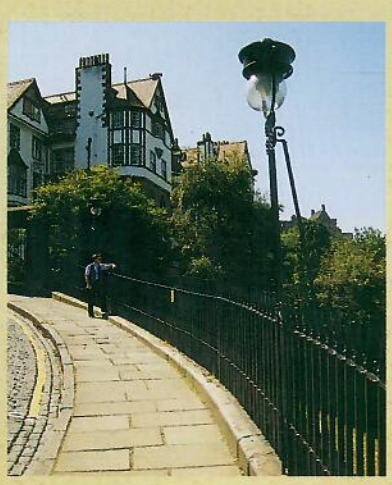
EDINBURGH
STREETSCAPE MANUAL



INTRODUCTION

Edinburgh's welcoming image

Edinburgh is unique. It attracts thirteen million visitors each year from around the world who come and contribute to the economic well-being of the city and its region. The appearance of our streets helps to project a welcoming image.

Streetscape is a term for what we see in the street. The design and appearance of buildings is important, but we are considering here the quality of the spaces between buildings and the equipment and structures that occupy those spaces.

Streets have always been intended for movement. Today our modern streets, while being welcoming, have to cope with the practicalities of traffic.

A streetscape manual

This manual brings together the activities of all the agencies who have a responsibility for a service affecting the appearance of Edinburgh's streetscape.

It is a statement by those authorities and companies of agreed policies and practices. We believe it will help to make Edinburgh a more attractive place to live, work and visit.

It is intended for everyone who is involved.

Jointly commissioned and published by:

Lothian Regional Council Transportation Department
City of Edinburgh District Council
Lothian and Edinburgh Enterprise Limited
Historic Scotland
The Scottish Office, Industry Department
Edinburgh Old Town Renewal Trust
Edinburgh New Town Conservation Committee.

November 1995
Colin J. Davis, Editor.

CONTENTS

A streetscape manual for the whole City

THE QUALITY OF EDINBURGH

Many parts of Edinburgh are known throughout the world. The Old and New Towns for example are instantly recognised. This manual is concerned with the streetscape of the whole City of Edinburgh.

Looking across at the famous views of Edinburgh, one sees dramatic and historic silhouettes: outlines which seem at night magical in the carefully designed floodlight.

The effect has been achieved by painstaking effort to maintain the original fabric of important structures and where necessary, to adapt historic buildings and secure a viable future.

Street furniture and paving surfaces. Usually in the foreground of a view

STREET FURNITURE & PAVING SURFACES

Street furniture and paving surfaces are usually seen in the foreground of any view. They complete the picture and provide a setting for the surrounding composition of buildings.

They need to fulfil a function but should not necessarily be the focus of attention. Their appearance, whether as individual items or as a group, should have a visual relationship with their surroundings.

JOINT POLICIES

To aid this visual relationship, joint policies have been approved by the local authorities on the appropriate street furniture and paving surface for the different locations across Edinburgh.

The positive effect of these joint policies on the quality of Edinburgh's streetscape is explained more fully on the following pages.

They complete the picture and provide a setting for the surrounding buildings

INEVITABLE CHANGE

Cities like buildings sometimes need to adapt to meet changing requirements.

Over the last few decades the streets of Edinburgh have had to cope with increasing volumes of traffic. The growth in car ownership is the biggest transport issue facing congested cities today. As we move towards the year 2000, concerns about the role of the car and damage to the environment are leading to an urgent need to re-assess travel habits.

REDUCING TRAFFIC

In Edinburgh's historic city centre, the general traffic levels must be reduced so that more road space can be devoted to other uses. The Regional Council's document 'Moving Forward' sets out plans for a number of environmental improvements and traffic calming measures. It stresses the importance of managing traffic, safeguarding the City's amenity value and improving safety.

Throughout the City, public transport, cycles and pedestrians are being given greater priority. Park and ride schemes as well as an express busway from the City centre to the Airport are planned. With these measures, standards of air quality that will prevent damage to health and the environment can become achievable targets.

Joint policies adopted by the local authorities are intended to ensure that the visual effects of any change to transport in Edinburgh are carried out sensitively.

A METHODOLOGY TO EFFECT CHANGE

The transportation and planning authorities have adopted a methodology to deal with new road patterns, additional equipment and signs, and the alteration of streets and pavements to withstand the impact of heavy vehicles.

All are considered from the view point of amenity as well as safety and practicality.

VISUAL APPRAISAL

In order to carry out work which respects the streetscape characteristics of a locality, it is necessary to identify precisely how the characteristics have evolved.

Architectural style, historic context, local construction materials and the way they are used are noted. The existence of symmetry, focal points and the general composition and relationship of buildings to their surrounding spaces and streets, are all taken into account.

PRACTICALITY, DURABILITY AND SAFETY

However, when choosing surface materials, street furniture, lighting or landscape, there needs to be a balance between visual quality and considerations for future management, maintenance and the needs of road users.

Durability, safety, accessibility, ease as well as economy of replacement, are required.

To balance these judgements a design team is needed with the skills of more than one profession.

THE METHODOLOGY IN PRACTICE

On pages 6 to 13 we show what is meant by a visual appraisal and how the local streetscape characteristics can be identified.

Then on pages 14 to 21 we illustrate four examples of the methodology in practice. Visual appraisals are used in the design of hypothetical changes to carriageway geometry.

CONTINUING IMPROVEMENT

This methodology for effecting change is supplemented by joint policies and practices to maintain high standards, pages 22 to 39.

Sample public attitude surveys help to assess the effectiveness of completed schemes.

Management and maintenance manuals for major projects set out procedures to ensure that the original high standards of a scheme are continued into the future.

MONITORING AND CONSULTATION

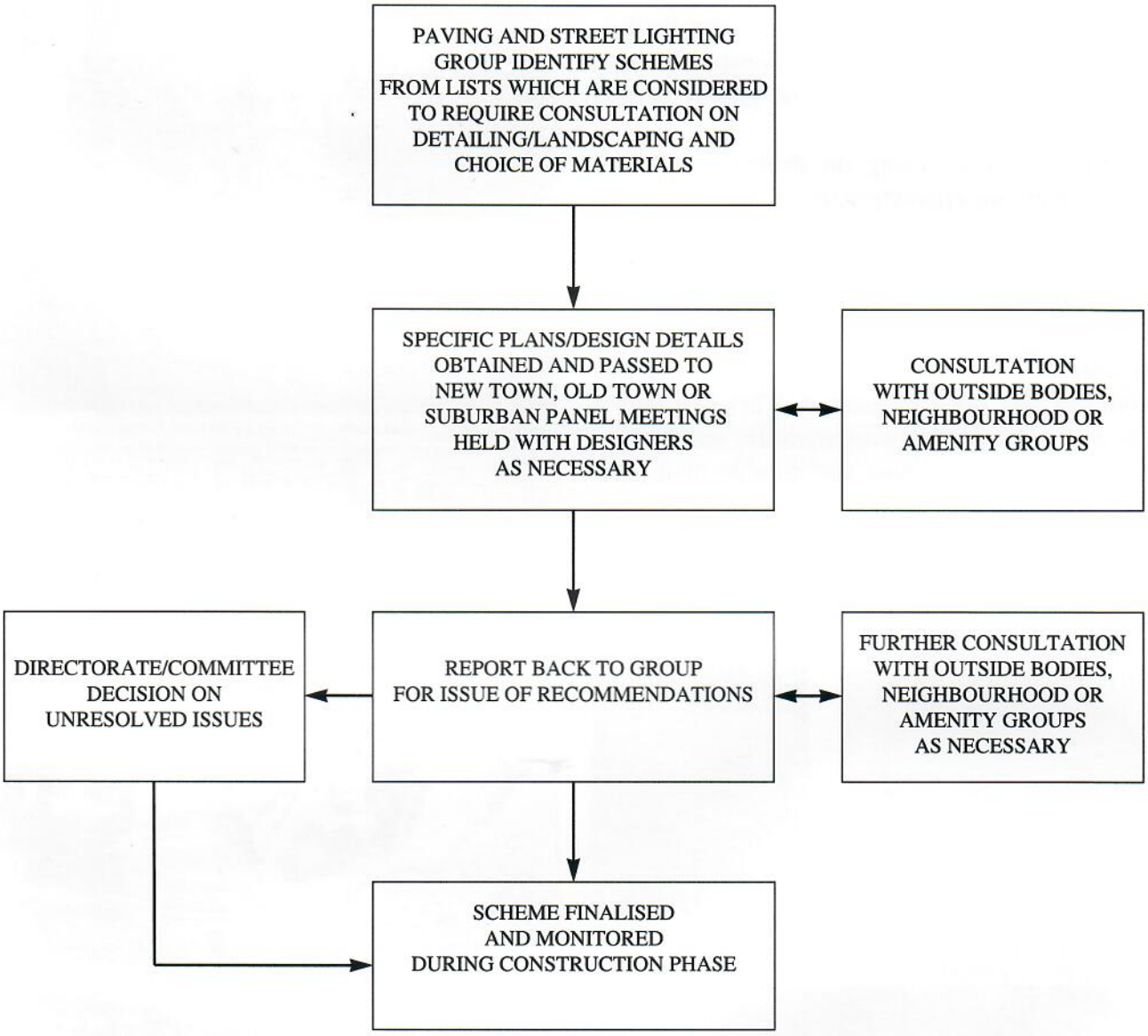
In addition to any statutory requirements to consult, the constituent parties to this manual meet through working groups and discuss any proposal which is likely to materially affect the Edinburgh streetscape.

One such group concerned with Paving and Street Lighting was formed in 1983. It has met regularly to consider conservation policy and programmes of proposed work.

The group agrees grant aid for minor schemes and advises on special construction materials and details. It provides a forum for comment on the design of schemes not subject to consultation through other groups dealing with major projects.

Major projects are dealt with by sub-groups who review the initial, general and detailed designs, timetable, standards of workmanship construction arrangements and overall progress.

THE PROCESS OF CONSULTATION



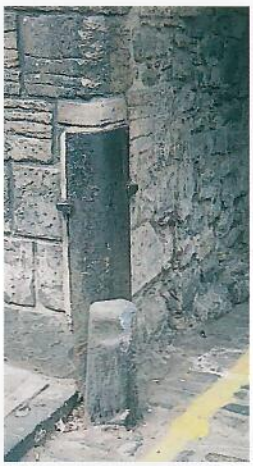
The Paving and Street Lighting Group
comprises representatives of:
Lothian Regional Council, Transportation Department
City of Edinburgh District Council
Historic Scotland
Edinburgh Old Town Renewal Trust
Edinburgh New Town Conservation Committee.

Old Town

The Old Town is the historic heart of Edinburgh. It is formed around the Royal Mile a thoroughfare following the original way from the Castle on the Rock to what is now the Palace of Holyrood House. This roadway has retained much of its ancient pattern of a main street along the ridge with steep closes sloping away on each side. Around the Royal Mile the original dense medieval urban fabric has been penetrated by a series of Georgian and Victorian street improvements: North Bridge, South Bridge, George IV Bridge, Johnston Terrace, Victoria Street, Cockburn Street and Jeffrey Street.

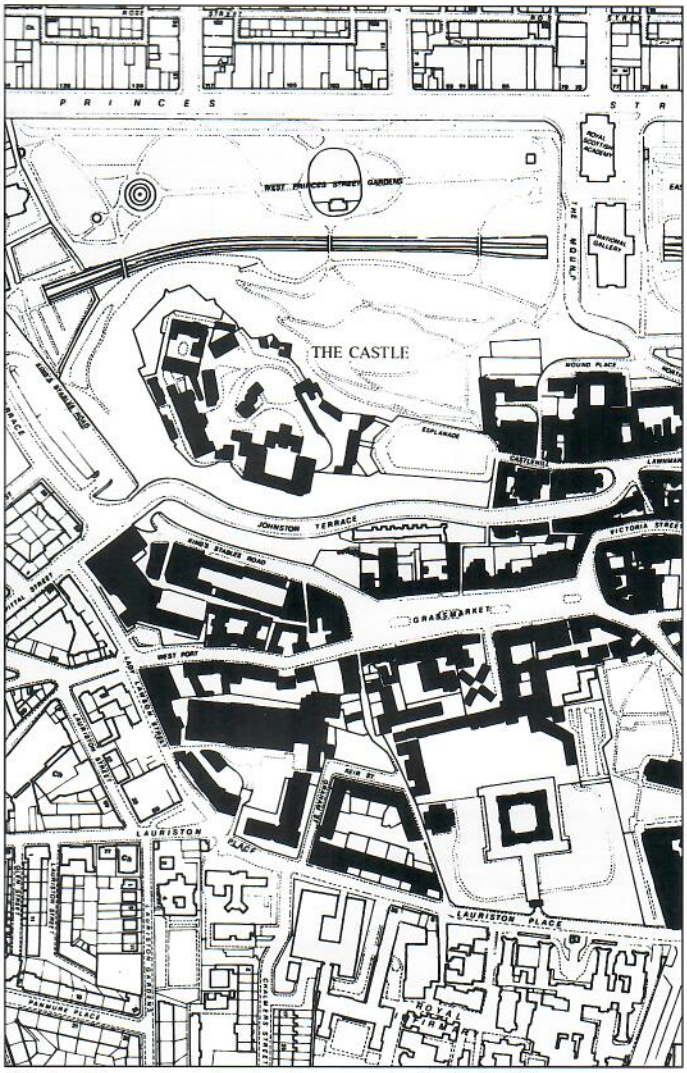
These improvements bring the dramatic changes of level which are characteristic of the Old Town. It is an environment of enclosed streets with occasional distant and breathtaking views and small courts and closes all lined with a rich collection of historic buildings, often of outstanding quality. Over much of the area, the historic paving has survived or has been reinstated. This displays a tradition of high quality workmanship, attention to detail and the use of robust and durable materials, all of which should be sought in new work.

