *Edinburgh City Local Plan - Des 3 a)*
- *Rural West Edinburgh Local Plan - E 41, E42*
- *Edinburgh Local Development Plan - Des 4 b)*

A typical example of a difference in scale being problematic is where new tenements are located next to older stone built tenements. Often the windows on the new building are smaller and a different shape and because the floor to floor heights are lower than the older buildings there will be an extra row of windows. This adds up to create a visual mismatch that can erode the character of the area.

In sensitive sites, floor to floor heights of new buildings should match their neighbours.

Where elevations have large projections or recesses, three dimensional views may be sought so that scale and proportions can be assessed.

Matching height, proportions and form—Hopetoun Crescent
The housing either side of the historic townhouses above has been designed to match the scale originally intended for this street.

Modern development with a similar scale—Wester Coates Gardens
This villa has large windows which help to integrate it with the scale of surrounding historic villas. The proportions of stonework help also.

Windows too small?
While the housing five storey tenement has the same eaves height it has much smaller windows than those of neighbouring tenements. The small scale creates an inharmonious relationship.

2.3   Position of buildings on site and in layout

Position new buildings to line up with the building lines of neighbouring buildings.

Where building lines do not exist, position new development to engage positively with streets and spaces and where the surrounding townscape character of the area is good, reflect it.

Use the positioning of buildings to create interesting and attractive streets and spaces

Where locating buildings in an historic landscape, ensure the essential characteristics of the landscape are protected.

When locating buildings adjacent or close to an historic building ensure the key views to and from a building and characteristics of the setting of the historic building are protected.

Position buildings carefully with a full understanding of the topography and environmental constraints of adjacent spaces and site.

In areas of the city where buildings do not line up (for example the Old Town), plans of the wider context are extremely useful in helping to determine how well the proposed position of buildings on site is likely to make a positive contribution to the spatial character of an area.

Where back-land development would disrupt the spatial character of an area, it must be avoided.

Layouts should be designed to be attractive for all users and particularly pedestrians and cyclists.

Inserting buildings into a historic landscape must be done with a good understanding of the sensitive views and characteristics, and the setting of any historic buildings, in order that these can be protected. Landscape, visual and setting appraisals *(section 1.1)* should be used to guide the process.

The wrong position
Positioning large buildings (coloured red) in the rear of villa plots can undermine the spatial character of the area.

Infill development in a tenement area:
The proposed building completes a block of development. This will allow active frontages to be placed onto streets and allow private space for the development in the courtyard that is formed between the buildings.

Infill development in a villa area:
The proposed building (shown in red) is roughly the same size in plan as its neighbours and is positioned so that its frontage is the same distance from the road as its immediate neighbours.

Varied building positions—Cakemuir Gardens
Varying the positions of the buildings in relation to the street helps create an interesting sequence of streets and spaces in the development—contributing to its attractiveness as a whole.

Creating contrasting spaces
By positioning the flats and houses close together, this provides space for a green in the middle of the development. This big space creates an interesting contrast with the streets around.

Courtyards—Brighouse Park Gait
Small groups of housing can be made to form courtyards

Image courtesy of Steve Tiesdell Legacy Collection

15m wide street—Woolmet Place
By integrating the parking into the street and having small front gardens, the street has been made narrower than a typical suburban street.

A village green—Muirhouses Square, Bo'ness
The houses are arranged to form a space that is similar to a village green. This can be used for residents for a range of uses and has good visual amenity.

Space within a space—Dublin Street Lane North
The buildings are positioned to create a range of spaces that contrast with the ordered streets of the New Town surrounding the site.

Image © Tim Francey

Image © Tim Francey

Mews street—Donnybrook Quarter, London
This development provides terraces at upper levels, allowing relatively high density housing to come close together and achieve good quality outdoor space
Image courtesy of Steve Tiesdell Legacy Collection

A range of spaces—Accordia, Cambridge
In this development in Cambridge, the houses are placed 6m apart to create a mews street. Its narrowness means that cars can't be parked in the street so garages have to be used. This helps the street be more pedestrian friendly and suitable for play. The images above right show some of the open space within the development.

Image © Tim Francey

Ordered frontage to Canal—Amsterdam
These houses are arranged to provide an attractive frontage to the Canal. The moorings provided are set out to allow a relatively continuous strip of habitat for wildlife.
Image courtesy of Steve Tiesdell Legacy Collection

Positioning trees carefully—Allerton Bywater, England
Trees are integral part of this housing development, lining streets throughout the development
Image courtesy of Steve Tiesdell Legacy Collection

Narrow street—Amsterdam
Cars, cyclists and pedestrians are all taken account of in this narrow street. A key feature are the climbing plants which add visual softness.
Image courtesy of Steve Tiesdell Legacy Collection

New suburban developments
In new suburban developments it will be expected that a range of different housing types will be provided and that these will be laid out to give range of different types of streets and spaces. These should integrate with the hierarchy of the streets in the surrounding area. This layout shows that a range of different streets and spaces can be created using similar housing types: Squares (1), narrow streets with garages to the side (2) and mews streets (3) can all be created with standardised house types.
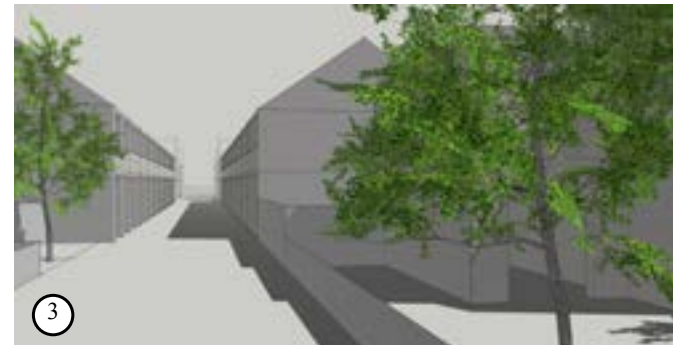
2.4   Design, Integration and Quantity of Parking

Welcoming, attractive and sustainable places balance the needs of pedestrians, cyclists, public transport users and motorists effectively

Need for car parking can be set against opportunities to support other modes of travel, including maximising access to public transport

Where car parking is required, its visual impact can be significantly reduced if strategies are design-led and place specific

Successful parking layouts are likely to offer a range of solutions that are convenient, efficient and well integrated within a high quality public realm

Car parking maximums should be applied for all developments, though careful consideration must be given to mitigating potential parking over-spill to surrounding streets

Safe, secure, and convenient cycle and motorcycle parking facilities are to be provided as part of new developments

Electric vehicle charge points should be provided for developments where 10 or more car parking spaces are proposed

Car club initiatives are encouraged to promote car use as a shared resource and reduce pressure for parking.

Policy References

- *Edinburgh Local Development Plan – Des 7, Tra 2, Tra 3, Tra 4*

- *Local Transport Strategy – Cars 1, Cars 3, Env 2, Park24, Park25, Park26*

- *Sustainable Energy Action Plan – Programme 5 Sustainable Transport*

The design, integration and quantity of parking within developments has a huge impact on the quality of our places and the way we use them.

Welcoming, attractive and sustainable places balance the needs of pedestrians, cyclists, public transport users and motorists effectively. Whilst it is recognised that car travel will continue to form a key transport mode, the need for car parking can be set against opportunities to support other modes of travel, including maximising access to public transport. Reducing the impact of the car not only creates more a sustainable place to live, but helps to address congestion, air pollution and noise, and improves the public realm.

Poorly conceived parking strategies have implications which stretch much wider than a site's boundaries. For example, large expanses of car parking can be visually intrusive and detrimental to the area's character and appearance in addition to encouraging non-essential car trips. Likewise, insufficient provision can be equally damaging in areas which are not designed to accommodate large quantities of on-street parking.

Defining a successful parking strategy

Parking strategies should be design-led and place specific.

Clearly if an area is well connected to amenities which are accessible by foot, bicycle or public transport, the need for car parking will be lower than in less accessible areas. In these instances, cycle parking may form the majority of a site's parking provision. Pedestrian desire lines within and adjacent to each site should be identified at the outset to inform proposals which prioritise safe and convenient pedestrian movement.

Where car parking is required, a successful parking strategy is likely to offer a range of solutions that are convenient, efficient and well integrated within a high quality public realm. The provision of a variety of parking solutions also reduces their visual impact.

Exploring options for car parking in new developments

In residential developments, a mix of on-street, side-of-property and underground parking should be maximised, whereas rear courts, integral garages and front-garden parking should be minimised. If garage parking is considered, dimensions should permit their effective use for that purpose. Car ports positioned to the side of properties can be a good alternative to garages.

Underground parking is a good solution and is practical for developments of a size where access ramps can be accommodated or topography easily permits its use. The effective design of underground

(More mages to be inserted later)

parking permits buildings to be located forward on the building plot creating a more active street environment and maximises private space to the rear of buildings. Where surface parking would have a detrimental impact on the public realm, rooftop parking should be explored if underground parking cannot be accommodated.

Source: SCOTS Road Development Guide

If parking is at ground level, building layouts should enclose and enable surveillance of this area(s) as much as practicable. Developments which tend to require higher levels of parking such as retail outlets, supermarkets and offices should be located to the streetward side of development sites with car parking to the rear.

The shared use of parking areas is desirable provided this works without conflict, such as for mixed use developments where uses are populated at different times of day. This arrangement may result in a reduction of the number of total parking spaces needed.

Smaller scale on-plot car parking options for residential developments:

Mews Court:
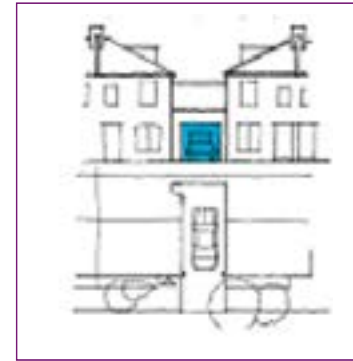
Attached Garage:
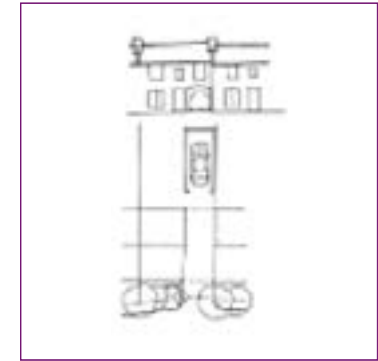
Cut out or drive through:
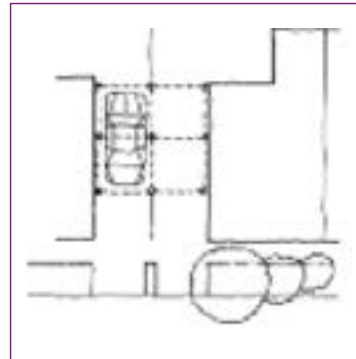
Car Port:
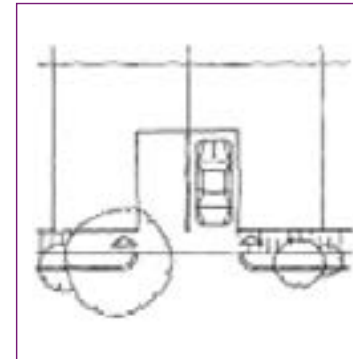
Hardstanding:
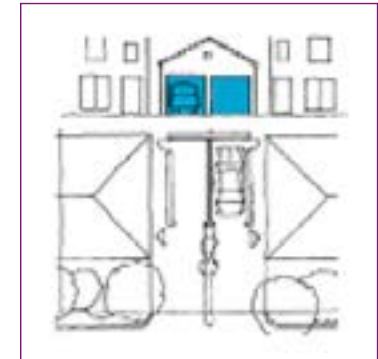
Detached Garage:
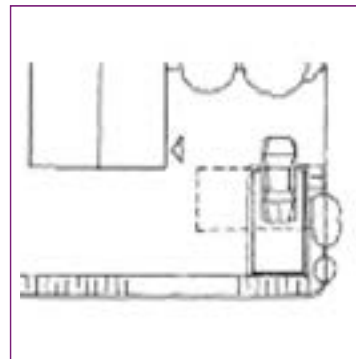
Detached Garage to Front:

Integral Garage:
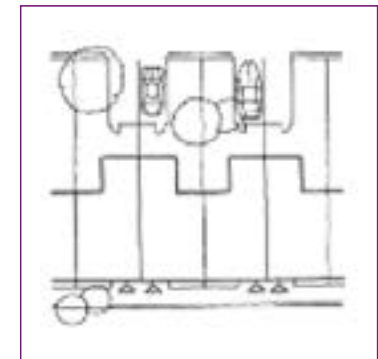
Rear Court:

Source: Space to Park website

Open space and landscaping

Parking should not be provided at the expense of delivering open space required as a setting to development. Where a development has a large area(s) of parking and insufficient open space, this may indicate over-development in which case the design should be revised.

The appearance of external car parks should be enhanced by a structure of tree and hedge planting; arranged both within the vicinity and along its boundaries. It is expected that the quantity of planting within car parks will correspond to the number of parking spaces. 50m2 planting is required for every 20 car spaces (or 250m2 of parking space), accommodating four trees. For each 100 car spaces an additional 100m2 of planting will be required.

Planting should be used to clarify pedestrian and vehicular circulation and be subdivided into compartments of 50-100 cars for ease or orientation. Tree planting in car parks should be in linear trenches, or if that is unavailable, large treepits with underground support structures to ensure robust growth of trees. Full details will be required. Design

Inclusion of robust structural landscape with trees and hedges helps to reduce the potentially negative visual impact of the car park.

should also ensure accidental damage to planting by vehicles is avoided. Perimeter planting requirements will be assessed depending on the context of the car park and its surroundings.

Parking spaces for people with disabilities

Under the Disability Discrimination Act 2005 as amended by the *Equalities Act 2010*, it is the responsibility of site occupiers to ensure that adequate provision is made for the needs of people with disabilities.

A proportion of car parking spaces must be accessible to a person with mobility impairment, including a wheelchair user (whether driver or a passenger), with the spaces designated for use as such. If it is known that there will be a disabled employee, this space should be exclusive of the disabled parking standard required. It should be noted that a larger number of spaces may be required at facilities where a higher proportion of disabled users/visitors will be expected, for example health and care facilities.

Disabled parking bays should be designed so that drivers and passengers, either of whom may be disabled, can get in and out of the car easily. Disabled parking bays should be located close to entrances and level access should be provided between them. *SCOTS* (Section 3.6.3) provides disabled parking design details that should be adhered to.

For on-street disabled parking bays, there will be a requirement to promote an associated Traffic Regulation Order (TRO), so that use of the spaces can be enforced. Developers will be expected to fund the associated costs of the TRO.

Parking spaces for cycles

The Council is committed to increasing cycling's share of travel in the city in line with the targets set-out in the *Active Travel Action Plan.* High quality cycle parking, including secure storage, is essential in making cycling as attractive as possible.

Cycle parking should be considered in-terms of two provision types – long stay and short stay.

Long-stay parking is likely to be required in residential developments, nurseries/schools, further education centres, and places of employment, as cycles are generally parked for long periods of a day. Focus should therefore be on the location, security and weather protection aspects of cycle parking design. It is recommended that associated facilities, including lockers, showers and changing rooms, are provided at land uses where long stay cyclists require them.

Short-stay parking should, as a minimum, serve all other development types and should be available for customers and other visitors to use. Short-stay parking should be convenient and readily accessible, preferably with step-free access and located close to entrances.

In many cases there will be a requirement for both long and short-stay provision to accommodate the differing needs of employees, residents and students, versus the requirements of customers or visitors to a site.

Where it is not possible to provide suitable visitor parking within the curtilage of a development or

in a suitable location in the vicinity agreed by the Council, the Council at their discretion may instead accept additional long-stay provision, or as a last resort, contributions to provide cycle parking in an appropriate location in the vicinity of the site.