Iron wall lamp, and stone surfaces in an Old Town close

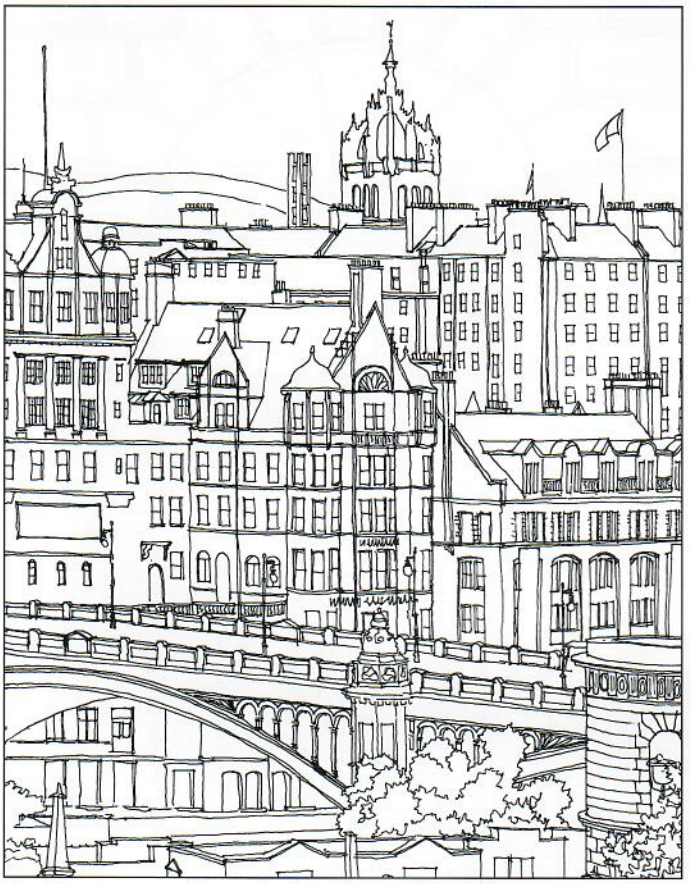


Across the High Street the far arch is protected by a stone bollard

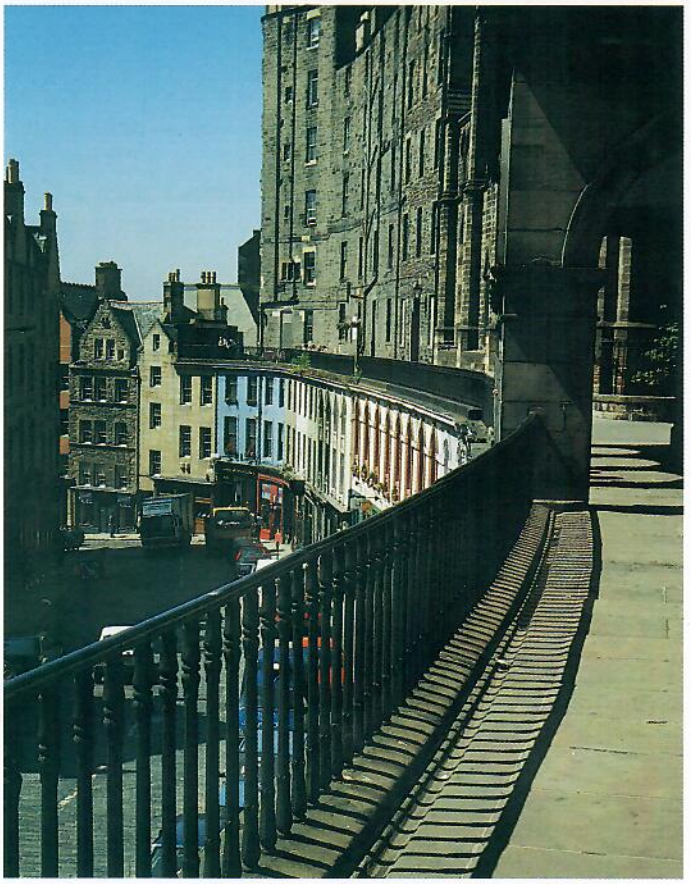
Sett drainage channel, stone retaining walls, iron railings in a close



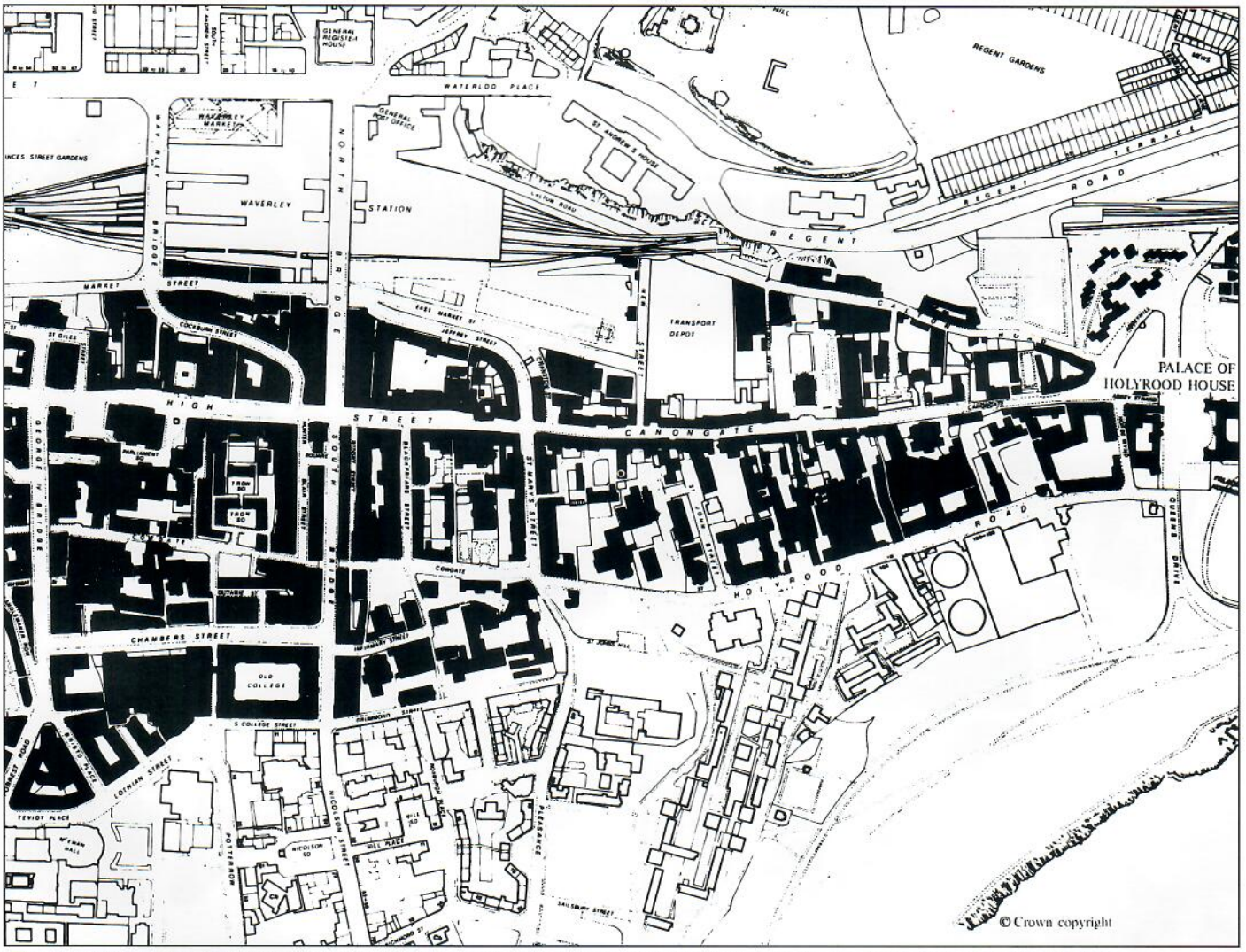
Much of the ancient street pattern remains in the Old Town



Looking across to the vertical emphasis of the Old Town



Victoria Street towards the Grass Market from George IV Bridge



The main street along the ridge follows the original way from the Castle on the Rock to what is now the Palace of Holyrood House

New Town

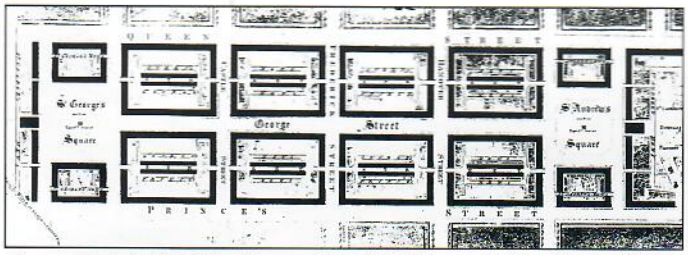
Acknowledged as one of the world's prominent examples of formal urban design, the streets of the New Town were consciously laid out in a geometric pattern, starting in 1767 with James Craig's first layout and developing over the following century.

Most of the area remains intact. Its character is one of strict order, rhythm and symmetry, using a tightly defined vocabulary of materials. This character can be traced in the smallest construction details of a window or door, through the design of a building elevation, to the formal arrangements of terraces and crescents.

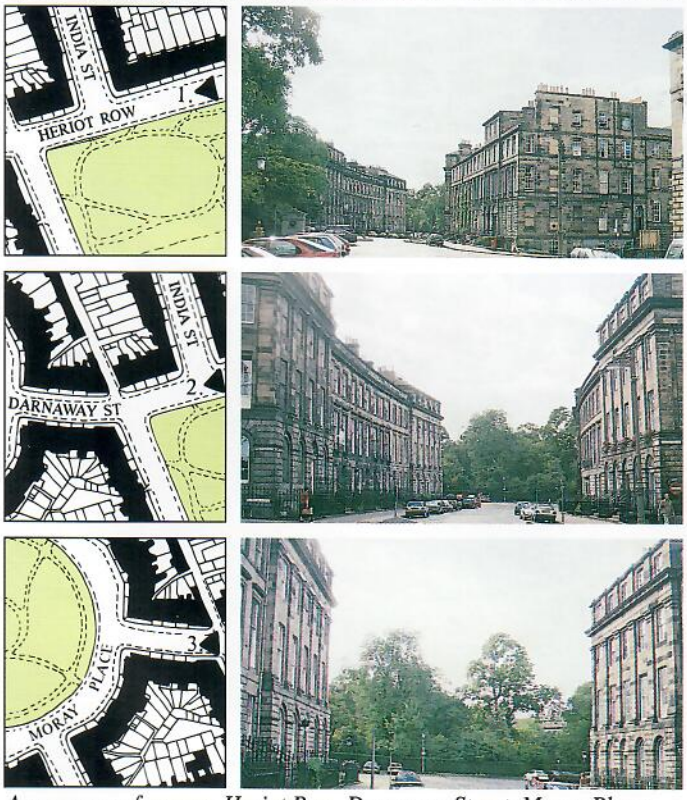
An important part of the New Town's character lies in the traditional detail of its paved surfaces, railings, lamp posts and other street furniture.

Any introduction of new street furniture, or modification of what exists, should be carried out in a way that defers to the ordered character of the area. Therefore as well as being functional and practical it should be part of, and normally visually subordinate to, the more formal features of the street composition.

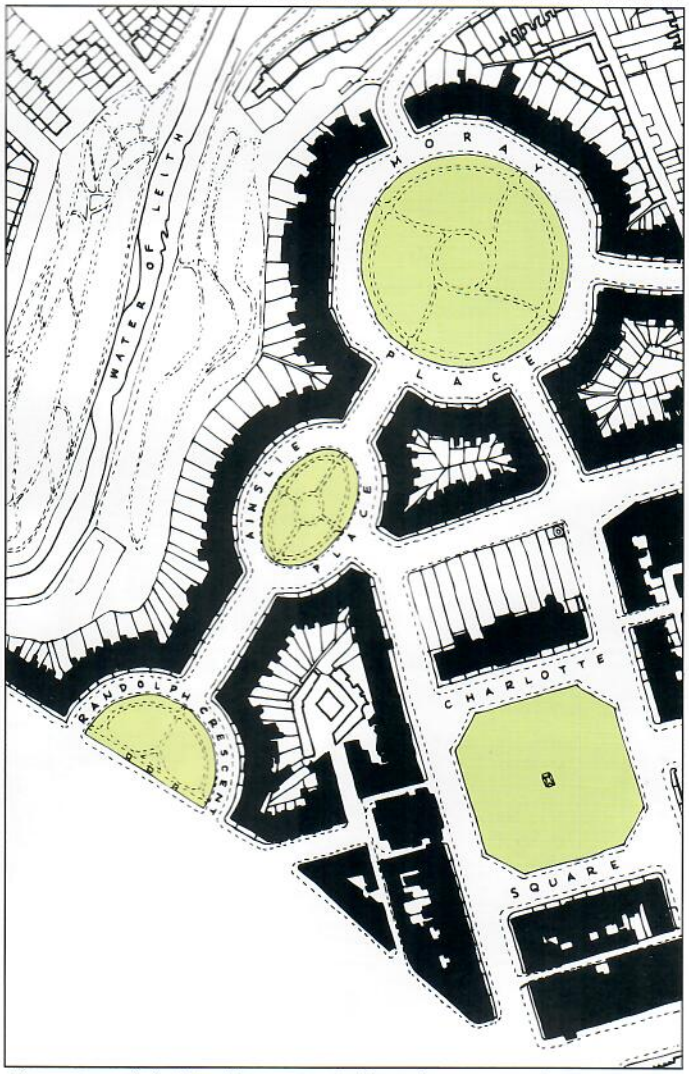
Strict order, rhythm and symmetry in the design of doors and windows



James Craig's first New Town plan of 1767, centred on George Street



A sequence of spaces: Heriot Row, Darnaway Street, Moray Place



The streets of the New Town were laid out in a geometric pattern

Order, rhythm and symmetry extend from the elevation of a whole house and group of houses to a complete terrace or square

The formal groups of buildings, streets and open spaces were begun in 1767 and developed over the following century

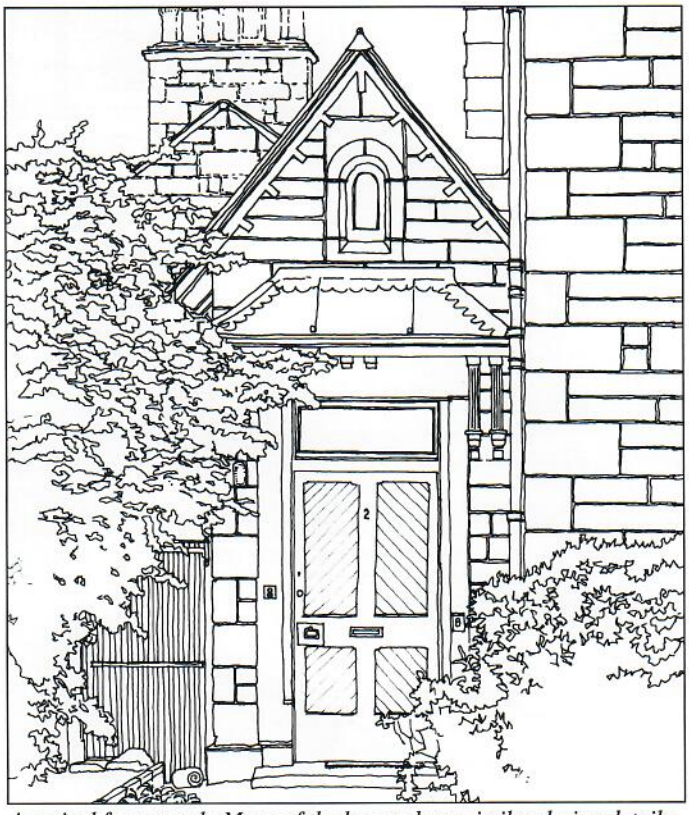
The Grange

The Grange was largely constructed in the nineteenth century. It is an area characterised by individual houses set back from the road behind lush planted front gardens. While the houses are of different sizes and shapes, many have similar design and construction details.