Where it is not possible to provide adequate cycle parking within residential dwellings, the 'Garages and Outbuildings' section of *Council's Guidance for Householders* should be referred to as it provides links to practical cycle storage advice including on-street and garden provision.

Developers should include details of on-site cycle parking/storage on the relevant drawing(s) and early consideration of the location and type of provision is required to avoid retrofitting at the end of the design process.

To ensure that cycle parking/storage is implemented, developers are expected to specify that the cycle parking/storage provision (as agreed with the Council) shall be fully implemented prior to the operation or occupation of the approved development. This should be clearly stated on the relevant drawing(s) prior to the determination of the application. Developers will also be expected to set out how the facilities shall be retained throughout the lifetime of the development.

All cycle parking should be consistent with the design details set out in the forthcoming cycle parking factsheet (Summer 2017 – within Section 4 of this Guidance) and should also reflect section 8.3 of *Cycle by Design* which also details storage facilities.

Parking spaces for motorcycles

Parking provision for motorcycles are likely to be in demand around educational establishments, workplaces, shopping and leisure destinations, and residential areas lacking in private car parking opportunities. If motorcycle parking demand is unmet this disincentives motorcycling and will potentially result in informal motorcycle parking which proves hazardous to pedestrians by blocking footways, as well as inconveniencing cyclists should cycle parking facilities be misused.

In terms of convenience, flexibility and security, motorcyclist requirements are akin to cyclists, with *good practice* design stating that motorcycle parking provision associated with new developments should be near, clearly marked, secure and safe to use.

Sites should have anchor points, quality non-slip level surfacing, CCTV and/or natural surveillance, be located away from drain gratings and protected from the elements as well as having good lighting. For long stay parking, such as workplaces, lockers to allow storage of clothing and equipment and changing facilities should be provided. *SCOTS* Section 3.6.5 provides further design details for motorcycle parking.

For houses, provision could be in a garage or a secure rear garden with suitable exterior access. For flatted developments, covered and secure facilities should be provided.

Electric vehicle charging infrastructure

Edinburgh has already begun to make huge progress in encouraging the adoption of electric/hybrid plug-in vehicles, supporting the early market through deployment of an extensive recharging infrastructure. As plug-in vehicles make up an increasing percentage of the vehicles on our roads, their quieter operation compared to internal combustion engine-powered vehicles will mean that a major source of noise in our society will decrease (see Section 2.5 - Environmental Protection).

To ensure that the infrastructure required by the growing number of electric vehicles is available; one fully wired, connected, and ready to use electric vehicle charging point must be provided for every five spaces on proposals where ten or more car parking spaces are proposed. It should be noted that electric vehicle parking spaces will typically be counted as part of the car parking provision and not in addition to it. The delivery of charging points should not exclude parking spaces for Blue Badge holders.

Fast charging provision will be required for residential developments, whilst for all non-residential developments, rapid charging will be required (both are detailed in the following Technical guidance). These should be demonstrated in the Design and Access Statement.

For individual dwellings with a driveway or garage, passive provision of an electric vehicle charging point must be made so that a charging point can be added in the future. Passive provision requires the necessary underlying infrastructure (e.g. capacity in the connection to the local electricity distribution network and electricity distribution board, as well as cabling to parking spaces) to enable simple installation and activation of a charge point at a future date.

Typical charging equipment which tends to be in the form of charging posts or wall mounted charging units

As informed by the *UK Electric Vehicle Supply Equipment Association (UKEVSE)*, there are various names for electric vehicle charge point equipment including charging post, charging point and charging station. Charging point or charge point is sometimes used to describe a single socket rather than equipment possessing multiple sockets.

Source: Code of Practice on Electric Vehicle Charging Equipment Installation (IET Standards, 2012)

Fountain Park installation of underground car-park electric vehicle charging

Fast charging is typically charging from a charge point socket or tethered plug capable of delivering a minimum 7kW power outpu efficiency of the vehicle AC to DC converter.

Rapid charging is typically from a charge point with tethered plugs that can provide a significantly higher power output than both fast charging and can generally charge an EV to 100% in an hour or less. AC three phase rapid charging is typically at 43kW power output (at 63 Amps per phase from a three

phase AC supply) utilising a tethered Type 2 plug attached to a charge point that resembles a forecourt petrol pump. The EV charge point communicates with the vehicle via Mode 3 before initiating a charge. 43kW units will charge a 24kWh battery to 80% in about 30 minutes. The vehicle onboard AC to DC converter (separate or integral to the motor) must be capable of accepting the higher level of charge. Some vehicles are fitted with such a converter as standard, others offer it as an option and some only accept DC rapid charging.

Provision for car club vehicles

Car clubs are well established and have been in operation in Edinburgh since 1999. Car clubs are membership based and provide access to pay-as-you-go cars and vans parked in clearly marked spaces in publicly accessible locations.

An increasing number of people find that using a car club is cheaper and more convenient than owning a car, and businesses may utilise this facility to provide fleet vehicles for employees. LDP Policy Tra 2 (Private Car Parking) states that where complementary measures can be put in place to make it more convenient for people not to own a car, such as access to a car club scheme, reduced car parking provision may be justified.

Early dialogue with the Council and a car club representative should take place to establish the acceptability of the location and any practicalities in implementing a car club scheme as part of a new development. Where car club spaces are considered acceptable as part of a new development the Council will require a financial contribution towards the cost

of this provision (refer to the *Council's Guidance on Developer Contributions and Affordable Housing*).

For housing developments, prospective residents should be made aware of the car club facility as part of a welcome pack associated with a Travel Plan.

Parking Standards

Parking Standards (the Standards) are a tool for managing the levels of parking associated with new developments. The Standards set maximum limits for car parking to restrict excessive provision, while setting minimum levels for cycling, motorcycling and electric vehicles to encourage a shift from the private car to alternative, more sustainable modes of travel.

The zones and parking requirements in the Standards are aligned to public transport accessibility levels, Controlled Parking Zones, and strategic development zones. The Standards for zones with good public transport accessibility require comparatively less car parking whilst those for zones which are less accessible require more car parking. The standards also align to Planning Use Classes.

In some instances the level of parking proposed will be lower than the maximum limits set by the Standards. Potentially zero provision will be justifiable in highly accessible and dense locations such as within the city centre. In less accessible locations, zero provision or low levels of parking provision will only be considered where carriageway widths are sufficiently wide to safely accommodate on-street parking (carriageway widths will be detailed in the final version of the Guidance later in 2017; in the interim SCOTS section 3.1.3 provides design details including Housing Road Widths),

and where it has been determined that there are no existing parking pressures on surrounding streets. The quantity of parking spaces proposed should not be reduced to a level which would have a detrimental impact on the surrounding area.

Applicants will be required to justify parking provision for new developments as part of their submissions for planning permission. The Standards for different types of development are shown in the tables within this section. If there is no standard provided, Transport Assessments or supporting transport information covering the likely impact on traffic congestion, the availability and opportunities for public transport, and the availability of on and off street parking, should be used to inform parking provisions for larger developments. Transport Assessments should be in line with but not limited to the principles set out in section 2 of Transport Scotland's Transport Assessment Guidance.

Technical guidance

Public transport accessibility levels are measured by taking account of the distance from any point to the nearest public transport stop, and service frequency at that stop. The higher the score, the greater the level of accessibility. The parking zones map should be used to inform the provision to be applied at a specific development, in a given area of the city. The map can also help when considering opportunities for higher density developments – note a link to updated GIS mapping will be provided in the final version

In calculating the level of car parking required, the Standards generally relate to gross floor areas unless otherwise stated (i.e spaces per habitable rooms in the case of residential developments). When the measurement relates to staff numbers, this should be taken as a full time equivalent member of staff.

Zone 1 — City Centre

Zone 2 — Areas with good/medium PT accessibility
Controlled parking zones
Strategic development zones
Edinburgh Waterfront
Edinburgh Park
Special Economic Areas

Note: Zone 3 standards apply to all other locations within the Council boundary
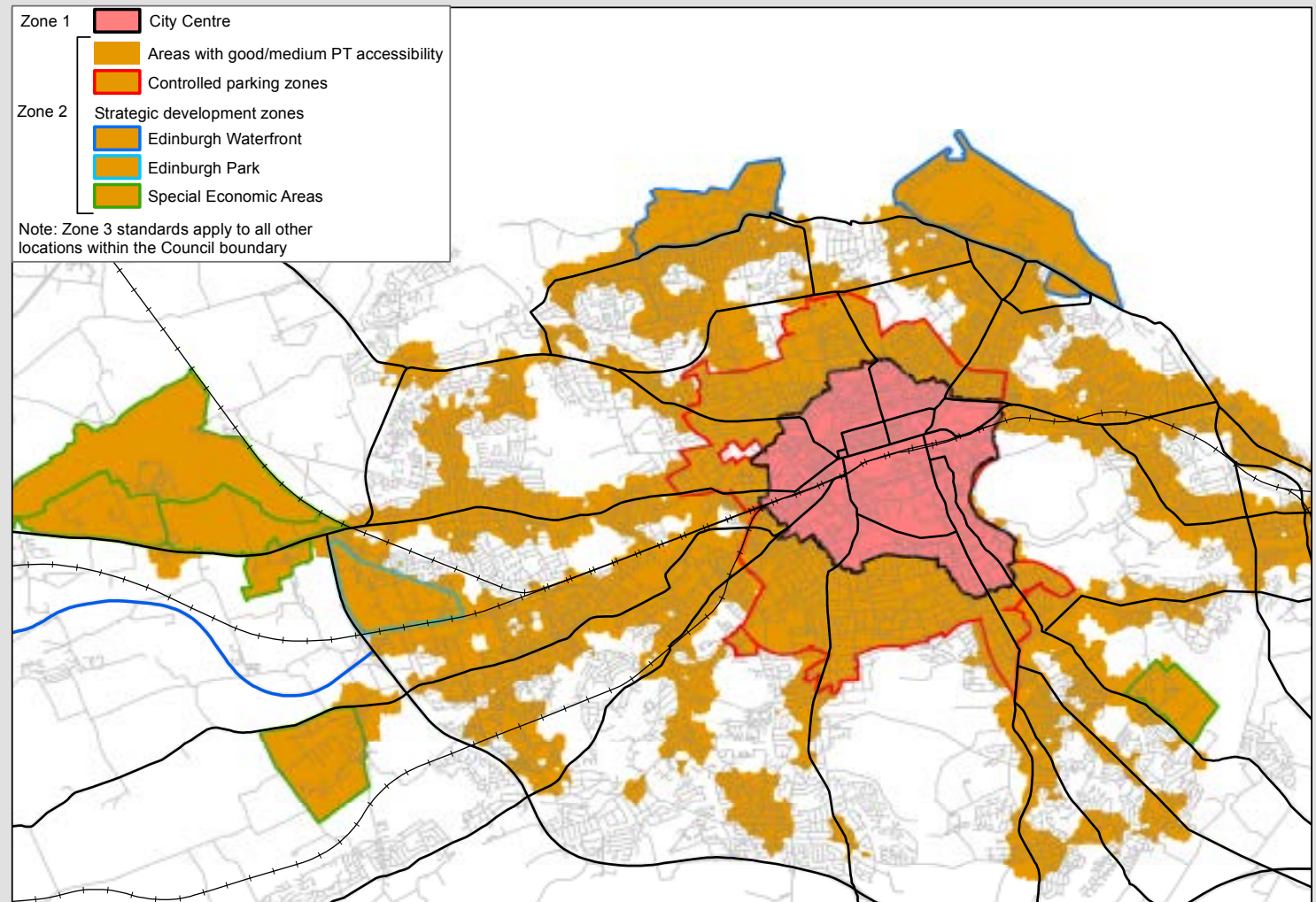
© Crown Copyright and database right 2016. All rights reserved. Ordnance Survey Licence number 100023420.

		Car Parking Maximum							Cycle Minimum		Motorcycle Minimum	
	New Zone Reference	Zone 1		Zone 2				Zone 3		Employees	Customers	Employees	Customers
	(Comprising Existing Zone)	1	2	3a	3c	5b	5c	4	6				

Class 1 Shops / Class 2 Financial & Prof'snal Services — *1 space per Xm² GFA*

	Zone 1	Zone 2	Zone 3	Employees	Customers	Employees	Customers
Retail Warehouse (public use)	500	50	30	500	1000	4000	2000
Retail Warehouse (trade only)	3000	360	180	1000	2000	8000	4000
Shops < 500m2	100	50	25	250	500	2000	1000
Shops > 500m2	70	35	20				
Class 2: Financial/Pr'fsnal S'rvcs	100	50	25				
Disabled parking	One space for each employee who is a disabled motorist, plus 3 bays or 6% of total capacity whichever is greater for visitors.						
Electric vehicles	For schemes where 10+ car parking spaces are proposed, one electric vehicle charging point should be provided for every five spaces.						

Class 3 Food & Drink (incl. pubs & hot food takeaways: *suis generis*)

	Zone 1	Zone 2	Zone 3	Cycle	Motorcycle
1 space per Xm² of GFA	20	14	11	75	1 per 20 car spaces
Disabled parking	One space for each employee who is a disabled motorist, plus 3 bays or 6% of total capacity whichever is greater				
Electric vehicles	For schemes where 10+ car parking spaces are proposed, one electric vehicle charging point should be provided for every five spaces.				

Class 4 Business / Class 5 General Industry / Class 6 Storage & Distribution — *1 space per Xm² GFA*

	Zone 1	Zone 2	Zone 3	Employees	Customers	Employees	Customers
				Cycle		Motorcycle	
Class 4: Business	500	63	35	150	1000	1000	4000
Class 5: General Industry	1000	125	70	300	2000	2000	8000
Class 6: Storage/Distribution	3000	385	210	900	6000	6000	16000
Disabled parking	One space for each employee who is a disabled motorist, plus 2 bays or 5% of total capacity whichever is greater						
Electric vehicles	For schemes where 10+ car parking spaces are proposed, one electric vehicle charging point should be provided for every five spaces.						

Class 7 Hotels

	Zone 1	Zone 2	Zone 3	Cycle	Motorcycle
1 space *per X bedrooms*	5	2	1	10	1+1 per 20 car spaces
Coach parking	1 coach space per 50 rooms (need not be on-site)				
Disabled parking	One space for each employee who is a disabled motorist, plus 3 bays or 6% of total capacity whichever is greater				
Electric vehicles	For schemes where 10+ car parking spaces are proposed, one electric vehicle charging point should be provided for every five spaces.				

Class 8 Residential Institutions — *1 space per*

	Zone 1	Zone 2	Zone 3	Cycle	Motorcycle
Residential Homes: *X beds*	10	5	4	15	25
Disabled parking	One space for each employee who is a disabled motorist, plus 10% of total capacity				
Electric vehicles	For schemes where 10+ car parking spaces are proposed, one electric vehicle charging point should be provided for every five spaces.				

Class 9 Housing (all forms of housing, plus flats) (includes all forms of housing & also flats: *suis generis*)

	Zone 1 and 2	Zone 3	Cycle	Motorcycle
Studio/ 1 room	1		1	1 per 25 units
2 rooms		1	2	
3 rooms		1.5		
4 or more rooms		2	3	
Disabled parking	From a threshold of 10 dwellings (where parking is communal) – 1 bay or 5% of total capacity whichever is greater			
Electric vehicles	For schemes where 10+ car parking spaces are proposed, one electric vehicle charging point should be provided for every five spaces. For individual dwellings with a driveway or garage, passive provision of an electric vehicle charging point should be made so that a charging point can be added in the future. This should take the form of a 7 kw socket within a garage for example.			

Class 10 Non-Residential Institutions — *1 space per X*

	Zone 1	Zone 2	Zone 3	Cycle	Motorcycle
Schools/nurseries: *staff*	15	3	2	2 (+1 per 7 staff + 1 per 10 pupils)	1(+ 1 per 25 staff)
Libraries: *PFA*	150	68	50	100 m² (+1 per 7 staff)	1(+ 1 per 25 staff)
Church/comm. Hall: *GFA*	120	50	40	67 m2	1
Disabled parking	One space for each employee who is a disabled motorist, plus 3 bays or 6% of total capacity whichever is greater				
Electric vehicles	For schemes where 10+ car parking spaces are proposed, one electric vehicle charging point should be provided for every five spaces.				

Class 11 Assembly & Leisure

	Zone 1	Zone 2	Zone 3	Cycle	Motorcycle
Cinemas/theatres: seats	24	10	6	50	1+1 per 20 car spaces
Golf courses	N/A	2 per hole	2 per hole	2	1+1 per 20 car spaces
Swimming: 1 per *pool area m²*	60	25	15	10	1+1 per 20 car spaces
Disabled parking	One space for each employee who is a disabled motorist, plus 3 bays or 6% of total capacity whichever is greater				
Electric vehicles	For schemes where 10+ car parking spaces are proposed, one electric vehicle charging point should be provided for every five spaces.				

Sui Generis

	Zone 1	Zone 2	Zone 3	Cycle	Motorcycle
Motor Trade — Display area: *Xm² GFA pr.space*	80	56	50	1 per 7 staff	1 (+ 1 per 25 staff)
Spares: *Xm² GFA per space*	40	28	25		
Service/repairs: *bays per space*	2	2	2		
Staff: *per space*	15	4	1.5		
Student Flats — *1 space per X beds*	20	6	5	1	25
Disabled parking	One space for each employee or student who is a disabled motorist, plus 3 bays or 6% of total capacity whichever is greater				

2.5   Environmental Protection

Development should actively help enhance the environment, manage exposure to pollution and reduce overall emis-sions.

Adopt good design principles that reduce emissions (noise, air and light pollution) and contribute to better pollution management.

Balconies should be avoided in locations which experience poor air quality, and where there is excessive noise.

Policy References
- **Edinburgh Local Development Plan - Env22**
- **Local Transport Strategy - Env2, Env3**

Air Quality

The location and design of a development has a direct influence on exposure to elevated air pollution levels. This is particularly relevant where developments include sensitive uses such as residential uses, hospitals, schools, open spaces and playgrounds. Developers should maximise the contribution the building's design, layout and orientation make to avoiding the increased exposure to poor air quality and therefore these elements need to be considered at the initial design stage.

Good practice principles in the design stage should consider the following;

- New developments should not contravene the Council's Air Quality Action Plan, or render any of the measures unworkable;
- Wherever possible, new developments should not create a new "street canyon" or building layouts that inhibit effective dispersion of pollutants;
- Delivering sustainable development should be the key theme for the assessment of any application;
- New development should be designed to minimise public exposure to pollution sources, e.g. by locating habitable rooms away from busy roads, or directing combustion exhaust through well-sited vents or chimney stacks;

Source: Draft Delivering Cleaner Air for Scotland, Development Planning & Development Management Guidance (Environmental Protection Scotland & Royal Town Planning Institute Scotland, 2017)

There are other relevant national guidance and policy which should be adhered to including Planning Advice Note 51 (Revised 2006): Planning, Environmental Protection and Regulation and Cleaner Air for Scotland: The Road to a Healthier Future, November 2015 .

Air flow pattern in a street canyon –Where vehicular traffic is expected street canyons should be avoided

Source: *http://www.intechopen.com/books/air-quality-models-and-applications/urban-air-pollution-modeling*

Developers should also consider the location of outside space including gardens, balconies and roof terraces proposed in areas of particular poor air quality. These should be screened where practical with exposure minimised through appropriate positioning and design. Buffer zones may be a practical solution.

Protecting internal air quality

To protect internal air quality, developers should specify environmentally sensitive (non-toxic) building materials and the use of materials or products that produce VOC (volatile organic compounds) and formaldehyde which can affect human health should be avoided. It is also important to maintain combustion plant and equipment such as boilers and ensure they are operating at their optimum efficiency

to minimise harmful emissions.

Noise

Excessive road traffic noise can impact greatly on daily life. In addition to reducing general quality of life, excessive noise can damage health and harm the environment. But it can also have an economic impact, for example by potentially affecting tourism, learning and workplace productivity.

The Council has 21 Noise Management Areas and 14 Quiet Areas across the city to deal with environmental noise. Developers should implement measures in their schemes to protect occupiers and the general environment from noise, and more specifically to protect and enhance designated quiet areas.

Where a proposed development will emit noise, developers should incorporate the most appropriate mitigation measures into the design of new schemes to minimise future noise complaints. Reference should be made to Planning Advice Note 1/2011 Planning and Noise.

The density and mix of uses within Edinburgh contribute to the vibrancy of the Place. However, noise associated with this mixture of landuses can be a nuisance to sensitive occupiers. New development containing sensitive uses that are to be located near a noise generating use, such as pubs and servicing areas, should be designed to limit the exposure of the new use to the existing noise source.

Where a proposed development is likely to be exposed to noise, developers should implement the most appropriate measures to ensure amenity is protected. This could include locating noise sensitive areas/rooms away from the parts of

the site most exposed to noises or designing the building so its shape and orientation reflect noise and protect the most sensitive uses.

Reference should be made to industry technical guidance and British Standards when addressing relevant issues, for example *BS4142 – Method for Rating Industrial Noise Affecting Mixed Residential & Industrial Areas and BS8233:2014 - Guidance on sound insulation and noise reduction for buildings*

Noise modelling output at Burdiehouse showing reduced noise levels (lighter colouring) at residential properties with noise barriers installed
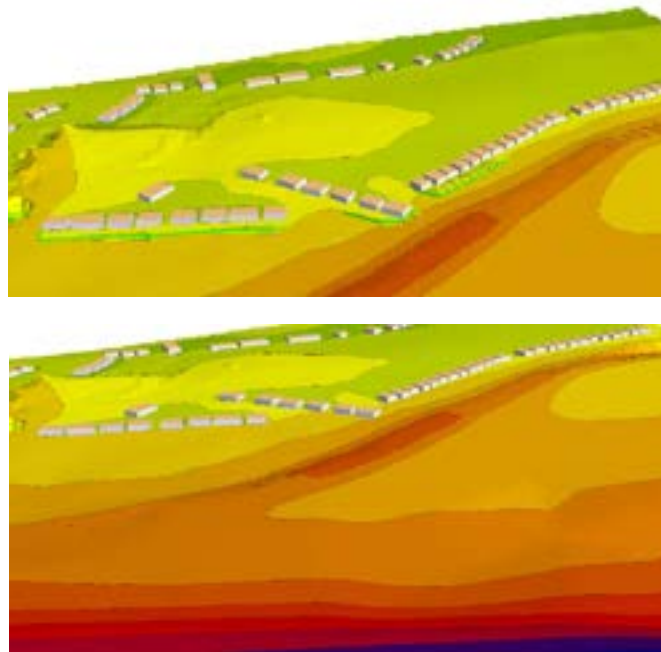
Without noise barrier
With noise barrier (bright green lines)
Source; Environmental Consultant Airshed
Planning application (Ref. No 16/06036/PPP) Residential

properties proposed Burdiehouse Road, Edinburgh

Lighting

Further guidance is contained within Guidance Note; *Controlling Light Pollution and Reducing Lighting Energy Consumption, PAN 51: Planning, Environmental Protection and Regulation and PAN 77: Designing Safer Places. Also the Council's Lighting Strategy should be adhered to.*

Contaminated Land

Early identification of land contamination issues enable the consideration of mitigation measures, phasing and the potential to implement less expensive, and more sustainable, in -situ clean up technologies. An assessment of the risks associated with developing contaminated or potentially contaminated land is essential to inform decisions about the appropriate level of treatment, clean up or sustainable remediation that may be required. The Council hold details on potentially contaminated land based on historic land uses. Where a site is affected by contamination it is the developer's or landowner's responsibility that the site is developed safely.

2.6 Minimise energy use

Minimise energy needs through a combination of energy efficiency and the incorporation of low or zero carbon equipment.

Ensure low and zero carbon equipment is sensitively integrated into the design.

To support appropriate energy generation to help meet national targets.

Policy References

- *Edinburgh Local Development Plan – Des 6, RS 1*

Energy Reduction in New Buildings

All new developments will be expected to meet the carbon dioxide emissions reduction targets set out within Section 6 – Energy and Section 7 – Sustainability of the current Scottish Building Regulations through a combination of energy efficiency and low or zero carbon technology.

For all applications, the sustainability statement form (S1) should be completed and submitted with the application.

Heat Mapping

Supplementary Guidance will be prepared regarding heat mapping and consideration of the potential to establish district heating and/or cooling networks and associated opportunities for heat storage and energy centres - as well as regarding how implementation of such initiatives could best be supported.

Minimising energy use through careful design—Fala Pl
This housing development achieved a BREEAM excellent award in recognition of it high standards of sustainability. It achieves this through a range of measures including insulation, air tightness and heat recovery.

Integrating micro renewables—Kings Buildings
Solar Panels are integrated into the design of the elevation.

2.7   Materials and detailing

Materials and detailing

Harmonise materials on new development with the materials used on surrounding buildings.

Use sandstone where sandstone is the commonly used building material.

Where alternative materials are used, these should either harmonise or provide a striking contrast.

Keep the number of materials on new development to a minimum.

Detail buildings to ensure they have a good visual appearance that lasts over time.

Use greenroofs where appropriate and creative detailing to help manage surface waterProtect and enhance biodiversity by incorporating habitat structures into the detailing of buildings.

- *Policy References*
- *Edinburgh City Local Plan - Des 3 a)*
- *Rural West Edinburgh Local Plan - E 41, E42*
- *Edinburgh Local Development Plan - Des 4 d)*

Materials are key to whether development achieves sufficient design quality and whether it is appropriate for its context.

Edinburgh's distinctive appearance and character is partly a result of the limited palette of quality traditional materials that are used in its buildings. Much of the city's built heritage is characterised by sandstone buildings and slate roofs.

Some parts of the city, like the Old Town, use a wider range of materials in addition to these. In these areas there may be more scope to use alternative high quality materials than elsewhere.

The reasoning behind the selection of materials should be set out in a design statement.

The long term visual success of building materials is dependent on how they are detailed and how they weather. Some materials are more likely to suffer from adverse weathering such as staining. Where the Council thinks this might be the case, detailed drawings may be required to fully assess the proposals. The durability of particular materials can be assessed by examaning existing examples.

Construction techniques are available to incorporate habitat structures into the design of new buildings in order to increase biodiversity, for example bat and swift boxes. Further information can be found in 'Biodiversity for Low and Zero Carbon Buildings: A technical guide for new build If suitable habitats exist.

The following pages set out in more detail the Council's technical expectations for building materials.

The choice of building materials may be a condition of planning permission.

On larger or more prominent schemes, sample panels may need to be constructed for approval. This is to demonstrate how the proposed building materials fit together. This should include the hard landscape.

Section 3.8. Hard landscape sets out the Council's expectations for materials in hard landscaped areas.

High quality detailing and design—Circus Lane
Considerable attention to detail has helped create a very refined design. This building sets the standard for mews conversions within the city.

Technical guidance

Stone

Edinburgh's distinctive sandstone forms the principal element in the city's traditional character and DNA.

Much of Edinburgh's sandstone was hewn from local quarries that are now closed; most famously Craigleith but also at other quarries such as Hailes, Humbie, Ravelston, Binnie and Granton.

It is expected that natural sandstone will be used as the main external building material in development where sandstone is the main material on neighbouring or nearby buildings or in the surrounding area. This is particularly important on facades that can be seen from the street.

This principle applies in conservation areas but also to other areas of the city with stone buildings including prominent areas such as arterial routes.

Sandstone in a villa area—Newbattle Terrace
Sandstone will be sought for new buildings in villa areas where the surrounding buildings are built of sandstone.

Scottish sandstone is still available from a few quarries, such as Clashach in Moray and Cullaloe in Fife, an excellent match for Craigleith stone. Pennine Sandstones – Crosland Hill can also provide suitable matches.

Where sandstone would be sought—Angle Park Ter.
If the white painted building were to be demolished, the Council would seek a sandstone for its replacement given the site's context of having sandstone buildings either side

Modern use of stone in an historic context
At the Museum of Scotland (above) rigorous and sculptural use of sandstone cladding provides the building with a striking contemporary aesthetic that responds positively to the surrounding historic context. Care needs to be taken with any proposal like this, that the detailing mitigates adverse weathering and staining.

Red sandstone, historically from the West of Scotland, contributes towards the city's DNA. It has been used effectively to help integrate modern buildings into historic areas where red sandstone is already used.

Granite is considered acceptable, where a contrast with surrounding buildings is appropriate (for example to emphasise important public buildings) and as a secondary element (for example on plinths where its robustness and good weathering characteristics help maintain the appearance of buildings)

The size of stone used should match that of nearby buildings.

If the white painted building were to be demolished, the Council would seek a sandstone for its replacement given the site's context of having sandstone buildings either side

Informatics Forum—Charles Street
Sandstone is built into vertically proportioned panels which are used to order the design of the elevations.

Cast stone and concrete

Cast stone and concrete are acceptable where their uniform appearance is appropriate and where measures have been taken to avoid adverse weathering such as the build up of dirt, streaking and staining.

It is important that there is a strong underlying reason for using cast stone or concrete rather than stone. One reason is that the design may be based around an idea of having very large or unusual shaped panels that would be very difficult to construct in single blocks of stone.

Measures to avoid adverse weathering include:

Architectural details which control the water run-off from a facade in ways which enhance the weathering characteristics;

The specification of the surface finish;

The inclusion of sealants to the surface.

Like concrete, cast stone is manufactured with aggregate and a cementitious binder. Its appearance is intended to be similar to natural stone. Unlike naturally formed stone, which tends to be visually rich, blocks of cast stone appear alike. This can look dull in comparison with natural stone. This effect is emphasised over time when typically cast stone will weather in a more uniform way than similarly detailed natural stone.

Further information about pre-cast concrete cladding can be found at *www.britishprecast.org.*

A mixture of cast stone & natural stone—Morrison St.
Cast stone was used at high level on the drum shaped part of the building while natural stone was used at low level on the corners.

In-Situ Concrete—Museum of Scotland
This concrete is used to sculptural effect on the museum building

Concrete used sculpturally—Horse Wynd
The sculptural potential of concrete is exploited in the Parliament wall with the patterned surface and integration of lights

Textures created with concrete—Princes Street
Concrete panels with textured surface treatment are used on this recent building on Princes Street.

Cladding

High quality metal cladding may be acceptable in some historic environments where there is already a range of building materials. It may also be acceptable where overt contrast is sought and considered appropriate. Appropriateness depends on the quality of the finish and detailing as well as the character of the surrounding environment—so while high quality metal cladding might be acceptable in some locations in the Old Town, it is less likely to be acceptable amongst the palatial frontages of the New Town. The surface finish of the cladding should be raw or treated metal which does not have a coating. The fixings of any cladding should be hidden.

There are a range of cladding materials and ways in which these can be constructed. Metal cladding can provide buildings with a striking contemporary appearance however if used inappropriately can have a negative visual effect.

Resin and cement based panels can be used on less sensitive sites and where their use is limited or will have a minimal visual impact. Because of their poorer visual characteristics in comparison with metal claddings like anodised aluminium, stainless steel and zinc—these should be avoided in conservation areas including those with villas.