Substantial stone walls of different height stand at the pavement boundary. At the front of the houses, low stone walls of some two feet high, originally with iron railings above, allow views across the flower gardens to and from the entrance doors and the primary rooms. The backs of the houses and the private gardens are protected by high walls of approximately six feet. Solid timber gates of equal height give access for vehicles.

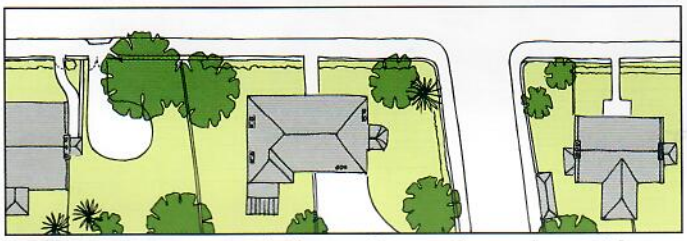
Very little Caithness stone paving remains, although many of the original granite kerbs still exist, including the sharply curved kerbs where private entrances cross the public pavement.

An interesting feature is the way public services have been set into the boundary walls. Electricity equipment boxes as well as traditional red post boxes are tidily recessed into the masonry walls. The design of any new or reinstatement work should recognise that here, as in much of Edinburgh, stone is the predominant construction material, selected in each case to suit its precise purpose: for walls, pavements, kerbs or roads.



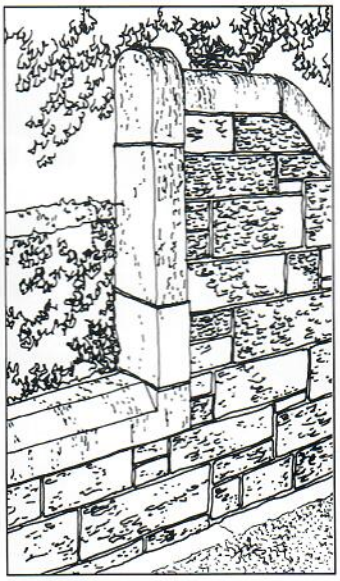
A typical front porch. Many of the houses have similar design details

Stone walls and solid gates protect the private areas of each house

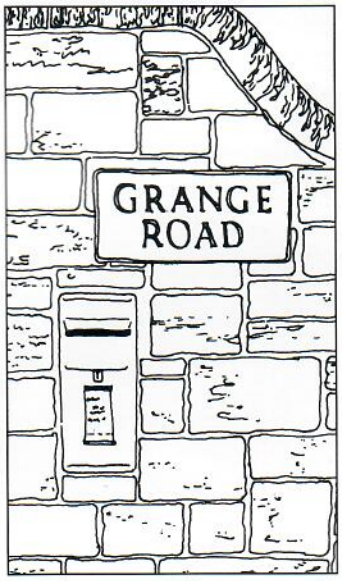


Floral colour contrasts with the muted tones of natural materials

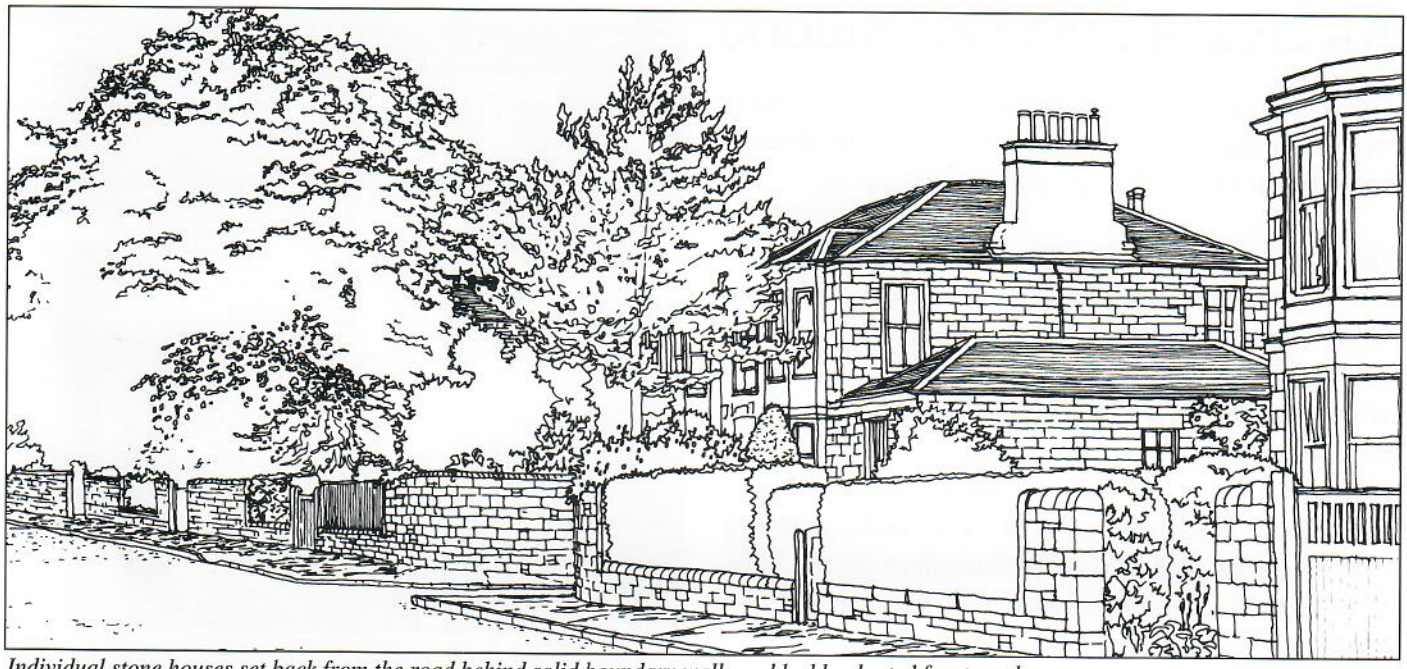
Garden foliage is an essential part of the street scene



Detail of stone wall construction



Post box recessed into stone wall



Individual stone houses set back from the road behind solid boundary walls and lushly planted front gardens

The plan clearly shows individual houses set among private gardens

An area of renewal: Niddrie

The improvement of the quality of life in housing areas is a high priority in the City and the design and upkeep of streetscape plays a large part.

Visual appraisals are therefore incorporated into the design process when areas are redeveloped to cater for modern housing and traffic needs.

In one such area at Niddrie, new traffic calming measures consist of road narrowing with ramps and raised carriageways at entries and T junctions, all within a 20mph speed zone. The traffic calming scheme forms part of a wider initiative by the City of Edinburgh District Council and Scottish Homes to renew housing and regenerate the local economy in an area of deprivation.

The implementation of the traffic scheme relates to the design of the new housing by incorporating similar construction materials.

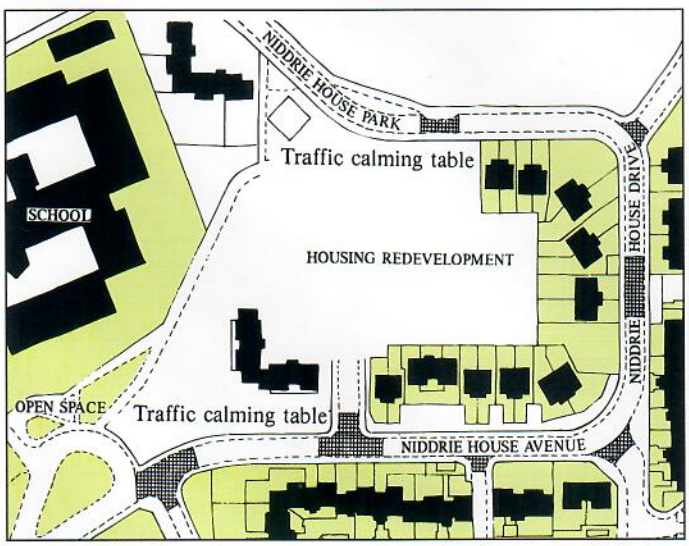
Concrete block paving on the ramps and speed tables resemble the materials used in the new housing and landscaped areas. Street furniture is simplified to reduce visual clutter and to ease on-going maintenance.

High maintenance standards are required to support residents' sense of ownership and concern for their environment. Therefore materials were selected that are durable and economic to replace.

An essential element in the process of design was consultation with the community.

Traffic calming at an internal junction. A consistent approach

Speed table design is co-ordinated with the adjoining buildings



Plan of the traffic calming scheme within redevelopment at Niddrie

An entrance to the estate. Straightforward robust construction

Edinburgh as a whole

INDIVIDUAL LOCAL CHARACTERISTICS

Having appraised four specific areas, consideration should also be given to other parts of the City. All areas will have their own streetscape character, from the largest district such as Leith to the smallest community such as Swanston.

We now consider the visual features which should be identified and taken into account generally across the whole of Edinburgh.

VISUAL FEATURES

Public buildings, churches, libraries, schools etc. are often focal points in a street. They are also places where people meet and so need to be found easily.

Open spaces, public or private gardens or areas of landscape, especially at the edge of the pavement, usually create welcome green openings in the line of buildings.

Local building materials: local stone, brick or render, the way they are used and their colours, should be noted. Previous good enhancement schemes, landscape or improvements to buildings, need to be recognised.

EFFECT OF PAVING AND STREET FURNITURE

The relationship which is seen between these features creates the visual character of an area. The less they are blurred by untidiness and clutter in the foreground, the more they will be appreciated and so contribute to the individuality and charm of their area.

Materials for new street works should follow or blend with those already used locally, rather than introduce a new striking or discordant texture or colour.

New landscape generally should continue the themes of the City, and respect existing green spaces and areas of planting.

VISUAL APPRAISALS IN USE

On the following pages, 14 to 21, there are four examples of the methodology to effect change.

Visual appraisals are used in the design process to carry out some hypothetical changes to carriageway geometry.

Public buildings, there are many in Edinburgh, are often focal points

In many streets of the City

there are opportunities to reduce the clutter of street furniture

Green is a welcome asset, from a small garden to a wide open space

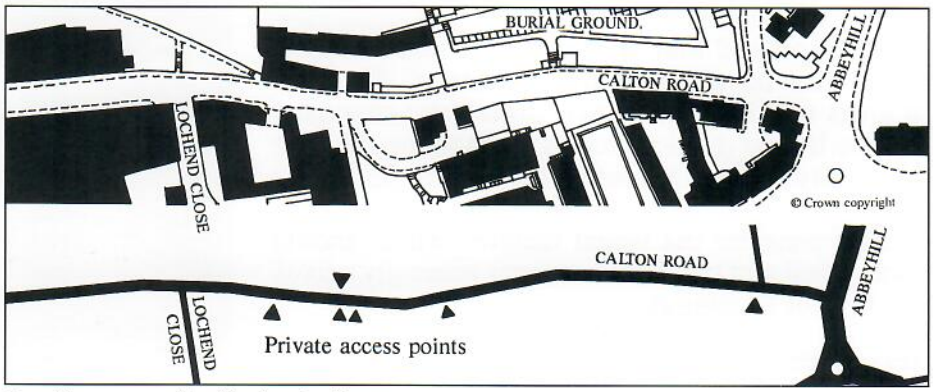
Traffic calming at Calton Road, Old Town

TRAFFIC OBJECTIVES

To encourage slower speeds and reduce danger to pedestrians.

CONSERVATION OBJECTIVES

To carry out traffic measures so that they respect the architectural character and urban design qualities of the area.