Where resin based panels are used as cladding, synthetic prints which aim to emulate wood should be avoided. These are not considered to have as positive a visual effect as natural timber.

Using zinc to provide striking contrast—Infirmary St.
The zinc cladding combined with the modern building form provides a positive contemporary contrast to the historic former Infirmary Street Baths building.

Aluminium—Simpson Loan
Multi-toned anodised aluminium cladding provides a striking and positive contrast to the historic buildings making the distinction between new and old very clear.

Too many materials?
The cladding, blockwork and render and their detailing used at this development would not now meet the Council's expectations for appropriate quality.

High quality detailing—Sighthill Court
Construction of a sample panel and approval were required by condition in order to ensure the design intent of high quality finish was executed.

Timber

Timber should be appropriately detailed to ensure that it retains a good visual appearance over time.

For local developments in sensitive locations and all major developments durable species should be used.

Specification and architectural details at a 1:5 or 1:10 scale of the proposed timber cladding may be sought. These should set out the thickness of the timber (which should not be less than 19mm finished size) and the types of fixings, which should be specified to ensure no staining. The details should show how water will be shed clear of the ends of timber to ensure moisture absorption is prevented.

Sensitive sites include conservation areas and arterial routes into the city.

Durable species include European Oak, Western Red Cedar and Sweet Chestnut. Moderately durable species can be used on smaller proposals which are not in sensitive sites. Moderately durable species include Larch, Douglas Fir and European redwood.

Tropical hardwoods should be avoided unless it can be clearly demonstrated that these are sourced sustainably. More information about timber can be found at *www.trada.co.uk.*

Careful detailing—Arboretum Place
The timber cladding overhangs cladding on lower levels of the building. This helps shed water from its surface, protect it from adverse weathering.

Sculptural effect—Upton
The timber cladding is used to give these houses a striking appearance.
Image courtesy of Steve Tiesdell Legacy Collection

Durable species—Informatics Forum
The timber cladding is Oak. This is a durable species that is appropriate for use in prominent or sensitive areas.

Brick

Brick generally has good weathering characteristics, and can be specified so that its colour and texture harmonises with surrounding buildings. In sites outwith conservation areas and where the design proposed is of a high quality, brick can be used positively.

Where brick is used in an existing context of stone buildings it is expected that the brick and mortar will be specified to harmonise with the range and tone of colours in the surrounding buildings. Note that generally, the expectation is for the use of natural stone where natural stone is the prevalent building material.

Brick can also be used to provide contrast. Care needs to be taken with this approach however that the architectural effect is not at the expense of the quality of the design of the street as a whole.

The proportions of windows have a major role giving brick buildings an Edinburgh character. Traditional tenements have large vertically proportioned windows. Using windows of the same size and alignment can help integrate brick buildings into their surroundings.

Although not a prevalent building material, brick has been used throughout Edinburgh to positive effect. Brick is commonly used in industrial structures such as maltings and as a secondary element, for example on side and rear elevations or chimney stacks. Many traditional Edinburgh examples used locally produced Portobello brick which was produced into the early 20th Century.

Swift bricks provide an opportunity for ecological enhancements. Further information can be found in 'Biodiversity for Low and Zero Carbon Buildings: A technical guide for new build.'

Swift Bricks—Beaverbank Place
On this development in North Edinburgh these are designed into the external wall. These should be shown on planning drawings.

Subtle variation—Telford March
Two different mixes of brick have been used to a provide variation in colour within the elevations.

Care need to be taken with specification and during construction to avoid efflorescence. This is the build up of salts present in the wall construction appearing on the surface of the wall as the mortar cures.

Modern use of brick in an historic environment—McEwan Square / Fountainbridge
Brick has been used to integrate this development into its historic surroundings. In the image above right, it can be seen that the development is overtly contemporary in its appearance. As can be seen in the image above left, the colour of bricks were chosen to harmonise with the stone of the adjacent tenements. Combined with the vertical emphasis to the window and the building's scale, the material choice has helped ensure this development adds to Edinburgh's sense of place. This development sets the standard for the use of brick within Edinburgh.

Render

When appropriately specified and in appropriate locations, render can be used as an external building material which can contribute towards Edinburgh's sense of place.

Appropriate specifications include:

- Ensuring it does not discolour or fade over time and it does not suffer from algae growth or lime bloom;

- Consideration of the location of all expansion and movement joints, slim vents, boiler flues, extract ducts and rain water goods etc to ensure these do not have an adverse visual impact;

Consideration of architectural detailing to shed water from the surface of the render. Note that details may be sought;

There is a strong tradition of rendered buildings in parts of the city area which predate the building of the New Town, for example, the Old Town and the centre of Queensferry. This use has continued and render can be used to provide contrast in locations like these on contemporary buildings. Where render would make a building stand out in longer views, this should generally be avoided.

Render also has a contemporary appearance that is appropriate in areas where the overall character is modern.

In some areas - because of levels of vehicular traffic and microclimate - pronounced weathering is evident, which on rendered buildings can look adverse. Such an area is the Cowgate, where the canyon-like form of the street contains pollution which stains external wall surfaces. Render tends to highlight these effects rather than suppress them. For this reason alternative materials with better weathering characteristics and that are contextually appropriate may be a better choice in streets or areas like this.

Traditional lime renders and lime harling can be used in appropriate locations.

Integrating the new with the old—High Street
The controlled use of render, combined with sandstone, create a positive modern addition to the Old Town

Positive contrast—Old Fishmarket Close, off High St
The use of render and timber contrast positively with surrounding stone buildings.

Impacting adversely on views—Calton Hill
The rendered buildings stand out against the surrounding stone and slate buildings. Alternative materials may have allowed the buildings to integrate better into the view.

Technical guidance

Hard roofing materials

Slate, pantiles and metals such as lead, stainless steel, zinc and copper contribute to Edinburgh's roofscape. All these materials are generally considered appropriate. Synthetic versions of these materials should be avoided in conservation areas.

The use of synthetic materials will be considered on a case by case basis in other areas of the city and their appropriateness will be assessed against:

- The extent of use;
- Their prominence on the building;
- The prominence of the building on the setting of the city and setting of the street.

Edinburgh has a strong tradition of using slate (such as Ballachulish) as a roofing material. The palette of darker greys of slate helps to draw out the warmth of sandstone.

Metal roofing in an historic context—Canongate
Stainless Steel roofing has been used on the Scottish Parliament

Synthetic materials have been found to inadequately replicate the characteristics of materials they seek to emulate and as a consequence have a poorer appearance.

The vulnerability of metal roofing to theft should be considered at the design stage.

Traditional roofing materials (right)
Slate, Lead and zinc are traditional roofing materials used in Edinburgh—seen here from the Museum of Scotland's roof

Green roofs

Green roofs are flat or sloping roofs with some form of vegetation placed on them. They are intensively or extensively managed; the former with a deep soil profile supporting shrubs, trees and grass, and the latter with a shallow soil profile growing drought tolerant self seeding vegetation. Both are encouraged in appropriate locations, particularly adjacent to green/blue corridors and will be encouraged in locations adjacent (within 15m) of river corridors. They have numerous benefits that include prolonging the life of the roof, attenuating water, reducing sound transmission, improving thermal efficiency, enhancement of air quality, and habitat creation. Green roofs should not be regarded as an alternative to open space provision on the ground. Care should be taken to ensure they do not have adverse visual effects, for example by disrupting a visually cohesive existing roofscape. Green walls can also be used in certain circumstances and provide many of the benefits of green roofs.

Extensively green roof—Botanic Gardens
The planting on this green roof helps integrate the building into its surroundings

Aircraft Safety

The impacts of requirements for aircraft safety—for example the need to deter birds from roofs—should be considered at the outset to ensure any resulting features are sensitively incorporated.

Other Materials

To help the sustainability of development, uPVC should not be used as a material for windows on major planning applications. Thermally broken aluminium, aluminium / timber composites, and timber windows may provide suitable alternatives. For listed buildings refer to the Historic Environment Guidance.

Timber should be from a sustainable source. Reuse and recycling of materials are encouraged. When making an application, the *Sustainability Statement Form (S1)* should be completed.

Opaque panels in glazing systems or windows should be avoided.

Consideration should be given to 'bat friendly' roof membranes to support bat populations.

Frameless glazing—Festival Theatre, Nicolson Street
The refined detailing of the frameless glazing helps create a striking modern addition to the street

Curtain Walling—Beccleuch Place
The potential offered by glazing systems with variations in the window widths, patterning of the glass and mullion depths is fully taken advantage of here.

Frameless glazing—George Square Lane
Glazing is used to create the effect of a floating roof on this religious building

2.8   Adaptability

Ensure buildings are adaptable to the future needs of different occupiers.

Policy References
- *Edinburgh City Local Plan - Des 3 d)*
- *Edinburgh Local Development Plan - Des 5 b)*

Adaptability

Many buildings are designed with specific uses in mind. If the design becomes too specific this can mean it is very difficult to make changes to the building that can give it a new use at a later date. Examples of making buildings more adaptable include:

- Creating level access so that buildings can be used by all;

- Ensuring there is sufficient space for changing needs;

- Making floor to ceiling heights high enough to accommodate a range of different uses;

- Providing space for extensions;

- Designing roof spaces so that they can easily be turned into floor spaces.

Adaptable laboratory building—Old Dalkeith Road
This building was designed to allow different types and sizes of laboratory space and all their associated services to be fitted out and changed over time.

Adaptability in suburbia
The houses are designed with sufficient space that extensions can be added while retaining relatively large gardens. In addition, attics have been converted.

2.9   Mix of uses

If appropriate, create a mix of uses.

Mix of uses

Having a mix of uses in a development can help both its sustainability and the sustainability of an area as a whole. If the services that people use are located in close proximity to where they are, there will be less reliance on transport as people will be more likely to walk.

Making places vibrant and interesting through providing a mix of uses, will help them become resilient to changes in the economy and make them more attractive to new development.

Mix of uses—Middle Meadow Walk
This new development incorporates a mix of uses including housing, offices, gym, shops and cafes.

Mix of uses—Newhall, England
This office integrates into this suburban development
Image courtesy of Steve Tiesdell Legacy Collection

2.10 Daylight, sunlight, privacy and outlook

Design the building form and windows of new development to ensure that the amenity of neighbouring developments is not adversely affected and that future occupiers have reasonable levels of amenity in relation to:

- **daylight;**
- **sunlight; and,**
- **privacy and immediate outlook.**

Policy References

- *Edinburgh City Local Plan - Des 3 c)*
- *Rural West Edinburgh Local Plan - E41, E42, H5, H6*
- *Edinburgh Local Development Plan - Des 5 x*

Daylight and sunlight are not only important to people's health and well being, but can also reduce energy use.

It is important that buildings are spaced far enough apart that reasonable levels of privacy, outlook, daylight and sunlight can be achieved. However, care should be taken that buildings do not become so far apart that the townscape becomes uninteresting. Therefore, achieving reasonable amenity needs to be balanced against achieving good townscape.

Trees have an effect on daylight and sunlight. This can be positive - for example deciduous trees provide shading from the sun in summertime but let sunlight into buildings in winter. However, if buildings are too close to trees the daylight is adversely affected.

For there to be reasonable daylight, windows need to be big enough and interiors have to be designed to ensure daylight can get deep enough within them. Reasonable levels of sunlight to buildings and spaces will be achieved if sufficient account is taken of orientation.

Edinburgh has a wealth of successful areas where good levels of daylighting, sunlight, privacy and outlook have been achieved. These can be used as a guide to the layout and form of development. When comparing proposed development against existing situations, scale drawings showing layout including external spaces, building height and elevations should be provided along with the relevant calculations and methodology.   It is the responsibility of the agent/applicant to ensure that this information is provided and that all affected properties are clearly shown and tested.

This section applies to all new development where these aspects of amenity are particularly valued including housing, schools, nurseries, hospitals and clinics.

Marchmont—Arden Street
These tenements manage to provide good levels of daylight to all the properties. This is a result of the high floor to ceiling heights and relatively large and tall windows which allow daylight to go deep into the rooms.

Gables—Haymarket Terrace
The upper floors of the modern office are set back from windows on the tenement's gable. This allows some daylight to reach the windows, but importantly maintains the street frontage.

Protecting daylight to existing buildings

New buildings should be spaced out so that reasonable levels of daylight to existing buildings are maintained. The layout of buildings in an area will be used by the Council to assess whether the proposed spacing is reasonable. When there is concern about potential levels of daylight the Council will refer to the *BRE Guide, Site Layout Planning for Daylight and Sunlight – A Guide to good practice*. This shows how to measure daylight and sunlight. A copy is available to view at the Council's Planning Helpdesk.

The amount of daylight reaching an external wall is measured by the Vertical Sky Component (VSC). The Council seeks this to be more than 27% or 0.8 of its former value. If this is not the case, changes to the building design, including a reduction in building height may be sought. 27% VSC is achieved were new development does not rise above a 25° line drawn in section from the horizontal at the mid point of the existing window to be tested. It can be measured using more complex methods that are set out in the BRE guide.

If the townscape surrounding a development site would, in itself, not meet these requirements, the Council may require information on the likely amount of daylight in affected rooms in existing buildings. This will be assessed using the Average Daylight Factor (ADF) methodology. It is expected the following criteria will be used for calculations:

|	
Minimum ADF for bedrooms	1%
Minimum ADF for living rooms	1.5%
Minimum ADF for kitchens	2%
Transmittance of double glazing	0.65
Correction factor for dirt, curtains etc.	0.9
Net to gross area of window	0.7
Average reflectance of room surfaces	0.5

Daylight to bathrooms, stores and hallways will not be protected.

Daylight to gables and side windows is generally not protected.
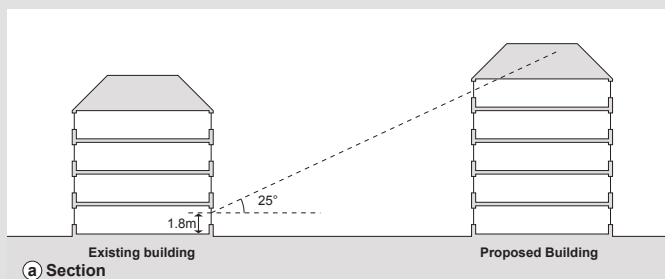
25 degree method example 1
This situation may fail to provide reasonable levels of daylight to the existing building
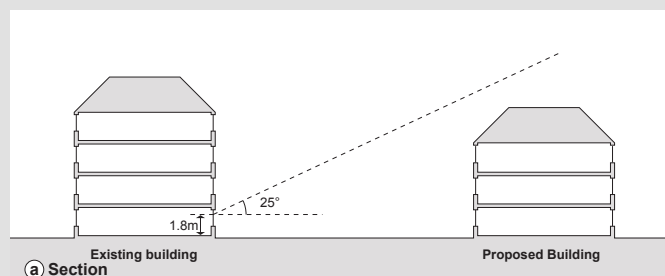
25 degree method example 2
This situation would provide reasonable levels of daylight to the existing building

Providing daylight to new buildings

Another measure of daylight is known as the position of the "no sky line". The BRE guide explains this in detail. If drawings can be provided that show that direct skylight will penetrate at least half way into rooms within new development at the height of the working plane (0.85m above floor) and where windows make up more than 25% of the external wall area, this will ensure that adequate daylight is provided to new development.

Providing adequate daylight to new development does not guarantee that adequate daylight will be maintained to existing development. This could be the case in instances where the existing building is lower.

No sky line method
The new development to the right of the image is positioned so that the sky can be seen within the front half of the room on the ground floor. This has been achieved by providing the ground level with a higher floor to ceiling height than the floors above.

Sunlight to existing gardens and spaces

New buildings should be laid out so that reasonable levels of sunlight are maintained to existing gardens and spaces.
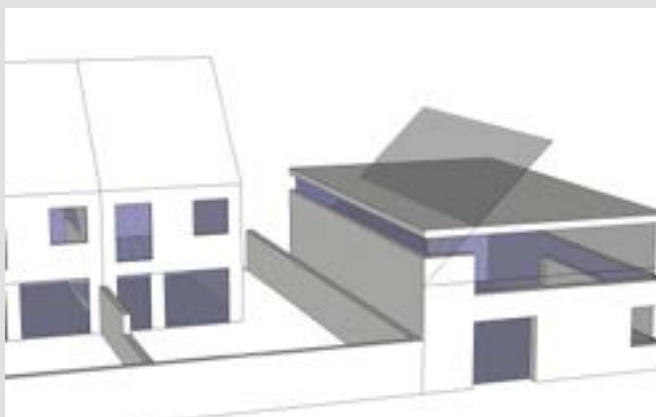
Whether sunlight to neighbouring gardens will be affected can be tested by checking whether a building rises above a 45° line drawn in section from the site boundary. If a development rises above this line, the sunlight of the neighbouring garden might be affected. To take account of orientation, draw the 45° line at the following distances above the ground level:

Orientation of boundary in relation to potentially affected garden	Height of 45° line above boundary
N	4m
NE	3.5m
E	2.8m
SE	2.3m
S	2m
SW	2m
W	2.4m
NW	3.3m

The use of the affected area of the garden and the size of the garden as a whole will be taken into account when assessing whether any loss of sunlight is adverse. The sunlight of spaces between gables will not be protected unless the affected space is of particular amenity value in comparison with the remainder of the garden. Such a space may include one that has been designed with the house as a patio.

Note that these heights do not indicate whether a development will be acceptable when assessed against other considerations.

Where there is an established townscape of high quality which in itself would not satisfy the requirements of the 45° method for sunlight (such as the Old Town) sunlight will be assessed using before and after plans which show shadows for each hour of 21 March. The qualities of the existing space and the effects of sunlight, both before and after will inform whether any loss of sunlight is considered adverse.

45 degree method for sunlight
This sketch shows a proposed development located on the north side of an existing garden. The sunlight to the neighbouring garden might be adversely affected because it rises above the 45 degree line set from 4m above the boundary.

Sunlight to new gardens and spaces

Half the area of new garden spaces should be capable of receiving potential sunlight during the spring equinox for more than 3 hours.

This will be assessed using hour by hour shadow plans for each hour of 21 March

Privacy and outlook

People value privacy within their homes but they also value outlook - the ability to look outside, whether to gardens, streets or more long distance views. To achieve both, windows should be set out so that direct views between dwellings are avoided.

The rearward side of development often provides a better opportunity for privacy and outlook than the streetward side of development. This is because on the streetward side, privacy to some degree is already compromised by the fact people in the street can come relatively close to the windows of dwellings. Privacy is generally achieved in these situations through the installation of blinds, curtains and translucent glass, etc.

The pattern of development in an area will help to define appropriate distances between building and consequentially privacy distances. This means that there may be higher expectations for separation in suburban areas than historic areas like the Old Town.

On the rearward side, as well as spacing windows far apart, reasonable levels of privacy can be achieved by setting out windows on opposing buildings so that there are not direct views between them, angling windows and erecting screens between

Technical guidance

ground floor windows. In assessing this, the Council will look at each case individually and weigh up the practicalities of achieving privacy against the need for development.

Though private views will not be protected, immediate outlook of the foreground of what can be seen from within a building may be. Unless there are exceptional circumstances, this means that new development that blocks out the immediate outlook of an existing dwelling must be avoided.

This guidance does not seek to protect the privacy of gables of existing housing.

2.11 Housing mix and size

Ensure there is a mix of dwelling types and sizes to meet a range of housing needs including those of families, older people and people with special needs.

Make sure the size of homes are adequate for the numbers of people that could be living there.

Provide adequate storage for general needs, waste and recycling, and cycles.

Ensure the design of new housing is "tenure blind".

The mix of unit sizes and house types has a significant impact in ensuring a varied and sustainable community. This mix should respond to the differing needs of residents, immediate site conditions and to citywide objectives. It is expected that within all developments of 12 or more units a minimum of 20% of these units will have a minimum floor area of 91m² and should be designed for families, with direct access to private gardens either from ground or first floor level, enhanced storage and convenient access to play areas.

On larger development sites, the provision of facilities and services to support the existing and proposed community will be sought, where these are required. For example, local healthcare facilities, childcare facilities, meeting places and commercial units may be needed if these do not already exist in the area.

Affordable housing will be required in accordance with the policy in the *Edinburgh City Local Plan* and the supplementary planning guidance on *Developer Contributions and Affordable Housing.*

Tenure blind housing at Gracemount—Fala Place
Here the market housing and affordable housing is integrated by using the same materials for buildings and street and designing the housing to have a similar appearance.

Technical guidance

Housing mix

In schemes with 12 units or more, a 20% of the total number of homes should be designed for growing families. These types of homes should have three or more bedrooms, have good levels of storage and have direct access to private gardens (for example via patio doors or private external stairs) or safe play areas for children.

In order to ensure satisfactory amenity, dwellings should not fall below the following minimum internal floor areas:

36m²   Studio dwelling

52m²   One bedroom dwelling

66m²   Two bedroom dwelling

81m²   Three bedroom dwelling

91m²   Three bedrooms or more with enhanced
         storage

The minimum floor area for studios is lower than that for one bedroom flats since the relatively larger single open plan space found in studios compensates for having a smaller space overall. It is expected that studios will be designed to be very space efficient. Imaginative solutions are encouraged for storage, the location of the bed and so on.

Internal storage

At least 5% of the net floor areas should be provided as dedicated storage cupboards in addition to any kitchen storage or wardrobes. This storage is needed to allow homes to be used by a wide range of households.

Shelving should be built into storage areas within dwellings to accommodate at least three 55 litre storage boxes for recycling. See diagram below.
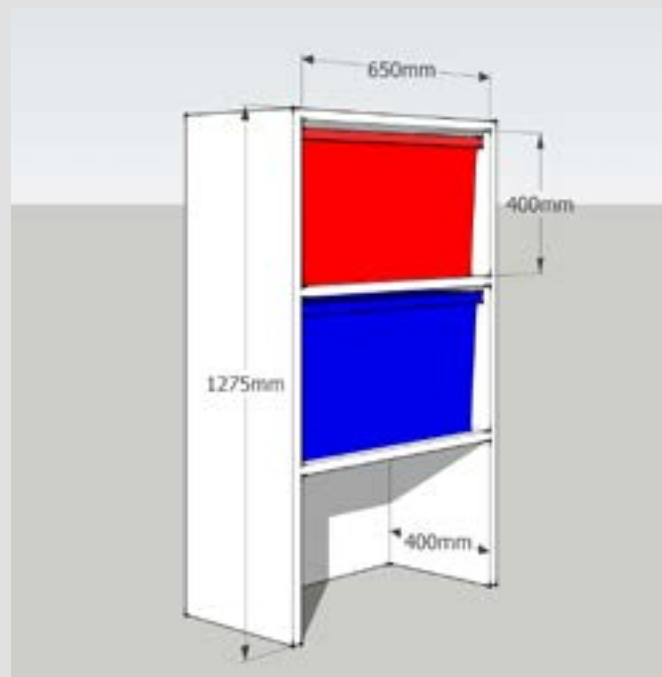
Space for internal recycling
This drawing shows a potential way of providing storage for recycling boxes.

Improving internal amenity

In order to ensure a good standard of overall amenity for new development, single aspect dwellings should not make up more than 50% of the overall dwelling numbers. Where they are incorporated, it is important to meet the requirements for daylight and sunlight.

Generous ceiling heights of 2.6m high and above are encouraged as these help provide development with a greater sense of internal spaciousness, allow enhanced adaptability to other uses and if window heads are also higher, can provide enhanced daylight penetration into dwellings. Higher floor to ceiling and window head heights are important if the requirements for daylight, as set out in *Providing daylight to new buildings (page <?>)*, are to be met.

Tenure blind design

Development should be tenure blind. This means that where sites provide a range of tenures (for example market sale and affordable housing) it should not be possible to see the difference between tenures.

Where a site is predominantly for market housing, it is expected that affordable housing should generally be provided in the same housing type. So, if the design is for houses for sale, the affordable dwellings should be houses too. Where it is not possible to deliver the same housing type, alternative types of the same physical scale should be used. For example, colonies, four in a block and cottage flats may integrate reasonably well with two storey houses.

Building form, materials and the general design of the building elevations will all be key components in determining whether or not a tenure blind development is achieved.

Technical guidance

The integration of ancillary facilities is important on small developments—like those common in villa areas—as well as in larger developments. As well as cycle parking (covered in Section 2.4), integration of facilities such as plant and bins needs to be considered from the outset of the design process.

Process for agreement with Waste Services

As part of the planning process, designers / developers must engage with the Council's Waste and Cleansing Service to agree a waste management strategy for your development, and ensure that their requirements can be satisfactorily incorporated within the design. This must happen as early as possible.

The officer in the Waste and Cleansing Service will talk you through their requirements and Instructions to Architects document. Once agreement has been made, Waste Services will issue a letter of agreement detailing this and any further requirements.

Key points for consideration:

Your waste management strategy must ensure that:

- bins are safely accessible and the collection system is operationally viable, taking into account swept path analysis, walking and pulling distances, slopes, vehicle sizes, access to bin stores, interactions with pedestrians, etc;

- the waste management strategy is compliant with the Council's policies and the requirement of Scottish legislation so that provision is made for the full range of recycling services and that these are fully integrated into the collection system

(e.g. that each bin store has sufficient space to accommodate the full range of bins);

- a decision is made regarding the use of individual or communal bins, the initial supply for these and their ongoing maintenance;

- that arrangements are in place to allow for the ongoing maintenance and repair of bin stores, bin housings, etc.

1280 litre recycling bins

Sizes and bin types:

Waste and Cleansing Services will advise you as to whether individual or communal bins should be used. A range of bin types may be employed from kerbside collection boxes for glass and some other materials right up to 3200 litre communal bins. The Waste and Cleansing Service will advise you of the capacities you require to provide for each waste stream, the detailed design requirements for bin stores etc.

The specific materials which are currently collected from households, and in compliance with Scottish legislation are:

- Residual (landfill waste);

- Food;

- Glass;

- Mixed recycling;

- Garden waste (kerbside collection areas only);

- Small electricals, batteries and textiles (collected in the glass collection box in kerbside collection areas only)

In addition to ensuring that there is sufficient space for all collection streams, and that containers are stored off street, you should also consider the arrangements for the management of bulky waste- for example where householders should present bins on collection day.

Bins
Underground bins for residual waste allow large volumes of waste to be held with minimal impact upon the street scene. For further information on refuse and recycling requirements see the technical guidance on Access for external waste storage (page <?>). Major planning applications should be accompanied by a refuse strategy including vehicle tracking drawings for refuse vehicles and the location and sizes of waste storage spaces. It is important that the Council's Waste Services are involved early as their requirements may impact on design.

2.12 Purpose Built Homes for Rent

(Images to be inserted later)

The 'Built to Rent' sector has the potential to make a positive contribution to the overall housing mix in Edinburgh.

Proposals should support regeneration and fulfil placemaking principles.

BTR developments are considered as mainstream housing, where relevant LDP policies and guidance apply.

Design should be place specific, high quality, innovative and energy efficient.

A flexible approach to current space and amenity standards is accepted depending on the quality of the accommodation and amenities provided.

Shared on-site facilities should be high quality, accessible and safe.

Policy References
- *Edinburgh Local Development Plan - Hou2, Des 5*

The Private Rented Sector (PRS) continues to be a key provider of homes throughout the city. Recent innovations in this sector have seen the emergence of purpose built accommodation for rent, also referred to as Built to Rent (BTR), which offer high quality professionally managed homes under single ownership with shared facilities that can be delivered rapidly. PRS accommodation of this nature can also include the conversion of existing buildings where the BTR 'model' can be incorporated.

BTR developments are considered as mainstream housing, where relevant LDP policies and guidance apply, including those relating to parking and affordable housing.

Due to the speed at which BTR developments can be delivered, they offer opportunities for rapid placemaking particularly for large mixed use regeneration sites which can help to create a sense of place.

BTR Model

BTR developments are generally characterised by the following key elements:

- Single ownership and professional on-site management;
- Self-contained units which are let separately;
- High quality amenities for communal use;
- Longer tenancies offered with defined in-tenancy rent reviews; and
- Property manager to be part of an accredited Ombudsman Scheme and a member of a recognised professional body.

Due to the nature of these developments, the retention of the homes for rent for a specified time period should be explored and secured via an appropriate method to be agreed between the Council and the developer.

Design Approach

In BTR developments there tends to be key differences in their design which justify a more flexible approach. This specifically relates to the minimum internal floor areas and quantity of single aspect units as set out in section 2.10 of this Guidance.

The key differences with BTR developments to other general housing types are usually as follows:

- Provision of high quality, well managed and accessible on-site shared facilities such as communal gathering spaces, secure storage, workspaces and gyms;
- Innovative and efficient design technologies which reduce the requirements for non-habitable space within units; and
- Open plan layouts which increase useable space and allow light to penetrate more deeply into the units and therefore allowing a higher percentage of single aspect units over the standard 50%.

The level of flexibility to be applied to the standards will be dependent on the quality of the accommodation proposed. Any deviations from the standards need to be fully justified and will be determined on a case by case basis.

Developer Contributions

Developer contributions shall be applied towards the provision of services, works and facilities as the Council may, in its reasonable discretion, determine are required in connection with BTR developments in accordance the LDP and associated guidance.

BTR developments will be expected to provide 25% affordable housing on site. Affordable homes within BTR developments should be tailored to meet the greatest housing need and preferably they should be owned or managed by a Registered Social Landlord (RSL). The rental levels, conditions of tenure and the length of time that the units will remain affordable will be subject to agreement between the Council and the developer.

2.13 Community safety

Create active frontages directly onto important streets and publicly accessible routes and spaces.

Provide main door access to ground floor properties from street side.

Ensure all external spaces including pedestrian and cycle paths are overlooked.

Use lighting to help community safety.

<div style="background-color:red">

Policy References

- *Edinburgh City Local Plan - Des 3f)*
- *Edinburgh Local Development Plan -*

</div>

The design of development has a key role to play in community safety. If buildings overlook and provide direct access to streets people feel safer. Active frontages, where the ground floor is designed to allow visual contact and pedestrian movement between inside and out, ensure that this is achieved.

Lighting can make a very positive contribution to the security of the external environment. To ensure the overall quality of the design, it should be integrated into the design from the outset and considered with the Road Construction Consent application.

The Council will refer all major planning applications and local developments that have particular security issues to the *Police Architectural Liaison* service for their comments. Developers are encouraged to make early contact with the Police Architectural Liaison service.

Secured by Design accreditation is the Police's initiative to design out crime in the built environment. This has many benefits. However, sometimes there can be a conflict between the needs of Secured by Design and planning requirements. It is important that these matters are understood early in the process so that they can be addressed without compromising the design as a whole.   Meeting the needs of Secured by Design should not be at the expense of the overall quality of the external space within the site.

Active frontages and housing—Forbes Road
Traditional tenements (above) have main doors directly into ground floor flats which maximise activity on the street and help ensure front gardens are used.