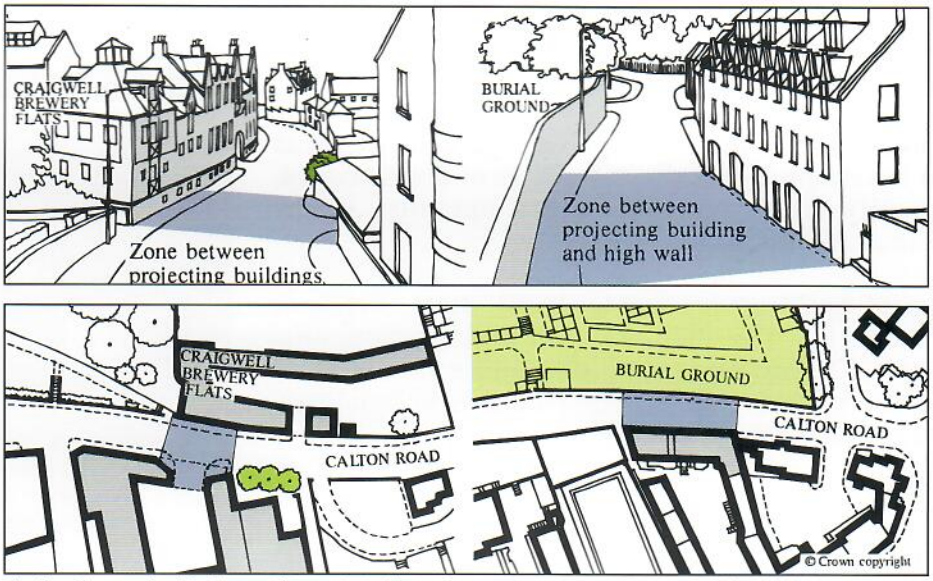
Location map and traffic density diagram

ANALYSIS AND PROPOSAL

Calton Road has many of the typically irregular streetscape characteristics of a medieval town. Buildings and their settings have been designed to fulfil practical functions.

Two traffic pinch points, some fifty metres apart, are desirable at the eastern end of Calton Road to reduce traffic speeds.

The positions selected for the road narrowings are where the irregularities of the townscape can be accentuated and also be used to add emphasis to the change in road width.



A visual appraisal helps to determine where the carriageway narrowings should be positioned

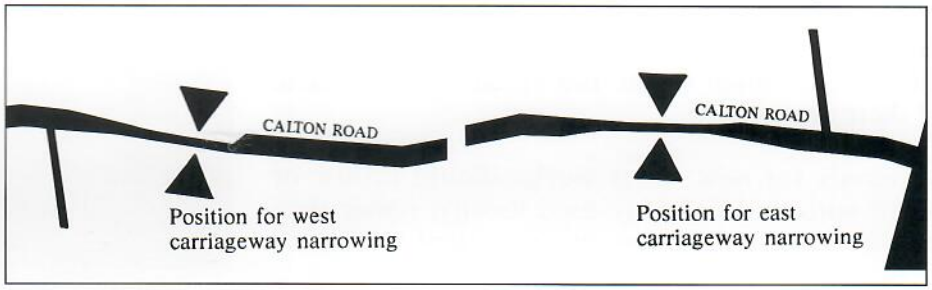
DETAILED DESIGNS

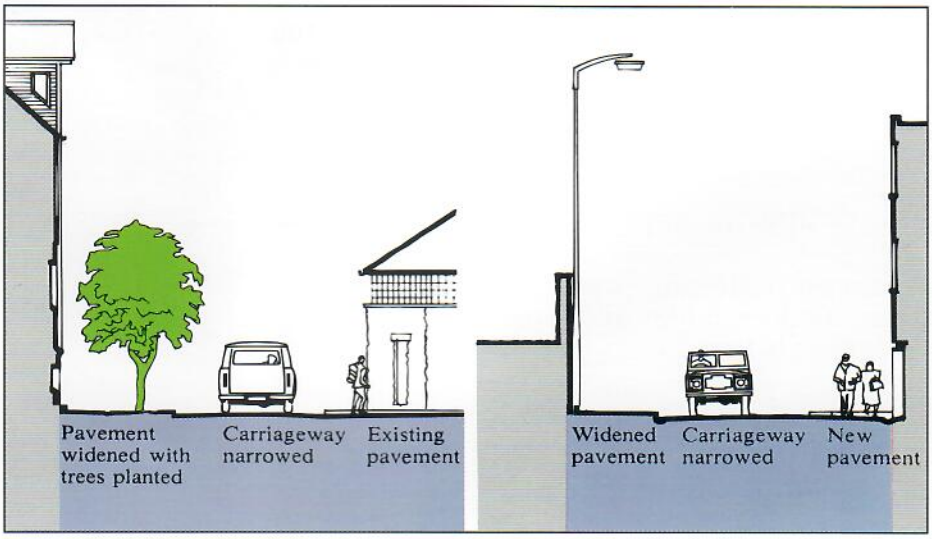
Many people use Calton Road as a route parallel to the Royal Mile. Pedestrians walking in either direction have time to experience the constantly changing views. They can appreciate the foreground features in relation to the traditional stone buildings along the road and the landmarks in the distance. The sequences of views are shown on pages 15 and 38.

Drivers, travelling much faster, need to be warned where the road narrows.

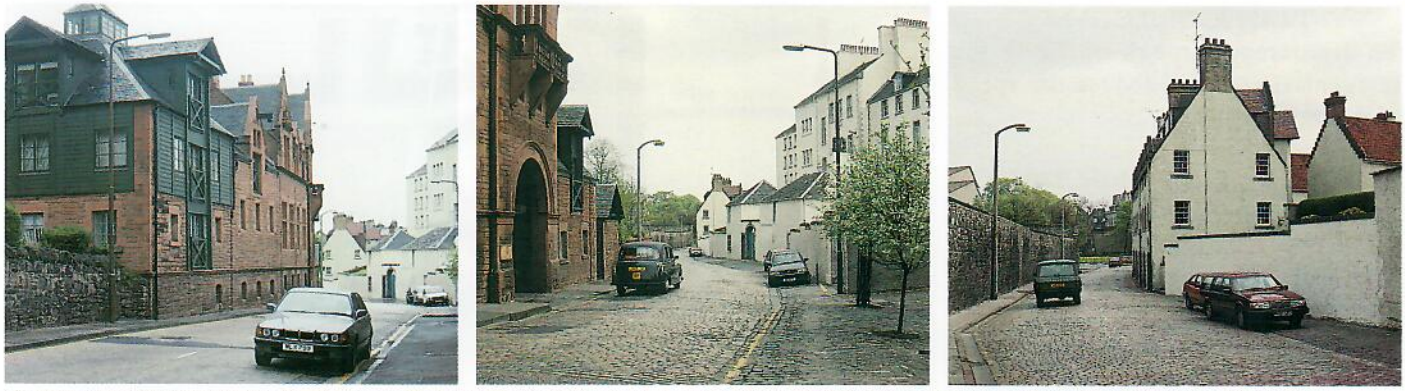
Positioning a narrowing where existing buildings stand forward adds to one of the streetscape characteristics seen by pedestrians. Also, without the need for unsightly traffic signs, it warns drivers of the potential hazard of a narrow road.

Construction details continue the use of stone in ways which have been a tradition in the Old Town for many centuries.

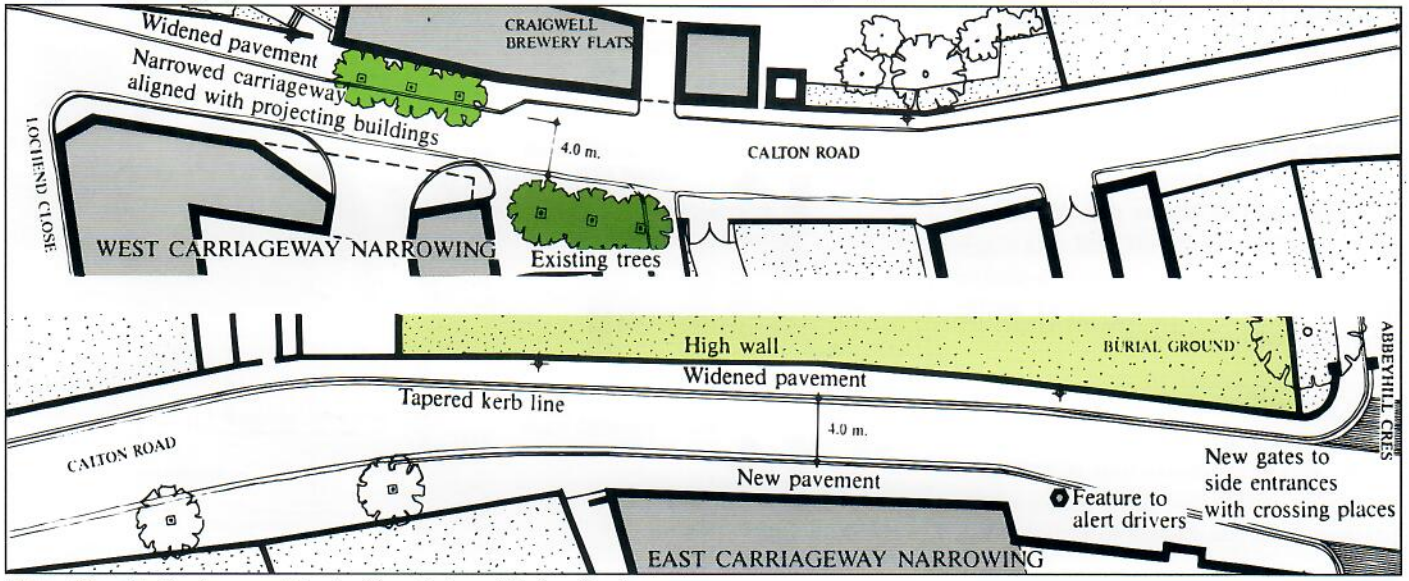




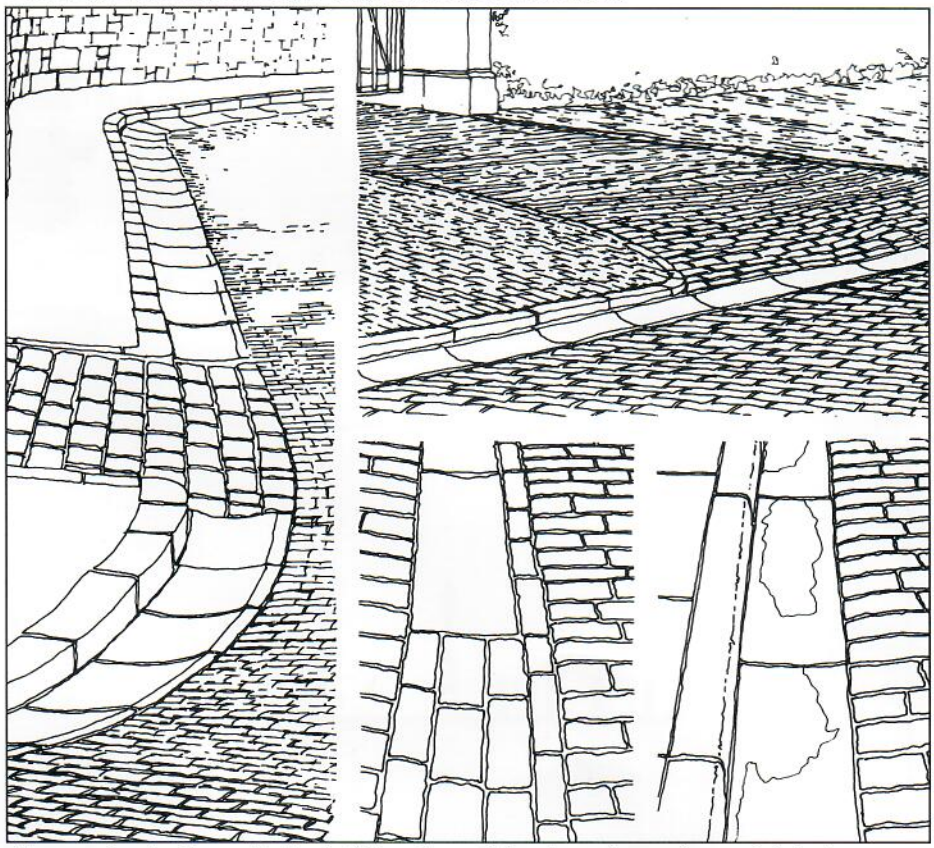
Carriageway narrowings are placed where they are accentuated by the position of the buildings



A sequence of changing views. As you walk down Calton Road towards The Palace of Holyrood House the steep gable gradually appears



Plan of hypothetical proposal for traffic calming at Calton Road



Construction details would closely follow the traditional use of natural materials in the area

CONSTRUCTION DETAILS

Throughout Edinburgh there is a wealth of good traditional examples of the use of local stone for footway and carriageway paving, kerbs and drainage channels.

At Calton Road the existing traditional construction details are noted. Subtle differences in the layout of the kerbs and drainage channels, such as where a private vehicle access crosses the pavement, would be replicated at similar conditions in the proposals.

Examples of traditional stone construction details for kerbs and drainage channels are shown on pages 22 to 29.

Traffic calming at

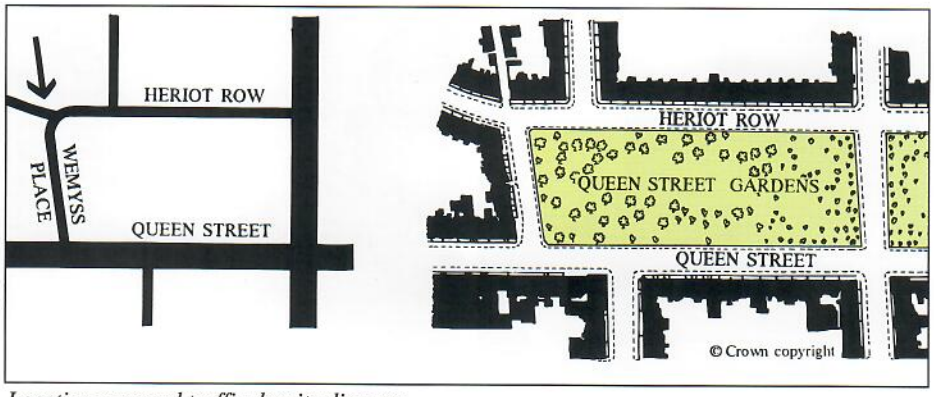
Heriot Row, New Town

TRAFFIC OBJECTIVES

To discourage through traffic in the residential area and reduce the speed of essential vehicles.

CONSERVATION OBJECTIVES

To preserve the street geometry and to accommodate the traffic measures so that they respect the architectural character and urban design qualities of the area: the colour, scale and detail.



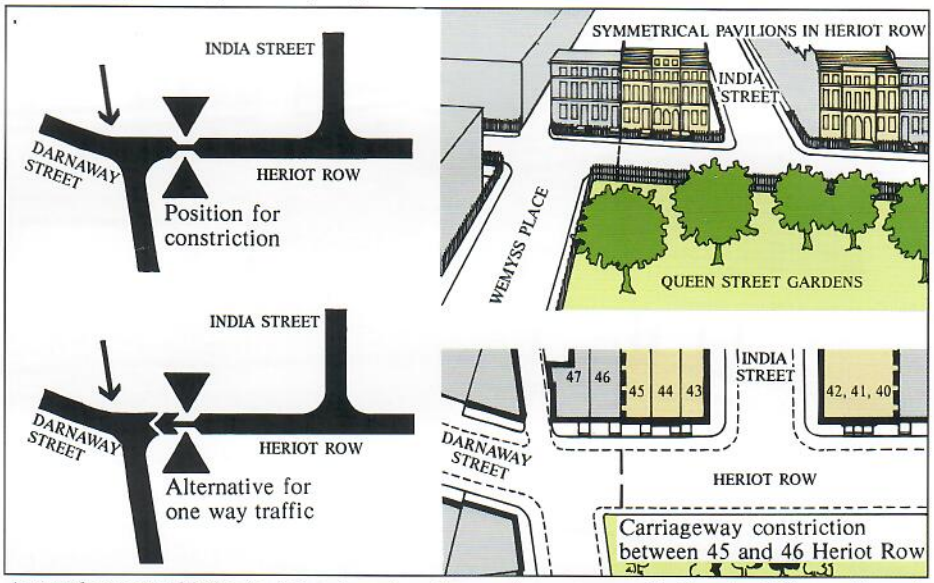
Location map and traffic density diagram

ANALYSIS AND PROPOSAL

The most effective position for a traffic calming device in Heriot Row is between India Street and Wemyss Place, that is between 43 and 47 Heriot Row.

A visual analysis shows that 43, 44 and 45 Heriot Row were designed as a single symmetrical pavilion to match a similar pavilion formed by 40, 41 and 42, on the other side of India Street.

As a general rule, the least change and the less that is put in the carriageway the better. But if a constriction is needed it should be positioned at the edge of the pavilion: between 45 and 46 Heriot Row.



A visual appraisal helps to determine where the carriageway constriction should be positioned

ALTERNATIVE DESIGNS

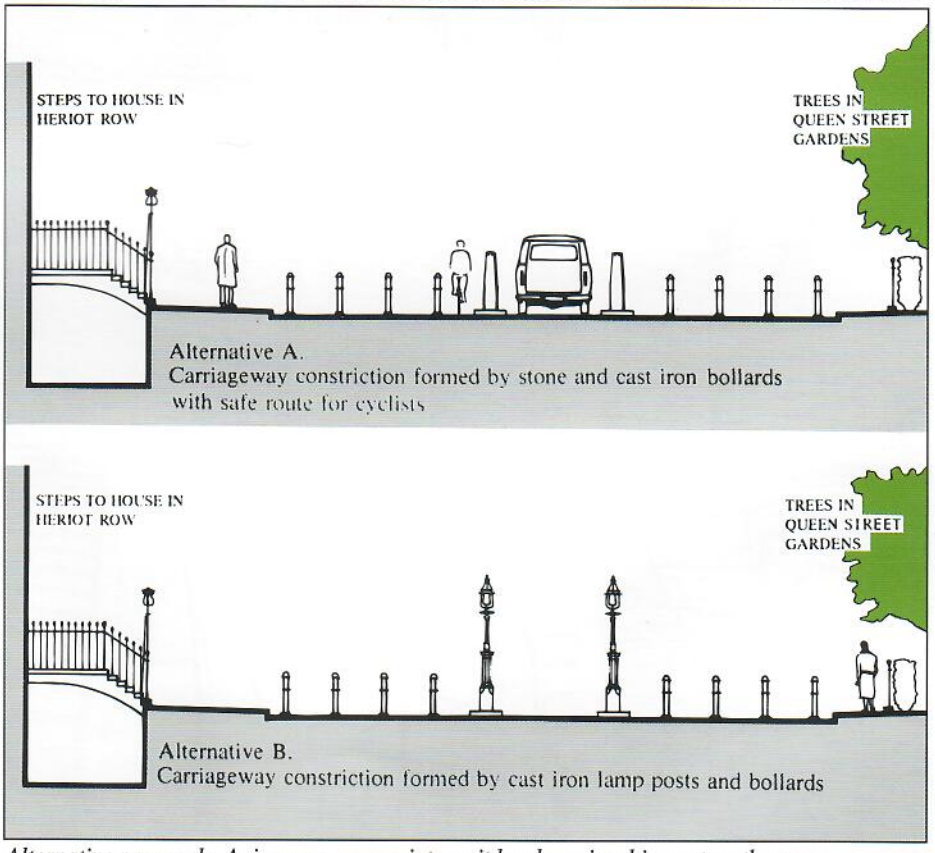
Two alternative designs were considered. Both respect the formality of the New Town by being placed centrally between the original pavement kerbs:

A. Robust stone bollards at the road narrowing, flanked by iron bollards. The stone bollards to be similar to those at Charlotte Square, page 32.

B. A more elaborate proposal. Lamp posts, patterned on the examples at the National Gallery, flanked by bollards.

Of the two, A. is more appropriate. It is simple and has the least visual impact on the regularity of the New Town or the sequence of views from Heriot Row, through Darnaway Street to the enclosed space of Moray Place, page 8.

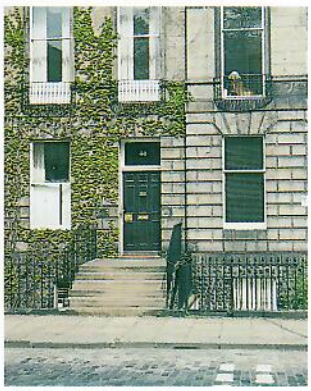
The design approach of B. might be appropriate elsewhere, in which case the lamps would be chosen with equal care to be suitable for the location.



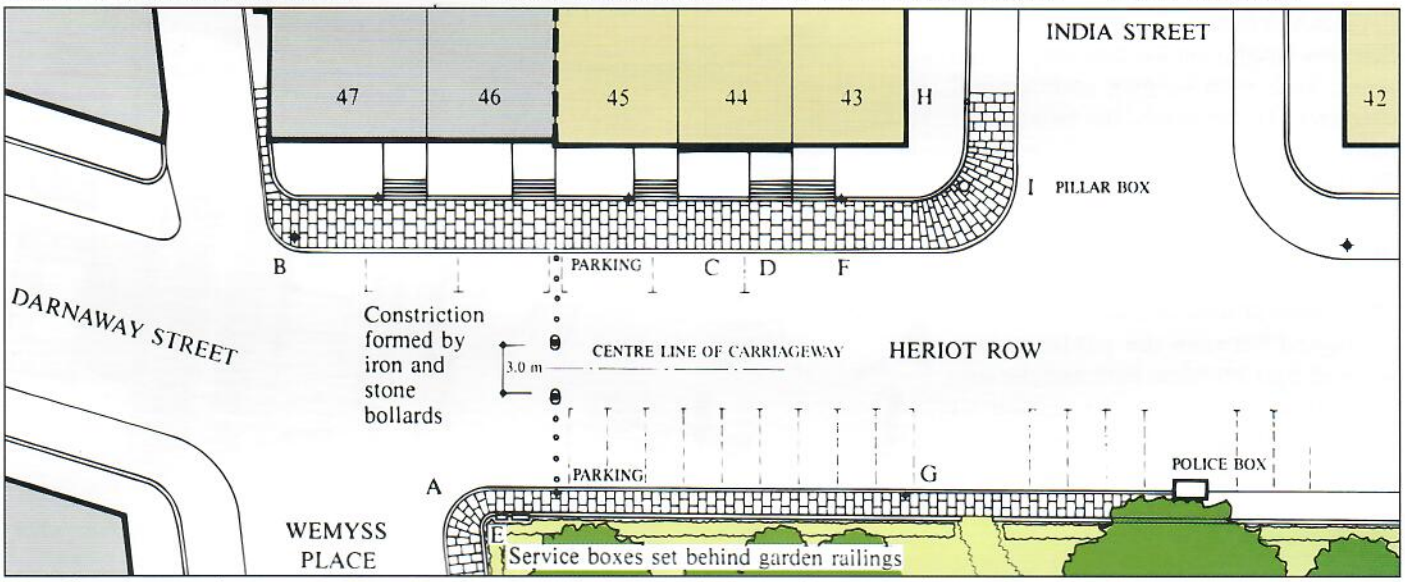
Alternative proposals. A. is more appropriate as it has less visual impact on the area

Queen Street Gardens at Heriot Row

45, 44 & 43 Heriot Row match 42, 41 & 40, beyond India St.



46 & 45 Heriot Row



Hypothetical proposal to constrict Heriot Row between India Street and Wemyss Place, precisely at the boundary of numbers 45 and 46

Detailed sketches of lamps at the National Gallery

ON-GOING IMPROVEMENTS AND MAINTENANCE

A. to I. on the layout plan above refer to the application of the on-going policies and practices which are dealt with on subsequent pages:

In this proposal, no changes are intended for the kerbs and drainage channels. If there were, the existing construction details would need to be recorded and incorporated into the specification of the proposal. An example is on page 27.

Traffic calming at

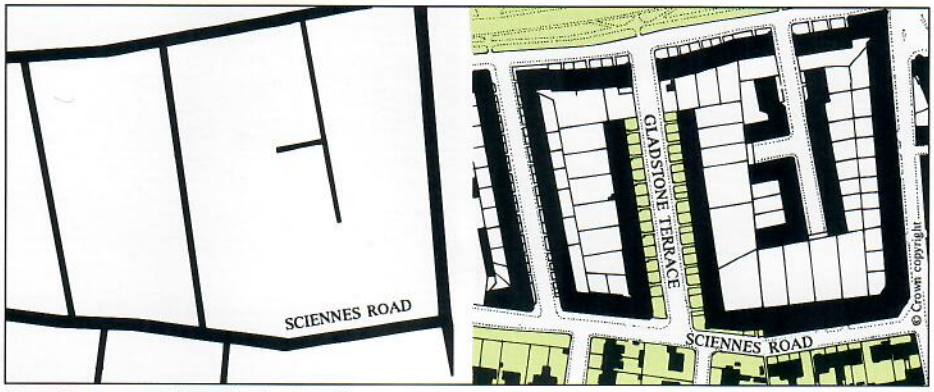
Sciennes Road, the Grange

TRAFFIC OBJECTIVES

To reduce or calm the speed of traffic by constricting the width of the carriageway.

CONSERVATION OBJECTIVES

To integrate the design of the constriction so that it looks as though it had always been there.

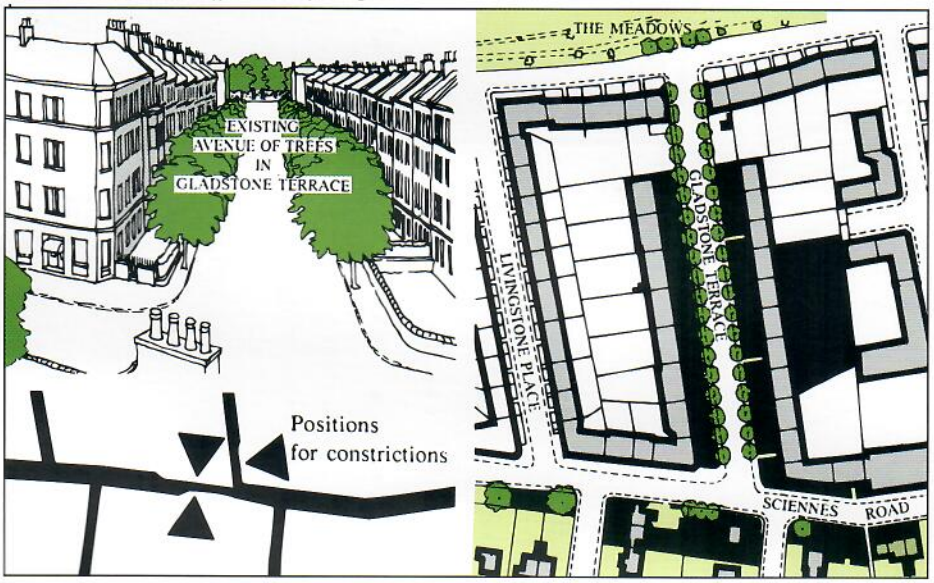


Location map and traffic density diagram

ANALYSIS AND PROPOSALS

Sciennes Road is on the boundary of two areas, each with its own architectural character. To the south, the Grange has individual houses surrounded by gardens. To the north there is a more urban, tenemented form which includes the shops on Sciennes Road.

The avenue of trees in Gladstone Terrace is aligned between the public garden gates of East Meadow Park and the side wall of the house at the corner of Sciennes Road and St. Catherine's Place.