Active frontage on a supermarket—West Port
This image demonstrates it is possible to create an active frontage for uses such as supermarkets. This has been achieved by arranging shelves and counters perpendicular to windows so allowing views into the shop.

3. Landscape, biodiversity and the water environment

This chapter sets out the Council's expectations for landscape proposals as part of new development and how biodiversity should be maintained and enhanced. In order to achieve good design, landscape architects should be engaged early in the design process. It also sets out the Council Expectation with reference to the Water Environment.

The key aims are for new development to:

- Create a robust landscape structure as an integral component at all scales of development, which follows green infrastructure and green network principles.
- Meet the requirements of the Council's strategy for public open space and provide residential private gardens.
- Maintain the conservation status of protected sites and species, and enhance and create new habitat.
- Protect trees and woodland and provide new tree planting.
- Ensure that hard landscape and car parking are an integral part of the overall design.

Water Environment

- Survey and analyse the existing and historic water environment on development sites.
- Design developments to ensure that properties are not at risk of flooding from coastal waters, rivers, culverted rivers, or surface water flooding
- Design developments, including the floor level of buildings, to ensure that properties are not at risk of surface water flooding.
- Provide above ground surface water attenuation on development sites to reduce flooding, due to the development, on surrounding areas.
- Integrate Sustainable Urban Drainage Systems into the landscape design of the development to reduce flooding, reduce pollution, provide biodiversity benefits and create beautiful places.

3.1 Green infrastructure and green networks

Establish a robust framework of multifunctional green infrastructure in new developments of all scales, and connect this to the wider network of open spaces, habitats, footpaths and cycleways beyond the site boundary.

A green network is formed when green infrastructure components are linked together to give additional combined benefits. Components can include:

- Green corridors
- Watercourses
- Woodland
- Tree belts
- Habitats
- Parks and play areas and other public open spaces
- Sustainable Urban Drainage Systems (SUDs)
- Green roofs
- Active travel routes
- Street trees, hedgerows, verges

Ideally a network of multifunctional greenspaces should run through the urban area, urban fringe and wider countryside, creating high quality landscape and townscape. This should support new access and recreational opportunities, incorporating flood management, enhanced biodiversity and habitat linkages, and promote healthier lifestyles through walking, cycling, creating spaces for food growing and restorative outdoor activity. Delivery of such a network is consistent with the development of the Central Scotland Green Network.

The Local Development Plan identifies Edinburgh's established Green Network, comprising greenspaces distributed across the city's hills, neighbourhoods and waterfront and connected by wooded river valleys, disused rail corridors, the Union Canal and frequented path routes.

It identifies proposals to improve connections within the urban area and to connect to the surrounding countryside and neighbouring Council areas.

The Scottish Government's Green Infrastructure: Design and Placemaking guidance illustrates how green infrastructure can be integrated within new developments as part of the design process.

An understanding of a site's current and potential contribution to the green network should inform decisions on scale, location and layout. The way in which this has been considered in the placemaking process should be explained in the Design Statement.

Development should be carefully designed to contribute positively to development of green

Large public space—Braidburn
This public space is a major component of the green network.

networks, and all proposals will be assessed in terms of their consideration of connectivity between green infrastructure components and their contribution to national and local green network and open space objectives.
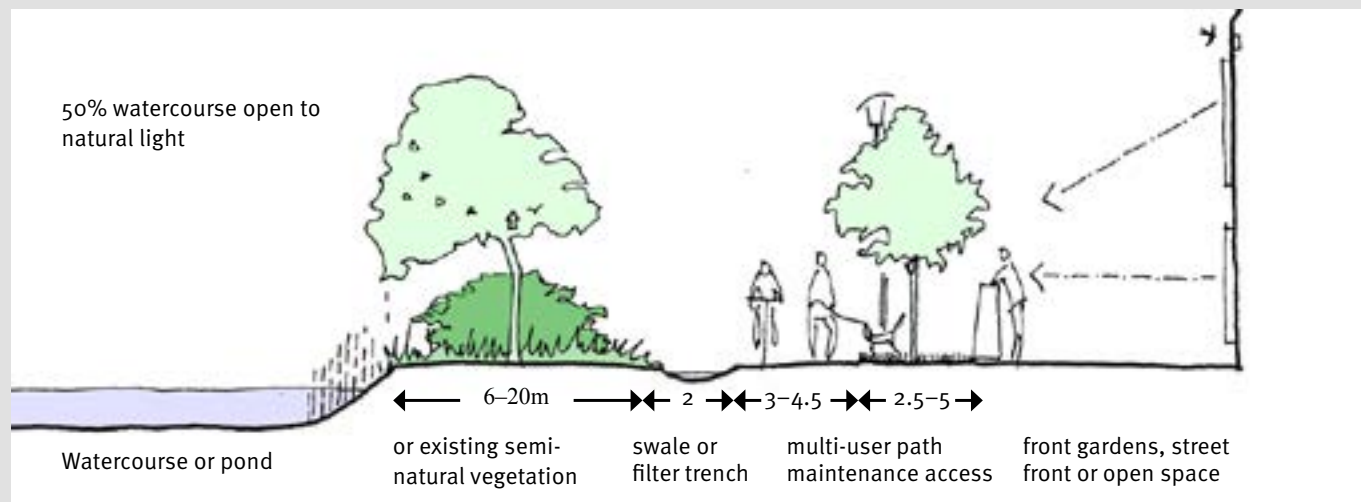
These sketches illustrate how green networks can be integrated within a range of development scenarios and at range of scales.

The Council supports substantial framework planting that seeks to integrate and connect multi functional green infrastructure features as guided by site specifics and local landscape character.

Masterplans will require adequate space for large growing native tree species to achieve maturity and form woodland habitat, provide a secure setting to multi-user paths, cater for active travel, a variety recreational uses within open space, incorporate SUDS, whilst allowing integration with the street layout and built form. In urban edge situations, a landscape edge will also be required to integrate development with the surrounding countryside and landscape setting of the city.

Masterplans should allow space for large scale trees to achieve maturity and form part of the green network, along roads and in green corridors.

These provisions can vary in width depending on the development scenario but for some major developments spatial parameters of 30-50 m may be necessary to accommodate a full range of green infrastructure functions.

50% watercourse open to natural light

6–20m   2   3–4.5   2.5–5

Watercourse or pond   or existing semi-natural vegetation   swale or filter trench   multi-user path maintenance access   front gardens, street front or open space

Blue Networks
Green networks can be aligned with watercourses or permanent (retention) ponds or detention areas providing for Sustainable Urban Drainage, to enhance existing wildlife habitat, whilst providing for amenity, recreation and active travel. New development should provide active frontages to main path routes, open spaces with SUDs features
If buildings are proposed close to a watercourse then discussions with the Council's Flood Risk Unit is required. Optimise opportunities for natural bank sides by the removal of wall with low or no archaeological value and set back new development at least 15m from the Water of Leith and the River Almond, except in conservation areas, to provide important habitat improvements and space for future flood areas.
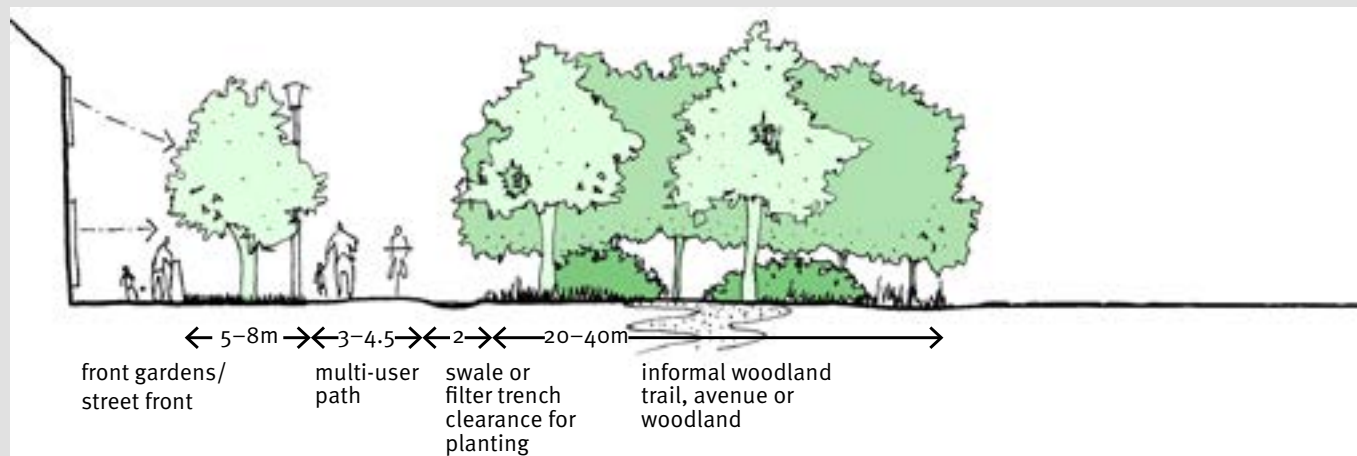

Water of Leith Walkway
Access and amenity improvements carried out at The Dene, between Dean terrace and Mackenzie Pl, within the New Town Conservation Area.

If buildings are proposed close to a watercourse then a full appraisal of flooding scenarios is required (*see chp 3.8*) and early discussions with the Council's Flood Risk Unit. Buildings proposed on brownfield site within the more rural areas of the Water of Leith require at least a 15m setback to create opportunity to reinstate natural bank sides. Only walls with significant archaeological value should be retained, other retaining walls should be removed. Building proposed adjacent to the Water of Leith and River Almond in built up areas should mitigate the potential for natural banks by the use of other methods such as reducing the top part of the wall to provide a wetted bank or cladding on the retaining wall to provide some riverine habitat with tree planting to provide habitat connectivity.

Technical guidance

← 5–8m → ← 3–4.5 → ← 2 → ← 20–40m →

front gardens/
street front

multi-user
path

swale or
filter trench
clearance for
planting

informal woodland
trail, avenue or
woodland

Green Corridor
The density and type of planting is suited to the urban situation and parkland context. Where a rural context exists at the urban edge, native woodland may achieve a more appropriate fit with surrounding landscape character whilst providing shelter for new development.

North Meadow Walk
North Meadow Walk footway and cycleway, providing for recreational use and active travel. The route is lined with large growing trees species, including nesting boxes, set within a broad grass verge, the path is lit and surveillance is provided from surrounding residential dwellings.

indicative dimensions to
conform with street design
guidance

→ 2m ← ← 3.5–5m → ← 5.5m → ← 2 → ← 2 →

footway &
services

verge &
street tree

verge &
filter trench
or swale

Green Street
The incorporation of trees and other planting within street design should be considered alongside the spatial parameters for movement and access - including visibility, services – including lighting, the proposed approach to sustainable urban drainage and the intended density and spatial definition of the proposed built form.

Forrest Road
This street extends the tree lined avenue of Middle Meadow Walk to George IV Bridge.

3.2   Publicly accessible open space

Ensure homes are within walking distance of good quality and well designed open space. Provide new publicly accessible and useable open space in non-residential development.

<div style="background:#b01c2e; color:white;">

Policy References

- *Edinburgh Local Development Plan - Des 5 c), d), Des 7, Des 8, Env 18, Env 19, Env 20*

</div>

The Council's Open Space Strategy sets out and explains the following standards to ensure that all communities have access to quality greenspaces, which cater for a variety of needs and ages.

Lang Rigg, Queensferry

Local greenspace standard:

Local greenspaces close to homes play an important role in how people feel about their neighbourhood and offer convenient spaces for everyday enjoyment of the outdoors.

They can be important places to meet your neighbours, havens for wildlife, spaces to play after school or enjoy on a walk to the shops.

All homes should be within 400 metres walking distance of a 'good' quality, accessible greenspace of at least 500 square metres, which is equivalent to a five minute walk.

In new housing developments, good quality local green spaces should support health and well-being by providing usable outdoor spaces as well as looking attractive.

Spaces should have surfaced paths linked to the surrounding area, provide features to attract wildlife, incorporate seating or walling, cycle parking and waste bins, fruit trees and raised beds for community growing and provide a safe and stimulating place for unequipped play.

Urban tree planting and use of hedges and shrub planting should be considered to define spaces and create appropriate shelter and shade. Areas of open grass should be balanced with use of herbaceous perennials and bulbs to create year round interest.

Local greenspaces can be complemented by drainage features such as grass or planted swales and rain gardens. Where it is proposed that part of a local greenspace should be used to accommodate

Small public space in the the Old Town—Trunks Close
It makes good use of its constrained site and provides an attractive green setting for surrounding buildings

below ground surface water storage, there should be no impact on the quality of above ground space e.g. through restricting locations for tree planting or need for inspection chambers.

Good quality local green spaces should complement the provision of private gardens for new houses and in blocks of flats, garden flats and communal back greens.

Large greenspace standard:

Every neighbourhood should benefit from a large park to provide the space for the whole community to enjoy their free-time. It's the place to exercise and play informal ball games; walk the dog or go for a run; come together for local events; watch wildlife and scenery through the seasons; and experience natural open space.

All homes should be within 800m walking distance of a good quality accessible greenspace of at least 2 hectares

Where possible, new large greenspaces should incorporate existing built, cultural and natural features, including skyline views to celebrate distinctive local characteristics (Section 1.8). The overall size and form of parkland should therefore respond to the topography and opportunities of the site.

The overall provision of facilities should ensure that spaces are well used, lively, safe and resource efficient by delivering multiple benefits, in particular providing an uplifting place to support daily self-management of physical health, including opportunities to participate in group activities.

Larger greenspaces should both meet local greenspace needs through provision of sheltered community garden areas with seating and cycle parking as well as including larger scale features appropriate to their size.

New parkland provides the opportunity to create a landmark feature, including woodland and forest scale trees; provide well drained, ground for community events, markets, informal ball games, outdoor learning and exercise activities; lay out

measured walking and running circuits with links to the wider green network and integrate allotment provision (refer to Scotland's Allotment Design Guide).

Grassland management approaches may include a mix of close mowing, naturalised grass or meadows. Use of planted swales and locating surface water storage basins alongside and in addition to new parkland can bring amenity and biodiversity benefits by creating wetland habitat and introducing open water as a feature of the landscape.

Path surfaces within greenspace should be appropriate to context and play an important factor in encourage use of the outdoors.

A grass edged multi-user path with Macadam wearing course will generally provide the most robust long-term solution, providing access for all including wheelchair users and pushchairs. Bound gravel may be suited to local greenspaces or feature spaces. Whin dust paths will generally only be acceptable in semi-natural settings, subject to appropriate build up, drainage and ongoing maintenance.

The relationship of new parks to homes, schools, other public buildings and commercial uses can help put open space at the centre of community life and provide options for refreshment and use of conveniences. New greenspaces should be directly overlooked from key living spaces such as lounges and kitchens and never blank facades.

Forth Quarter Park

Forth Quarter Park was developed for National Grid Property Ltd as part of the Granton Waterfront master plan to remediate the former Granton gas works.

This distinctive 7 hectare park is bordered by a mix of uses including office accommodation to the east, Edinburgh College's Granton campus, and the established communities of Granton, Pilton and Muirhouse together with new homes being developed at the Waterfront.

The park links the North Edinburgh Paths with the promenade at Silverknowes to the west, via a meandering route through this key urban greenspace.

Lying close to the Firth of Forth, the park provides views from the city to the coast and backdrop of hills within Fife.

A central water feature crossed by bridges and creating a waterside walk, including decking, was created by de-culverting the Caroline Burn.

The east end of the park and water feature terminates at a new public square and terraced viewing platform in front of the Scottish Gas headquarters.

New planting includes 800 birch trees, 15,000 shrubs and new grassland arranged in a series of undulating terraces surrounding the water feature, creating wetland and marginal habitats.