A visual appraisal helps to determine the form of the carriageway constriction

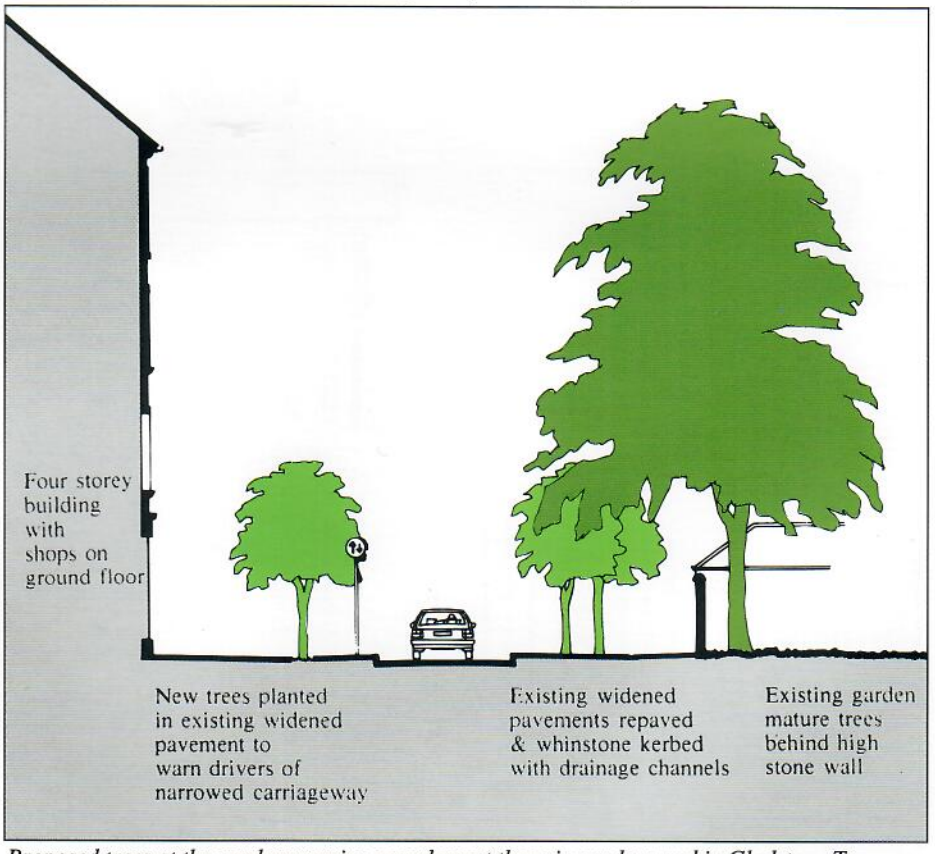
DETAILED DESIGNS

Widened pavements to form the road constriction are positioned to continue the line of the kerb in such a way that it appears to be a natural extension of Gladstone Terrace.

The position of new trees respect the existing avenue in Gladstone Terrace which are in line with the gable of the house at the corner of St. Catherine's Place.

One side of Sciennes Road has concrete slab pavements. The other has an asphalt surface. Very little of the original stone paving material remains. It is possible that in the future concrete slabs may be used to replace the asphalt.

New paved areas have concrete slab surfaces that extend the materials of existing pavements. The paving slabs are cut to the radius of the corners as shown on page 22.

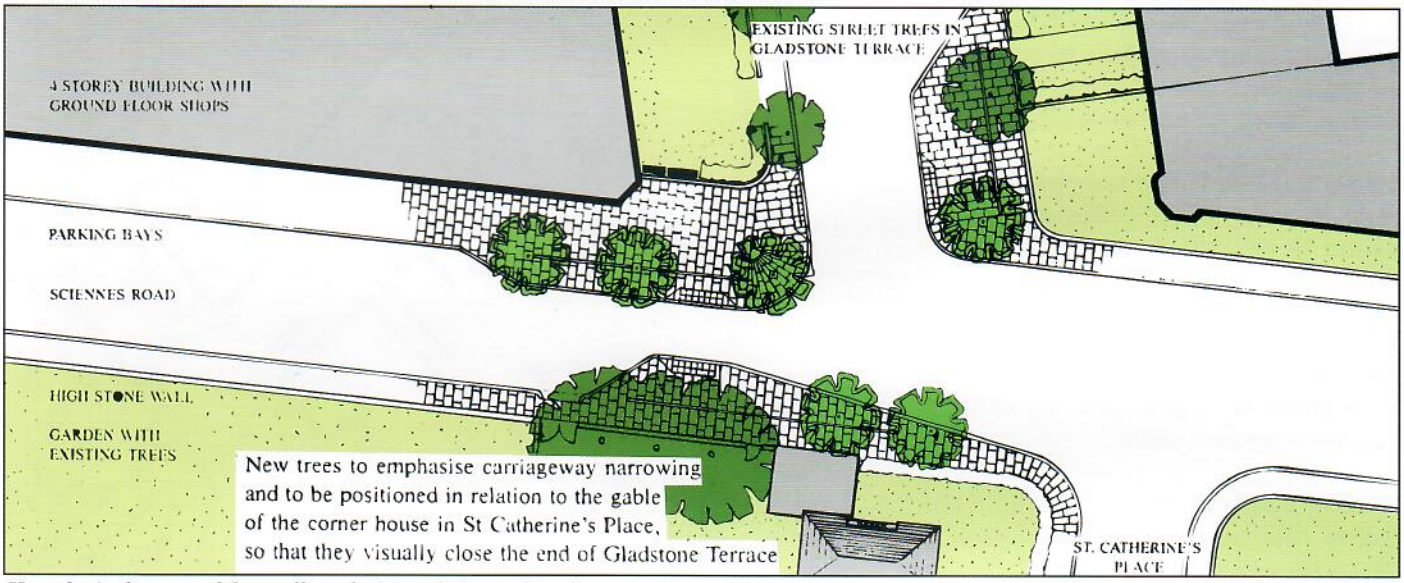


Proposed trees at the road narrowing complement those in gardens and in Gladstone Terrace

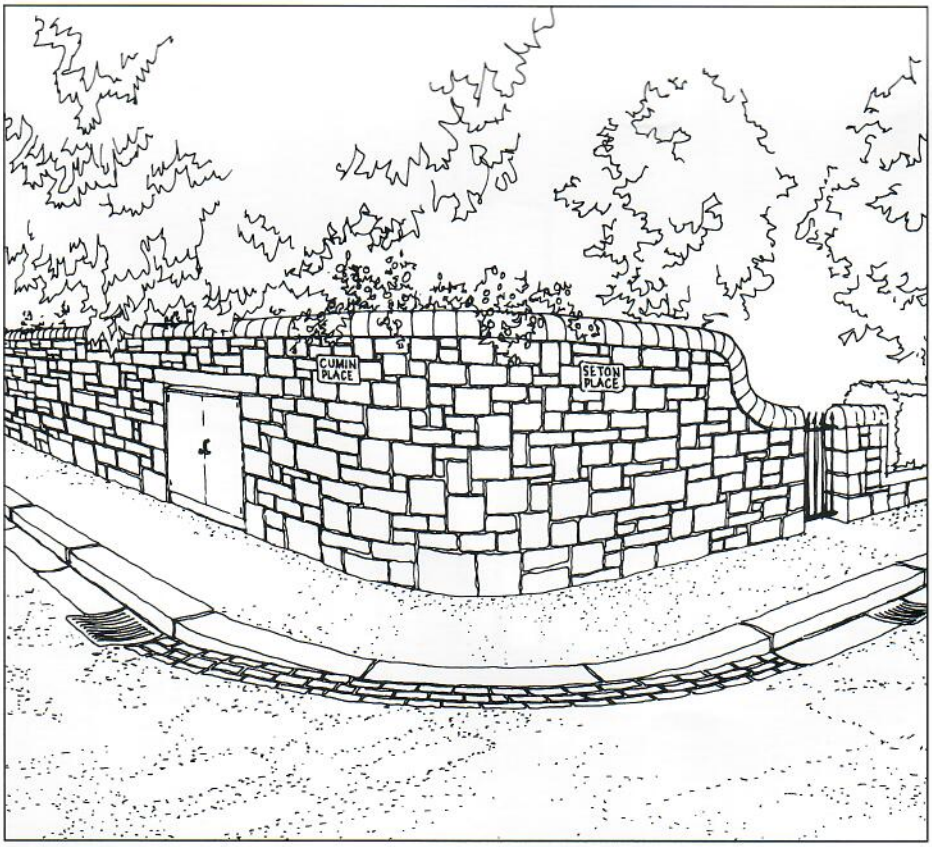
Lush planting in front gardens

Avenue of trees in Gladstone Terrace

House at the corner of St Catherine's Place



Hypothetical proposal for traffic calming at Sciennes Road



Local traditions for the detailing of drainage channels and the position of equipment boxes

NEW CARRIAGEWAY GEOMETRY

Apart from respecting the streetscape characteristics of the location, the new geometry of the carriageway is intended to be obvious and safe for drivers.

Additional unsightly permanent traffic signs should not be necessary.

SIGNAL CONTROL BOXES & EQUIPMENT BOXES

The tradition in the area for recessing equipment boxes into adjacent garden walls could be continued. This is less visually obtrusive and does not cause an obstruction on the public pavement.

Traffic calming at

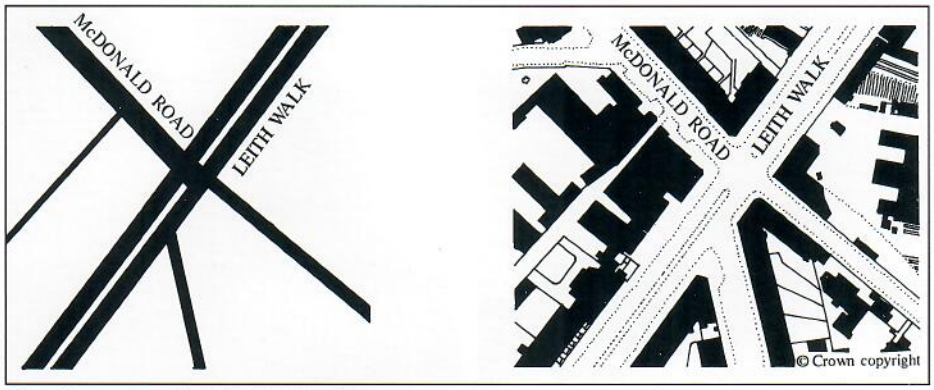
McDonald Road, Leith Walk

TRAFFIC OBJECTIVES

To introduce a further traffic constriction by narrowing the carriageway at the junction of a main road, to calm the speed of traffic in the secondary road.

URBAN DESIGN OBJECTIVES

To respect and enhance the architectural character of the area and maximise the use for pedestrians of any extension to public pavements.



Location map and traffic density diagram

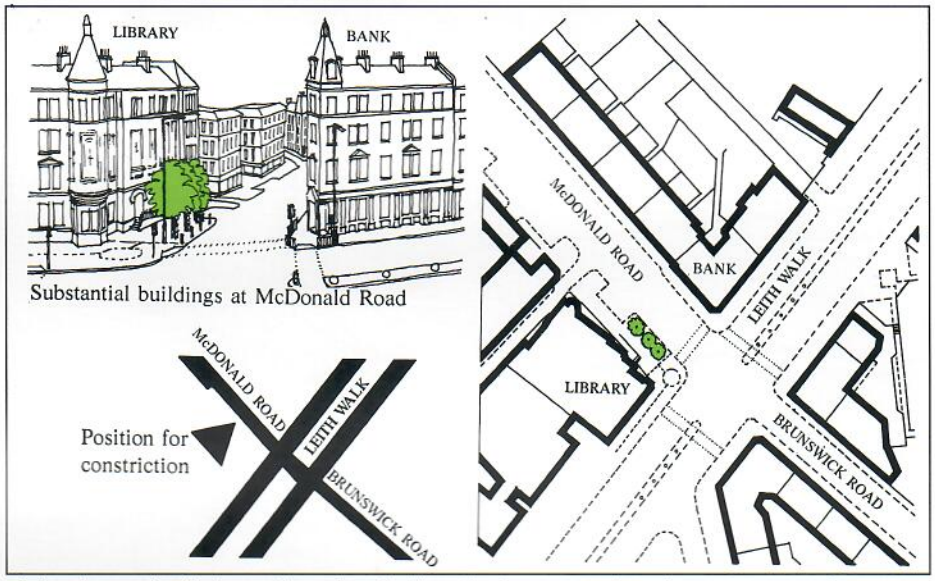
ANALYSIS AND PROPOSAL

A public library of architectural merit stands to the south, in front of which there is some recent landscaping.

Heavy flows of traffic and pedestrians meet at the cross roads. The inevitable clutter of equipment and traffic signs should be tidied up.

Street furniture could be co-ordinated and workmanship for maintenance or new work should be as good as at any of the City's conservation areas.

There are opportunities to extend the paving and continue the design theme of the previous enhancement scheme.



A visual appraisal helps to determine the form for the proposed carriageway narrowing

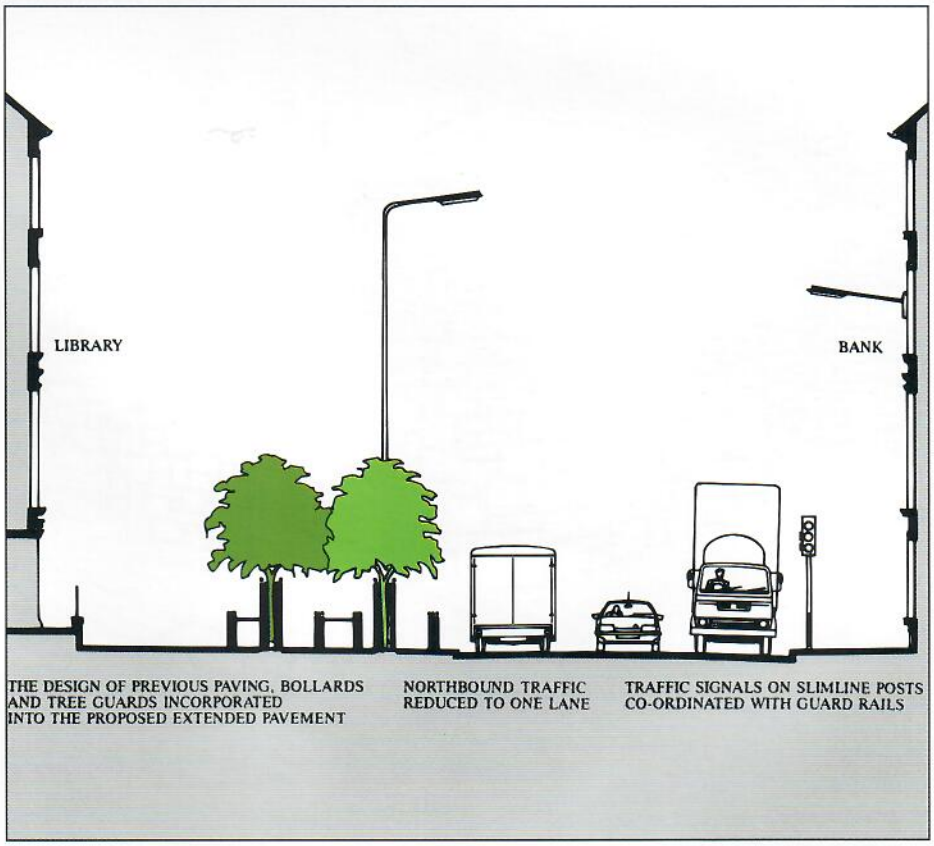
DETAILED DESIGNS

In traffic terms the problem is relatively straightforward. The carriageway is to be narrowed. Large vehicles have to be able to negotiate the corner and pedestrians need to cross safely.