The park also incorporates Lime trees which are remnants of the grounds of Granton House.

Playspace access standard:

Edinburgh's vision is to achieve a 'play friendly city, where all children and young people can enjoy their childhood.'

Parks and other large green spaces provide the ideal setting for good quality equipped play spaces. Play is vital to help children learn how to get along with each other and keep healthy.

The Council's *Play Area Action Plan* sets out the playspace access standard. Houses and flats should have access to at least one of the following:

- a play space of good play value within 800m walking distance;

- a play space of very good play value within 1200m walking distance;

- a play space of excellent play value within 2000m direct distance.

Play Value measures the quality of play area design and layout, together with range of play activities on offer to ensure children receive the right balance of risk and challenge in order to develop physical and social skills.

In addition to equipped play spaces, new green spaces and residential streets should be designed to encourage more 'free play' without equipment. Exploring woodland, meadows or running up and down slopes can provide ways for children to develop their creativity and imagination.

New play area at Burnbrae Drive meeting 'good' play value.

Terraced slopes and shared surface 'home zone' street at Gracemount.

Developments, including residential and non-residential, should contribute towards these standards by providing publicly accessible open space on site. Where this is not possible, contributions may be sought for the improvement of open space within the area.

Quality in new greenspace and play areas should be ensured by planning for these elements of green infrastructure as an integral element of places from the start of the planning process. New greenspace provision should be informed by an understanding of local community needs, including health and wellbeing and put in place the necessary framework for new neighbourhoods to thrive.

Making provision for facilities such as community gardens, growing spaces, orchards, woodlands and allotments within new greenspaces can allow both new and existing communities to have greater influence their community develops over time, strengthen bonds and contribute to the sustainable management of the city's greenspace resource.

The design of new open space provision will be assessed against Local Development Plan policies relating to Design and the Environment. Play area design must achieve the play value requirements set out in the Council's Play Area Action Plan.

3.3   Private open space

Provide well defined, functional, good quality private gardens to all houses and ground floor flats.

<div style="background:#c8102e;color:#fff;">

Policy References

- *Edinburgh Local Development Plan - Des 5 d), Hou 3*

</div>

There should be a clear distinction between public and private spaces, defined by appropriate boundaries such as walls, railings or hedges both to the street edge and between feus. Private and communal gardens should be designed for use by residents for a range of functions, including space for play, seating, food growing, tree planting and drying laundry. Outdoor taps and/or rainwater harvesting may be needed to allow these spaces to thrive.

Wooden fencing can be used to separate private back gardens, but not used in the public realm, however consideration should be given to different heights of fencing to allow communication between neighbours and some visual interest.

A key factor in ensuring space is usable is its capacity to receive sunlight and this will be affected by the position of existing and proposed buildings and tree planting.

The Council wants new development to be adaptable. To help meet the changing needs of residents, it is beneficial for there to be sufficient space in gardens for houses to be extended while retaining reasonably sized gardens. Developers should demonstrate how this can be achieved.

Ground floor flats should generally be provided with private gardens of a minimum of 3m in depth, which open directly on to a communal garden. Where this is not the case, patio doors and a defined threshold space should be provided.

Private front gardens have an important role in softening urban environments by providing planting on streets. They also provide an intermediate space between the public realm of streets and the privacy of dwellings. The impact of driveways on the continuity of boundary treatments and street tree planting should be considered. (Note: relationship to parking section and definition of private front gardens/thresholds).

Where private gardens cannot be provided or where their depth is limited (for example less than 3m) there will be a greater need for an expectation that street trees will be provided

Private communal grounds shall be well proportioned, well orientated and secluded from vehicles. Narrow peripheral spaces, subject to overshadowing will not be acceptable. Residents should not normally have to cross streets and car parking to access private communal greenspaces.

Where it is difficult to achieve the areas normally sought for private open space - for example, because of a need to adhere to a spatial pattern in an area, the inclusion of balconies or roof terraces may be seen as a mitigating measure. Where they are included, it should be demonstrated that they will benefit from adequate sunlight or an outstanding view, preserve reasonable privacy and have an area that is not less than 5% of the net floor area of the dwelling.

The size of gardens can contribute to the character and attractiveness of an area. This is particularly the case in villa areas. Here, gardens of a similar size to neighbouring gardens are likely to be sought in order to preserve the character of the area.

Private and shared gardens for flats.

This drawing is sliced through a courtyard development to show its interior and street side. It shows small private front gardens with private rear gardens opening on to a communal space.

Residential Homes and Care Homes

Particular attention should be paid to the orientation of care homes and long term residential homes. Residents should be able to access a garden space that is attractive, welcoming and well lit by natural light throughout the year and which allows a circuitous walking route to be created.

The length of private gardens (right).

Gardens should be designed to allow houses to be adapted and extended over time. This means that gardens longer than 9m are encouraged. Gardens in the centre of the picture are longer than 9m helping to allow the houses to be extended. Excessive changes in level should not be taken up across private back gardens. Where housing is set out across sloping ground, useable terraced space should be provided. Additional space is also required in garden where there is insufficient natural sunlight. North facing gardens should be longer to compensate for this.

3.4   Biodiversity

(Images to be inserted later)

Maintain the integrity of Sites of European, National or Local Importance for biodiversity and geodiversity.

Conserve protected species and the habitats which support them.

Survey and assess development sites

Design sites to allow the development of a varied and robust, ecosystems.

In Scotland it is the duty of every public body and officer, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions (part 1, section 1 The nature Conservation (Scotland) Act 2004.

Although it is important to safeguard – or enhance – Priority Species, it is often the commonplace birds and plants that are important in a local context. Nationally there is a decline in Song Thrush populations and the once-common Tree Sparrow and Starling are now rare in some locations. 'Improved habitats' can be as important as untouched ones. Urban areas offer a rich mosaic of habitats suitable for an unexpectedly large variety of wildlife. Our buildings have replaced the original cliff-top haunts of species such as Swift and House Martin; older housing provides cave-like roofs for Long-eared Bats and modern properties are ideal for Pipistrelle bats; some industrial buildings offer nesting sites for Kestrels, Barn Owls and Peregrine Falcons. Buildings themselves, plus walls and bridges, can all support Bats, Bees, Beetles and Lichens.

Sites protected for nature conservation and geodiversity are identified on the Local Plan Proposal Maps. These include international and national heritage designations, such as Special Protection Areas and Sites of Special Scientific Interest and local designations such as Local Nature Reserves and Local Nature Conservation Sites.

There is a strong presumption against development that will affect protected sites. Any proposal will have to meet strict policy tests to ensure protected site integrity is not affected. In the case of internationally protected sites such as Species Protection Areas and Special Areas of Conservation this may include long periods of survey work to inform the 'strict policy test' and Habitats Regulations Appraisal (HRA).

See the technical guidance (page xx) for a list of relevant legislation.

Protected species

European protected species (EPS) include bats, otters and great crested newts. They are legally protected and it is a criminal offence to disturb, injure or kill them; or to damage or destroy their resting or breeding sites. If we consider that a development proposal is likely to affect EPS then we will ask the applicant to carry out a survey to identify impacts and attempt to avoid them. If impacts cannot be avoided and an offence is likely to be committed then a protected species licence is required from Scottish Natural Heritage (SNH) to enable the proposal to proceed. Both SNH and the Planning Authority must be satisfied that the proposal will pass three tests laid out in the Habitats

Regulations 1994. A license will not be issued unless planning consent is given.

Other species are protected by UK law. These include badgers, water voles and breeding birds, all protected species are a material consideration in the planning process.

More information on European and other protected species, survey work and relevant licenses are available from the Scottish Natural Heritage website (link)

European Protected Species (EPS) and Licensing Requirements

There are three strict legal tests which must all be passed before a licence can be granted.

In summary they are:

- Test 1: that there is a licensable purpose.(i.e that the licesnse is required for 'preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment') SNH provides more detailed guidance on Test 1 at: *http://www.snh.gov.uk/docs/B896394.pdf*

- Test 2: that there is no satisfactory alternative;SNH provides more detailed guidance on Test 2 at: *http://www.snh.gov.uk/docs/B896418.pdf* and

- Test 3: that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range (the

- Qualified ecologist should be able to provide advice on this or alternatively seek advice from SNH). For more information on the three species licencing tests, the SNH website provides detailed explanatory text about these tests: *http://www. snh.gov.uk/protecting-scotlandsnature/ species-licensing/*

Site assessment and survey requirements

Proposed development sites may include features of natural heritage interest, or protected sites and / or species and an initial assessment of value must be made to establish whether further surveys are required. The process is :

1 A preliminary desk-based study to collect all existing ecological data about the site,

2 An Extended Phase 1 Habitat Survey to understand the ecology on site and the implications of the proposed development.

This will help identify what habitats are present, the protected species that they may support, further survey requirements, site constraints and potential mitigation. This information will inform site design.

Protected species surveys must follow established best practice and must be done at the correct time of year. Applications can be delayed if a survey season is missed. For example, bat survey work should comply with the Bat Conservation Trust publication *"Bat Surveys: Good Practice Guidelines (3nd edition)"*.

Biodiversity Duty and the Edinburgh Biodiversity Action Plan

The Nature Conservation (Scotland) Act 2004 places a duty on all public bodies to further the conservation of biodiversity. Section 1 of the Act, states that it is the duty of every public body and office holder, in exercising any function, to further the conservation of biodiversity so far as is consistent with the proper exercising of those functions. Every public body is now required to have regard to both the Scottish Biodiversity Strategy and the UN Convention on Biological Diversity.

The Edinburgh Biodiversity Action Plan

(Edinburgh Biodiversity Action Plan 2016-18)

The Nature Conservation (Scotland) Act 2004 places a duty on all public bodies to further the conservation of biodiversity. Local planning policy requires new development to demonstrate protection and enhancement of biodiversity. The *Edinburgh Biodiversity Action Plan* (LBAP) contains actions for the conservation of habitats and species. Aligning the design of the development with LBAP objectives is one way of meeting this policy requirement. Some examples include: retaining and enhancing existing features of value to nature; use of a diversity of structures in the landscape design; provision of nest sites for wildlife.

Layout and design

It is important that the information gathered from surveys influences the final proposal. Existing natural features should be retained and enhanced where possible and kept in context rather than in isolated fragments. Integrated habitat networks

and green corridors are encouraged to enhance biodiversity and help mitigate climate change effects. The landscape design of the scheme is expected to enhance the biodiversity value of the new proposals. This should include enhancing connections between ecological features within and across the site. It is also expected that the planting plan will maximise the structural diversity of the planting and provide a scheme that allows biodiversity value to increase over time.

Statutory requirements

The Council must ensure statutory requirements relating to biodiversity are being fulfilled.

The framework for statutory sites and species protection is provided by:

- Conservation (Natural Habitats &c.) Regulations 1994, as amended ("The Habitats Regulations")

- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011

- Wildlife and Natural Environment Scotland Act 2011

- Nature Conservation (Scotland) Act 2004

- The protection of wild mammals (Scotland) Act 2002

- Protection of Badgers Act 1992

- Wildlife and Countryside Act 1981 (as amended).

Types of designated sites in Edinburgh

see Local Development plan map

International

Ramsar Sites - Habitats

A wetland site listed under the Convention of Wetlands adopted following an international conference in Ramsar, Iran 1971.

Special Protection Areas (SPA) - Birds

An area designated under the Wild Birds Directive to protect important bird habitat.

National

Sites of Special Scientific Interest (SSSI) - Habitats and Species

Areas of national importance - The aim of the SSSI network is to maintain an adequate representation of all semi natural and semi natural habitats and native species across Britain.

Local

Local Nature Reserve

Designated for its local special natural interest and / or educational value.

Local Nature Conservation sites:

Local Biodiversity Site

Local Geodiversity Site

Designated for its local biodiversity, geodiversity and social educational value.

Ecological Impact Assessment

An Ecological Impact Assessment (EcIA) may form part of an EIA and is required for major and some small scale developments . The principle is to identify the biodiversity features of interest and propose avoidance, mitigation or compensation to reduce all impacts to the non significant level. An EcIA should be submitted as part of the planning application and should adopt the methodology of the Chartered Institute of Ecology and Environmental Management (CIEEM).

The CIEEM maintain a directory of suitably qualified ecologists who can carry out surveys. See *http://www. ieem.net/members-directory* CIEEM also maintain a list of survey guidance materials. See: *http://www.ieem. net/sources-of-survey-methods-sosm-*

http://www.cieem.net/data/files/Website Downlaods/Guidelines for Ecological Impact assessment 2015.pdf)

Habitats Regulations Appraisal

Any development likely to have a significant effect on a Special Protection Area (SPA) will be subject to a Habitats Regulations Appraisal, in addition to other assessments. If likely significant effects cannot be ruled out then the Council will have to carry out an 'appropriate assessment' of the proposal. The developer will be required to supply data to support this appropriate assessment. More information on HRA can be found at the following link: *Http:/ wwwsnh.gov.uk/protecting –scotlands-nature/ protected-areas/international-designations/nature-sites/habitats-regulations-appraisal/* Firth of Forth HRA Guidance for developers and regulators *http:www.snh.gov.uk/docs/A1979038.pdf*

Timing

Project management should take into account the optimum survey period for protected species (see the survey timetable below for guidance). Surveys findings should inform design and form part of the application. Surveys older than 12 months may be considered to be out of date and invalid in supporting an application. In some instances the timing of works may also be affected by the requirements of protected species.

The Wildlife Information Centre

Records on the presence of protected species or habitat in or near a proposed development site may be sought from The Wildlife Information Centre. See: *http://www.wildlifeinformation.co.uk.*

Invasive Non Native Species

Scotland has many introduced plants, some of which have been identified as being invasive by out completing our native plants for light space and nutrients. The most common invasive species in Edinburgh are:

> Japanese Knotweed (Fallopia japonica)

> Giant Hogweed (Heracleum mantegazzianum): and

> Himalayan balsam (Impatiens glandulifera)

The Wildlife and Natural Environment (Scotland) Act 2011 (Annex B) has introduced measures to deal with non native species. If a survey shows these invasive non native species are present on a site, the developers must remove them and ensure they are not spread from the site. Soil with Japanese Knotweed or Giant Hogweed it classified as

controlled waste under the Environment Protection Act (1990).

The Scottish Government has produced a Non-native species Code of Practice that will help developers understand their legal responsibilities. For more information see: *www.scotlands.gov.uk/publications/2012/08/7367*

http://www.nonnativespecies.org/home/index.cfm

Biodiversity. Code of practice for planning and development – BS42020 - The first British Standard on biodiversity management

Planning has a key role to play in supporting the UK commitment to halt the overall loss of biodiversity by 2020 in accordance with the European Biodiversity Strategy and UN Aichi targets. BS 42020 Biodiversity in planning and development – Code of practice, is useful tool when considering biodiversity in the context of planning.

3.5   Trees

(Images to be inserted later)

Using a suitably qualified arboriculturalist, survey and evaluate the existing tree and woodland resource within the site and 12m beyond the site.

Design development to take into account above and below ground constraints for retained trees and future planting.

Survey, assess and identify trees to be retained

Protect retained trees and areas identified for new tree planting during construction.

Ensure trees for retention are marked on masterplans.

Trees and woodlands are important for the quality and character of the landscape, the townscape, biodiversity, cultural heritage, ecosystem services and our sense of well being. Retention of trees and woodland within new development also gives a sense of maturity and raises the overall quality of the setting. Where trees are damaged and then decline or where inappropriate design leads to conflict, these positive benefits are lost. Successfully marrying trees and new development requires a process of survey, analysis and design which is set out in the British Standard (BS) 5837:2012. This provides a balanced approach on deciding when trees should be retained, how design considerations will be affected by existing trees and appropriate protection for trees during development.

A tree survey is required substantially in the form specified in BS 5837:2012 for all trees with a stem diameter of 75mm or more at 1.5m above ground on the site or within 12m of its boundary. Trees should then be categorised in accordance with their quality and suitability for retention.

In certain cases woodland may be surveyed and managed using best woodland management principles. Using this information, a Tree Constraints Plan (TCP) should be prepared to show the below and above ground issues that need to be taken into account during the design process to ensure successful survival of these trees.

Below ground, the Root Protection Area (RPA) must be identified for each tree, to be left undisturbed and protected from damage from building, road construction or service trenches and layouts of SUDS. Above ground, the physical requirements for future growth and maintenance will include for example the ultimate height and spread of each tree.

Input to the design layout also requires consideration of factors such as the effect trees may have on daylight, shading of buildings and open spaces, privacy, screening, wind throw and amenity issues with leaves from certain species.

Visibility splays, changes of level and allowance for construction activity will also be considered. When submitted with a planning application, the TCP should demonstrate how regard was given to the retention of trees in the proposed site layout.

Opportunities for future planting should also be identified and plotted on the TCP to identify areas for protection from soil compaction.

Once the layout is finalised, a Tree Protection Plan should be prepared showing trees for retention and removal, and the precise location of protective barriers and ground protection forming the Construction Exclusion Zone. Fencing will be at least to the standard shown in Figure 2 of BS 5837:2012. These will be erected before work starts on site and maintained throughout the construction phase.

Tree Preservation Orders as set out in the Tree Protection Charter (link?) will be used to safeguard trees in appropriate cases.

It is a duty under Section 159 of the Planning Act (1997) that conditions must be applied to all planning applications where existing trees require to be protected .

The developer should be aware of the responsibility to determine the presence of bats (a European protected species) and identify potential bat roosts on site and the effect of proposals on habitat and navigation features. See section *3.4. Biodiversity*

Summary of process

1 Carry out a tree survey and categorisation to identify trees worthy of retention.

2 Prepare a Tree Constraints Plan showing physical and spatial requirements for retaining those trees. This includes a Root Protection Area for each tree and an indication of the ultimate spread of canopy.

3 Use Tree Constraints Plan to design an initial site layout and identify areas for new planting.

4 Achieve finalised site layout.

5 Prepare a Tree Protection Plan showing the Construction Exclusion Zone.

6 Submit with Planning Application.

7 Planning approval with conditions.

8 Prior to start of construction, erect tree protection fencing and other identified measures to form a Construction Exclusion Zone.

9 Ensure site supervision to maintain tree protection fencing and measures until removal agreed.

3.6 Planting

(Images to be inserted later)

New planting proposals should be prepared by a suitably qualified Landscape Architect or Arboriculturalist (for trees).

Species selection should be appropriate to the intended location, function and growing space, taking into account ultimate height and spread, and relationship to buildings, paths and roads.

Use native species in locations adjacent to an existing nature reserve, wildlife corridor, rural area or when establishing woodland. In other areas use a mix of species to provide robust ecological diversity and resistance to disease.

Planting design should recognise Edinburgh's distinct landscape characteristics and provide an attractive, biodiverse and a long lived landscape structure for the future.

Woodland and structure planting should be carried out in advance of development to allow early establishment.

Proposals must allow for ease of maintenance and long term establishment

The concept and vision for the planting should be presented in a Landscape Framework at PPP.

An attractive and functional landscape scheme should use trees, shrubs, boundaries, ground cover and hard landscaping imaginatively to provide an appropriate setting for buildings. It can assimilate and integrate new development into the locality. All planting scheme should add to the biodiversity of the area by maximising structural diversity. They should provide all year round interest, and be playful landscapes that can be used by all age groups. Poisonous plants should be carefully specified and not used in housing schemes, school or nurseries. Bulb planting should be used to create early spring interest.

For advice on planting schemes for Sustainable Urban Drainage Schemes see section XXX.

Trees in particular make a positive contribution to both urban and rural landscape and new development should provide a spatial framework of new tree and woodland planting. Large stature tree species should form the basis of structure planting and adequate space allowed for their ultimate size. Housing proposals and major planning applications should provide sufficient space to accommodate at least 20% of long lived large scale trees to provide a long lasting heritage for future generations.

Edinburgh's Heritage of round crowned deciduous trees should be respected in a planting schemes and the creation of wooded ridges demonstrated with proposals wherever practicable.

Tree should be used to create special places in housing proposals, for example using orchards and fruit trees, horse chestnut trees (conkers) etc.

Any unavoidable removal of trees should be compensated by replacement with at least extra heavy standard sized trees or semi-mature in locations where amenity is a key consideration.

Trees in paved areas require careful detailing to provide suitable growing conditions. See Hard landscape (page 73). All planning applications should provide full tree pits/trench details.

Shrubs, hedges and ground cover plants should be used to define spaces, and provide shelter, privacy, amenity and enhance biodiversity.

Grassed areas are important for recreational spaces and bulbs and native wildflower seed mixes should be used to add seasonal interest and habitat value. If appropriate the Edinburgh Wildflower Seed Mix should be specified. (link XX)

Where space is limited climbing plants and green walls should be introduced where practicable.

Proposals within the CAA restriction zone should seek early liaison with Edinburgh Airport on their planting concepts in order to reach agreement.

Applications for Planning Permission in Principle

These applications should be accompanied by a landscape strategy setting out the proposed use and treatment of external spaces, indicating the location of services and changes in level, including preliminary drainage proposals (such as the layout and maintenance responsibilities for SUDS—see page 95. The strategy should include cross sections of typical roads and streets and green/blue corridors. Key distances from natural features and a palette of planting material should also be included.

Full planning applications

Full Applications require all planting and hard landscape proposals to be specified as follows:

- Full botanical name of all plant stock;

- Minimum size of plant stock at planting as per the National Plant Specification;

- Expected height and spread of trees.

- Planting density, total numbers and/or planting locations;

- Tree pit details, including means of support and protection;

- Details of surfacing materials, including grass mixes and paving;

- Details of junctions between surfacing;

- Details of walls and fencing, including boundary treatments;

- Details of new play areas and equipment;

- Site furniture including bin and cycle stores;

- Details of all functioning landscape elements of Sustainable Urban Drainage.

Management and maintenance

Details of the intended arrangements and proposed long-term maintenance and management operations for all landscape proposals should be submitted to demonstrate that a high standard of landscaping can be achieved, appropriate to the location of the site. This includes proposals for the adoption or otherwise of landscape features within streets.

For many landscape proposals in the city, the airport operator are required to assess proposed planting and water features against the risk of attracting birds which threaten the safety of air traffic.

Care should be taken to ensure that community safety is promoted through the specification and maintenance of trees and shrubs. Within pedestrian routes, streets and public open spaces, trees should not prevent good visibility with a minimum clear stem height of 2m. Shrub planting should also avoid impeding the opportunity for natural surveillance and must avoid the creation of hiding places. Where good visibility is essential shrubs should ultimately grow no higher than 1 metre and tree should have no foliage , epicormic growth or lower branches below 2 metres thereby allowing 1 metre filed of clear vision.

Hedges and planting should not obscure doors or windows, and trees should not provide climbing aids into property or obscure lights or CCTV cameras

Planting specification

The following minimum standards will apply:

Size at planting	Density / spacing		Other requirements
Woodland	60-80 cm height.	1m spacing	Include 30% feathered trees of min height 180cm where immediate visual effect required.
Trees - green spaces	Extra heavy standard, 14- 16 cm girth minimum. The Council may require larger dependent on location.		2m clear stem
Trees - paved spaces	Semi mature, 30-35 cm girth		2 m clear stem, underground guyed. Tree in tree trenches or substantial treepits with underground support where required. The surface should be finished with either a cover in metal / corresponding paving / resin bound gravel. See also Hard landscape (page 72) (Check LINK to Street Guidance SPEC)
Hedges	60-80 cm height	250mm spacing in two offset rows 300mm apart	Protected by appropriate fencing
Shrubs	Dependent on species	500-600mm apart	Planted in groups of 3-5 of same species
Ground cover	Dependent on species	450mm apart	Planted in groups of at least 7 of same species

3.7   Hard landscape

(Images to be inserted later)

Ensure hard landscape design helps reinforce Edinburgh's distinctive character

Harmonise materials used in new hardworks design with the materials used within the surrounding landscape.

Use stone walls and railings where this is the commonly used edge detail.

Keep the number of colours and materials in the hard landscape in a new development to a minimum.

Detail the hard landscape to ensure it has a good visual appearance that lasts over time.

Enhance biodiversity by incorporating hedge planting as boundaries.

The concept and vision for the hard landscape design should be presented in a Landscape/Public Realm framework for PPP applications.

Edinburgh's hard landscape is defined by the simple, uncomplicated use of a small palate of materials.

Materials should be chosen to define spaces of differing functions, public / private spaces and changes in level. The materials should be suited to the character of surrounding buildings especially where the buildings are of special interest or importance.

It is expected that new development will comply with the Edinburgh Standards for Streets and Designing Streets.

As well as streets, new developments may provide hard landscape areas. To reinforce Edinburgh's unique character it is expected that the design of these spaces should use hard paving materials found in the surrounding area, provided that these materials already comply with the Edinburgh Standards for Streets. The detail is also important, including ensuring the size of paving is appropriate.

Features such as boundary walls, railings, seating, cycle storage or stands etc, should all be carefully coordinated and integrated into the design. There is a strong tradition of stone walls, railing on low stone wall or coping and hedges in Edinburgh. These details should be used to reinforce Edinburgh's unique characteristics. Tall boundary walls using rendering should be used sparingly and detailed very carefully to shed water. Drainage needs to be robust and uncomplicated.

Narrow planters should be very cautiously used as boundary elements as they generally fail over the long term. Railing on coping or low walls or hedges are a more successful edge treatment. Timber fencing should not be used in the public realm unless bespoke and beautifully detailed.

The texture and form of trees improve urban environments such as squares and plazas and contribute greatly to the quality of public realm. Trees in hard landscape need to be carefully specified and have adequate soil volume, water and air for healthy growth. Raised planters should be avoided since trees are more likely to suffer restricted growth.

Paving materials should be the same on both sides of streets.

3.8   Water Environment

(Images to be inserted later)

Any development will alter the way that water moves across a site in times of rainfall or flooding. Flooding can happen because of pluvial (overland) flow, fluvial (river) flow or coastal flooding in certain conditions. Culverted rivers, streams or historical springs can also be present. Understanding the history of site and the risks and opportunities that water movement provides should be appraised very early on in the design process in order that concept layout plans presented to the council officers are realistic.

Along with increased flood risk the development can also increase the pollution due to the run off over hard surfaces. New development must address these issues through the use of Sustainable Urban Drainage Systems. SUDS systems attenuate water, treat polluted water and should be designed to maximise biodiversity benefits. They should also be designed so they are an attractive addition to the landscape. A range of SUDS features are available to designers including porous paving, greenroofs, swales, biorention trenches and detention basins and ponds.

In greenfield sites SUDS and flood attenuation methods should be designed above ground by early discussions with water engineers and landscape architects within the design team. On constrained brown field sites underground solutions are possible however these leave a legacy of hidden structures that have the potential to fail and should only be used in exceptional circumstances.

Technical guidance

Sustainable Urban Drainage Systems

SUDS are a legal requirement under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 when discharging surface water to the water environment (except ofr a single dwelling house or discharge to coastal waters).

All SUDS schemes should be designed to comply with CIRIA C753 the SUDs Manual and the latest Sewers for Scotland design guidance.

SUDS schemes should be considered at the outset of the project and presented as a strategy with plans at PPP which should align with the urban design and landscape framework.

If the SUDS system and the attenuation of flood waters up to the 1:200 plus climate change is to be combined, then the 1:30-1:200 can be designed into the open space (hard or soft) or parkland areas provided the designs of the landscape/ public realm are attractive and suitable maintenance arrangements can be put in place.

SUDS schemes should be designed to maximise the benefits we can secure from surface water management which are:

- Control the quantity of runoff
- Manage the quality of runoff and prevent pollution
- Create and sustain better places for nature
- Create beautiful places for people

Sustainable Urban Drainage Systems should also be designed by engineers and landscape architects.

The designers should propose a system that:

- that is attractive and visually interesting
- conveys water through the site above ground in swales, biorentention trenches and filter trenches as opposed to a piped system
- integrates the attenuation areas into the landscape design attractively
- be maintained by grass cutting machines max grass slopes 1:6
- uses hard landscape areas in suitable locations
- achieves water quality improvements through a series of treatment and not end of pipe control
- enhances biodiversity
- is overlooked by development as opposed to located in a hidden space
- only be fenced in exception circumstances, a carefully designed landscape should be able to reduce the risk to an acceptable standard.

Surface Water Management Plans

A surface water management Plan (SWMP) is a document necessary for the Council to assess the flood risk from surface water and ensure that runoff from the development does not increase flood risk to properties elsewhere. The SWMP should identify a drainage a strategy for events up to a 1:200yr flood event (a 0.5% Annual Exceedance Probability (AEP) , with an allowance of climate change as stated in Sewers for Scotland or SEPA's guidance (Links.. Technical Flood Risk Guidance for Stakeholders (SS-NFR-P002 whichever is most applicable) . It should include details of surface water flow paths, water quality treatment and discharge points for the drainage system.

Required attenuation volumes and surface water flow paths should be considered at the feasibility stage as they can affect the location and layout of development. Surface water should be dealt with by analysing the existing and proposed flow paths together with potential ponding and runoff depths. This should include runoff from outwith the site, from unpaved areas within the site, and from roofs and paved area in the events which exceed the capacity of the system.

New buildings in the development must not be at risk of flooding as a result of these flow paths and depths. For example, where flow paths show that water will be directed to a level access, or towards and underground car park then possible preventative measures could include:

- Change to the internal layout so that the door is not directly in line with the flow around the properties.

Technical guidance

- Raising the floor level and providing a ramp. Floor levels to be raised to a minimum of 200mm. Ground levels either side of the ramp must fall away to enable water to flow around the property. In terraced situation a fall needs to be maintained across each individual ramp, either from the centre of a terrace to either side or from one end to the other.

- Use other design concepts to divert the water around the properties.

- The use of soft landscaping as a form of soakaway and the reliance on linear slot drainage channels will not be sufficient as a form of flood prevention or diversion.

- Care must also be taken that where walls are built between gardens on the 'high' side of a slope that gaps are left to avoid trapping water.

The development should provide attenuation of surface water flows up to the 1:200yr+CC event on site.

Attenuation should be above ground. Underground attenuation is only acceptable in exceptional cases, for example in constrained brown field sites in urban areas. Flow to the attenuation areas should be through linear features designed into the landscape/ streetscape of the site .The scheme should be designed by a team that includes an engineer and landscape architect.

Hard works details that from part of the public realm should be designed in liaison with landscape architects in the design team to provide a co-ordinated response that is appropriate to the context and is part of the overall design concept. In the public realm careful consideration is required about flows along the streets and the attenuation of the overland flows. In certain situations flows can be attenuated in hard landscaped areas provided they do not negatively impact the flood of proposed or existing properties.

On larger sites where banks are being used to create the attenuation features, these should not be steeper than 1:6 to allow for grass cutting by the Local Authority teams. Steeper slopes will require planting with suitable plants that do not require cutting. It should be noted that arisings will not be picked up and may contribute to a gradual reduction in the amount of storage provided by a feature.

The maximum discharge rate to the 200yr attenuation should not exceed 4.5l/s/ha impermeable area or the Greenfield runoff fate, whichever is the lower.