Within the previous ten years an earlier traffic and landscape scheme at the same location had widened the pavement to provide a paved area with trees to form a better setting at the library entrance.

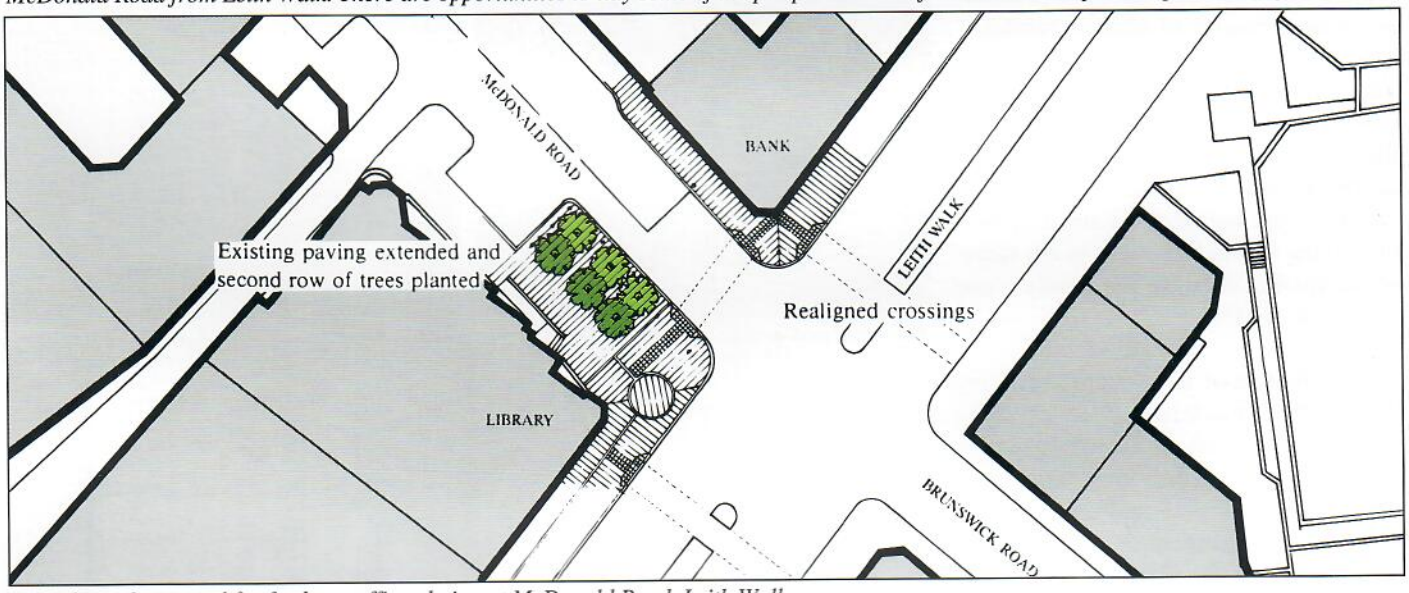
The design drawings of this previous scheme are studied to ensure that the detailed design of the new carriageway proposals appear as a natural extension. The drawings indicate a range of specially designed tree guards, bollards and a paving slab layout all based on the motif of a sphere.

The new proposal adopts these design ideas by further extending the pedestrian space at the library entrance with similar landscape details.

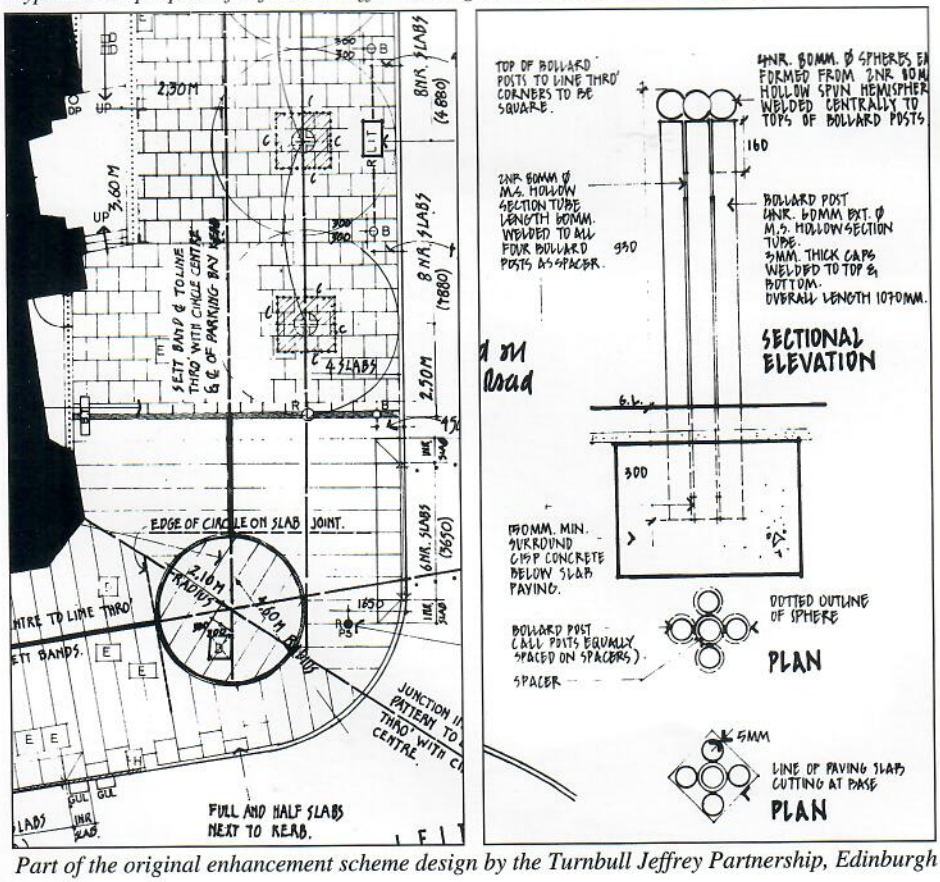


The proposed widened pavement is designed to extend the previous good enhancement scheme

McDonald Road from Leith Walk. There are opportunities to tidy some of the peripheral street furniture and respect the previous improvements



Hypothetical proposal for further traffic calming at McDonald Road, Leith Walk



Part of the original enhancement scheme design by the Turnbull Jeffrey Partnership, Edinburgh

ON-GOING POLICIES & PRACTICES

The four examples of the methodology to effect change rely upon a series of on-going joint policies and practices. These ensure that the changes are effectively carried out and maintained.

The policies and practices are described on the following pages.

For instance the desirable action with regard to the streetscape elements at McDonald Road would include:

* Reduce sign and sign support clutter by co-ordinating street furniture, page 32.
* Further reduce the appearance of clutter by matching street furniture colour to an Edinburgh theme, page 34.
* Consider opportunities to create visual compositions. Some examples are shown on page 36.
* Generally allow the library to continue to visually dominate the area, a theory explained more fully on page 38.

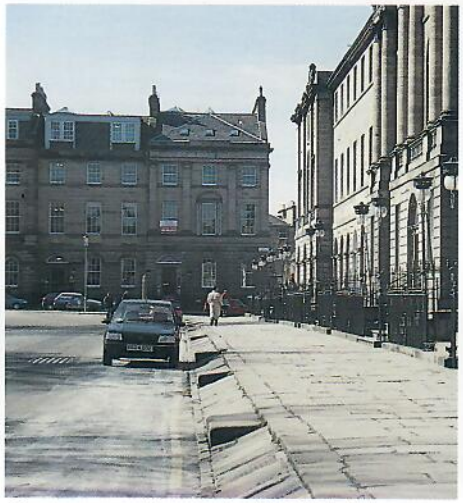
The design and workmanship of pavements often set the tone for an area. In some locations high quality natural stone paving is justified. But high standards of layout and construction are important throughout the whole City.

Natural stone paving slabs, extensively used in Georgian and Victorian times, have an uninterrupted smooth surface which complements the intricate design of buildings. The large stone slabs are shaped and laid with the same precision as the stone courses of adjacent houses.

The slabs are aligned to the pavement direction in random width courses across the pavement. Odd sizes are cut on the inside of the pavement and shaped to the profile of the building. At street corners the paving is usually set out to the radius of the corner. Slabs are cut tightly round inspection covers.

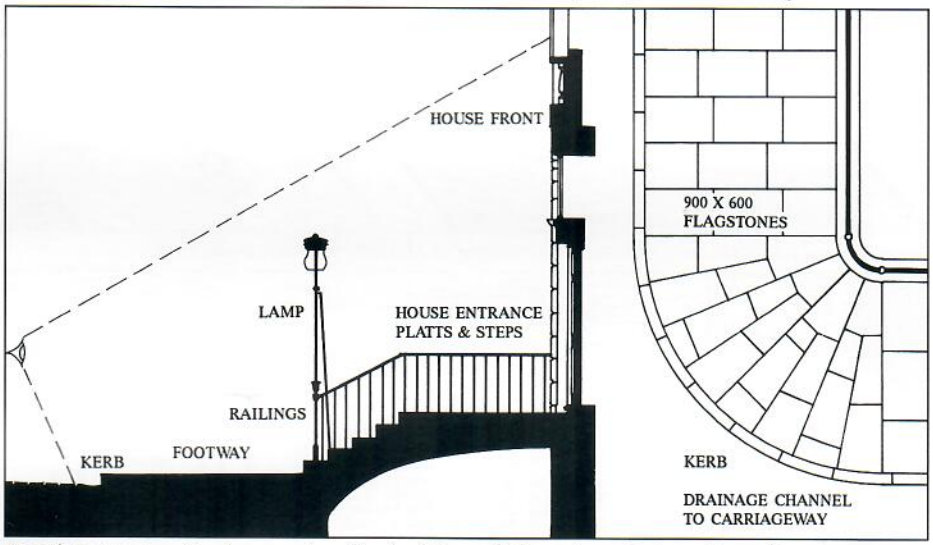
Where the use of natural stone can not be justified, modern concrete paving normally continues this tradition. Large concrete slabs, 900mm x 600mm, retain the scale of stone slabs and are a practical alternative. But the same care is taken to shape and fit the slabs.

If vehicles are likely to cause damage, the slabs are strengthened with a base of in situ concrete.



Pavement and houses in Charlotte Square

Radiused paving slabs in the High Street



Good paving is noticed as much as fine buildings. Slabs cut precisely to the radius of a corner

Slabs are cut accurately at inspection covers and 'Tobys'. Cutting slabs is a highly skilled craft and tools are not allowed to over run the surface of a slab. The filled space at the edge of the covers should not exceed 10mm and should be the same width each side.

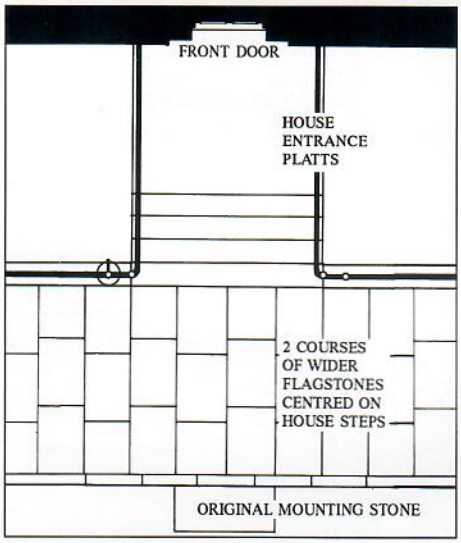
Additional posts or structures are often needed in the pavement. If so, the slabs are cut neatly to their profile, or the posts or structures are inserted through a hole or slot in the slabs.

Natural stone slabs being lifted by machine

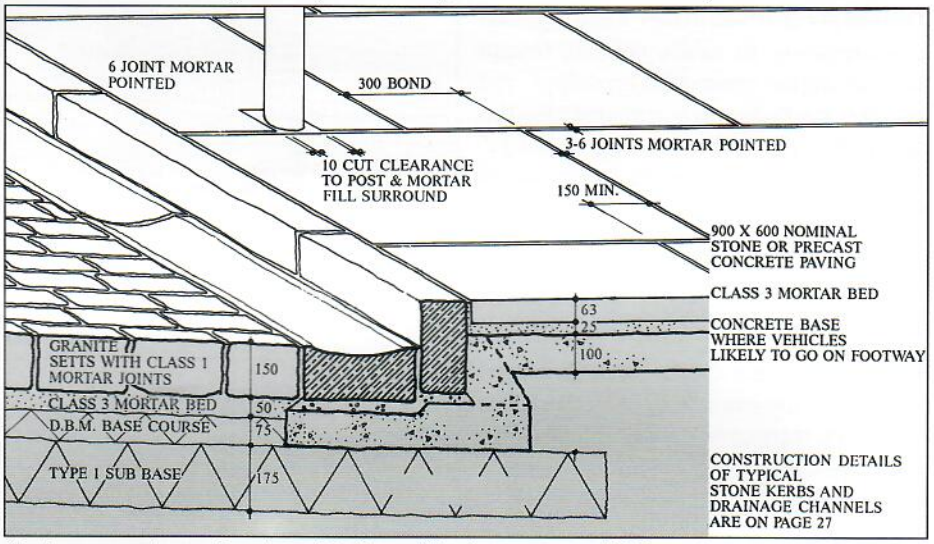
Cutting concrete slabs at an inspection cover

PAVEMENTS (FOOTWAY PAVING)

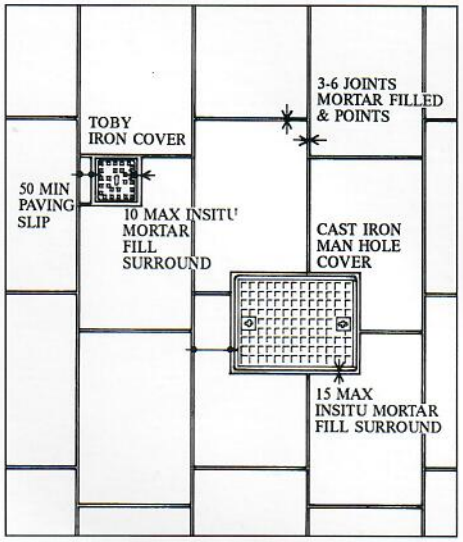
The layout of the pavement slabs at Charlotte Square is centred on lines from the front doors of the houses to the mounting stones at the kerb



Pavement slabs centred on front doors

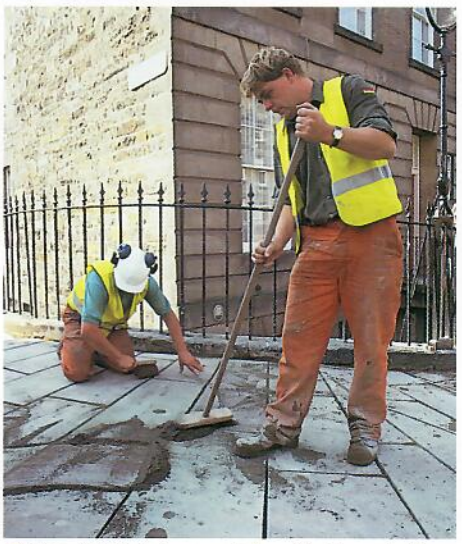


Setting out paving and cutting slabs for traffic sign posts etc. All dimensions are in mm



Cutting slabs at Tobys and inspection covers

Filled space round Tobys is 10mm maximum



Filling joints between slabs with dry pointing

Construction details and workmanship are very noticeable. They can be appreciated particularly at places where there is a change in the level or the surface treatment of a pavement.

To overcome the City's many hills, Edinburgh's craftsmen have developed some fine traditions in the construction of steps and stairways. In the historic areas of Edinburgh, steps are constructed from large solid slabs of stone. Several alternative designs can be seen. A few examples are shown on these pages.

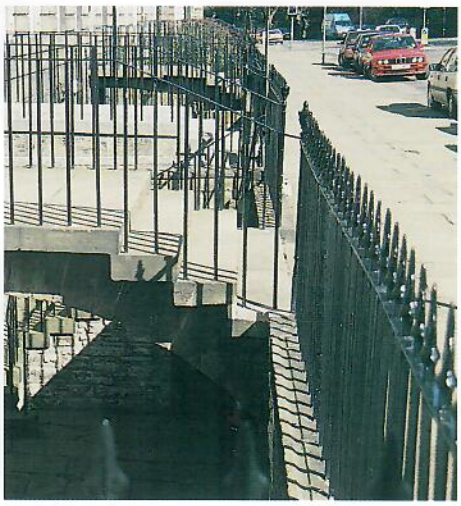
Where handrails are incorporated they are supported by vertical bars leaded into each tread. At narrow steps the wrought iron handrails, traditionally painted black, are fixed directly to adjacent walls and follow the incline of the steps.

People with disabilities need special consideration. At zebra, pelican, toucan or other signal controlled crossings, red tactile surfaces are normal on the dropped kerbs and across the footway. At other crossings where tactile paving is needed, and if appropriate at controlled crossings, buff or stone coloured tactile paving 800mm wide on the dropped kerb, may be more suitable.

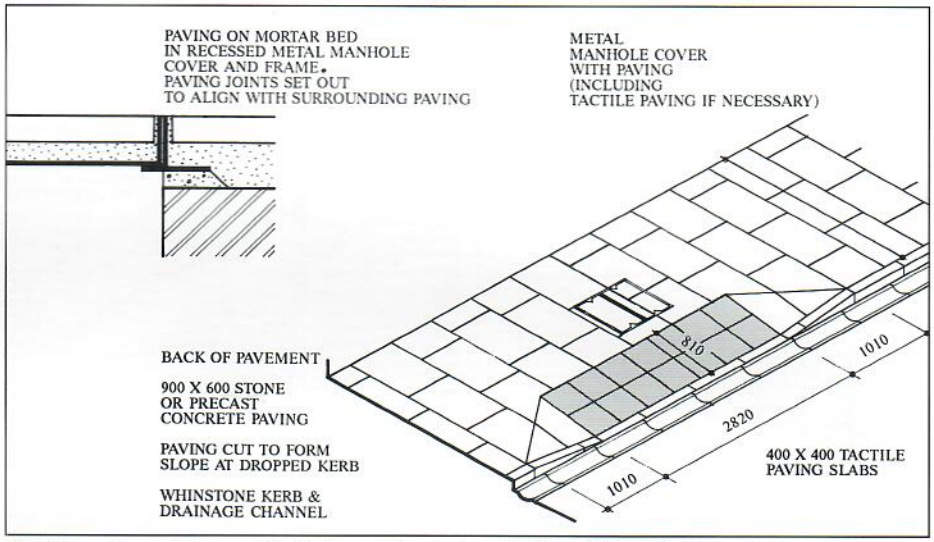
The tactile surface can be made in natural stone. Unintended visual distortions caused by inspection covers can be overcome by continuing the tactile surface within the depth of an inspection cover.

Drainage channels, pavement lights to cellars or other interruptions to smooth footway surfaces are often necessary. They can be incorporated into the paving so that they form part of the overall design and continue the visual rhythm of the paved surface.

Typical flying buttress arches supporting steps



Steps overlap the one below

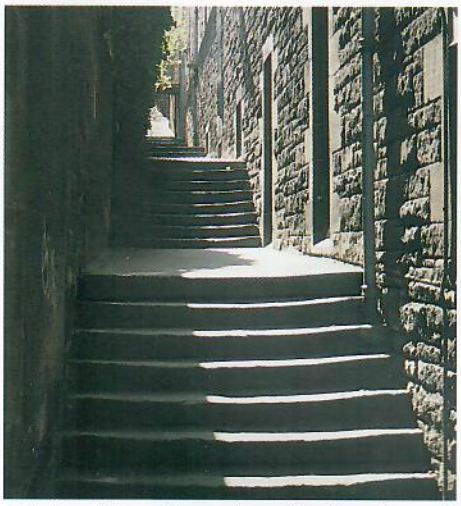


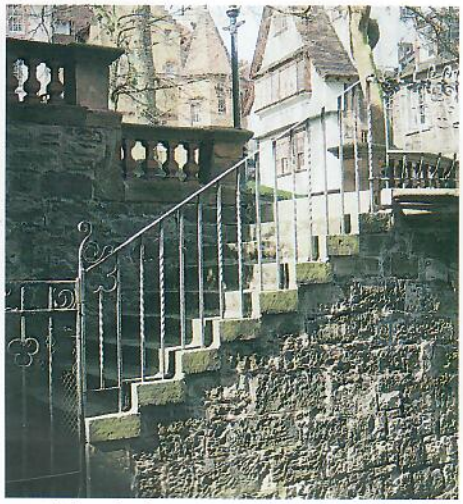
Tactile surface at dropped kerbs to assist people with disabilities. All dimensions are in mm

Laying setts against drainage channel

Grating fits into width of drainage channel

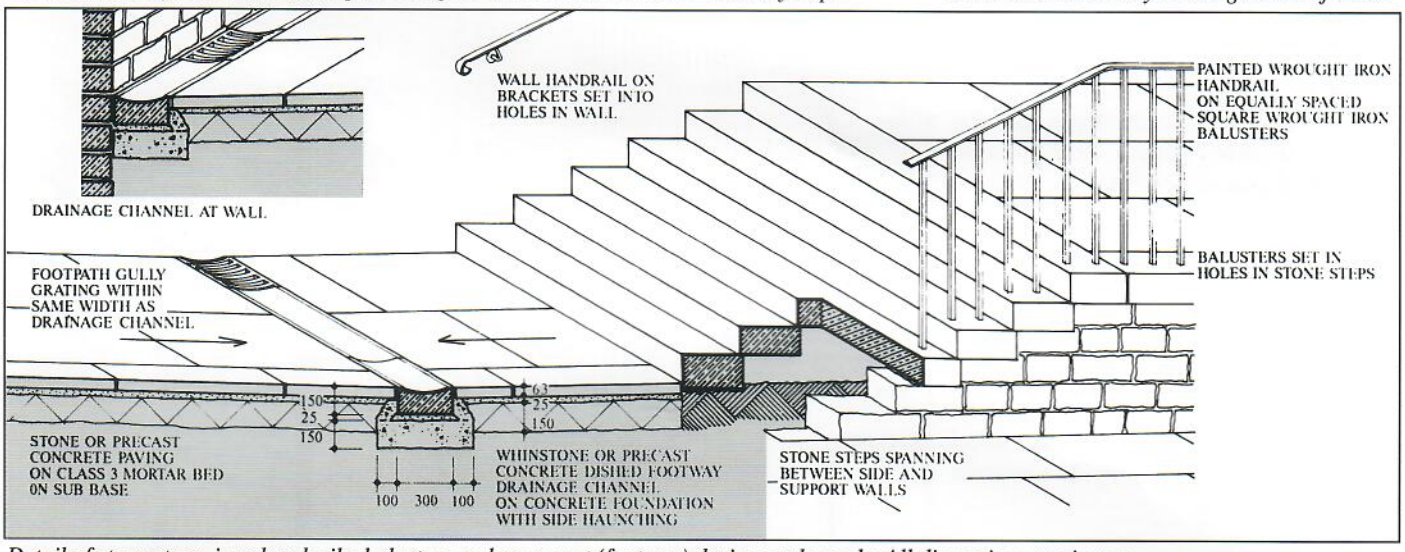
STEPS, DRAINAGE CHANNELS AND TACTILE SURFACES



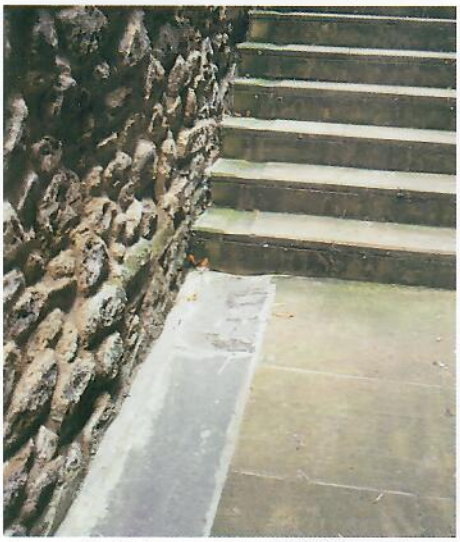


Edinburgh's craftsmen have developed some fine traditions in the construction of steps

In historic areas they are large slabs of stone



Detail of stone steps, iron handrails, balusters and pavement (footway) drainage channels. All dimensions are in mm



Steps with drainage channel, Old Town close

Overlapping steps with balusters, New Town

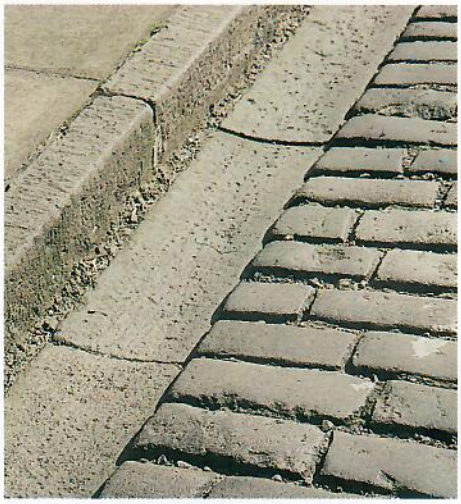
Profiled entrance steps, Charlotte Square

Edinburgh is renowned for its wealth of sett paved streets with robust granite, whinstone or sandstone kerbs. There are different designs of wide stone drainage channels. Many of these historic street surfaces are retained and they need to be maintained correctly by following the original patterns.

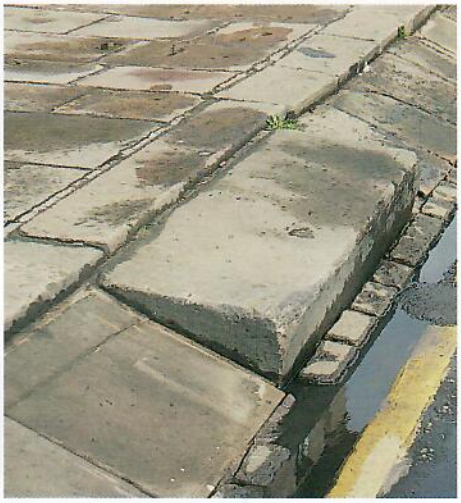
Kerbs are a strong visual statement in a street. They clearly define the limit of the pavement and emphasise the width and direction of the whole street.

Throughout Edinburgh there are subtle differences in the way traditional materials have been used. The examples on these pages are the more typical.

Where appropriate the traditional kerbs, carriageways and drainage channels are reinstated. At each site it is important to refer back to and accurately follow the original materials and construction details.



Typical setts, kerb and drainage channel

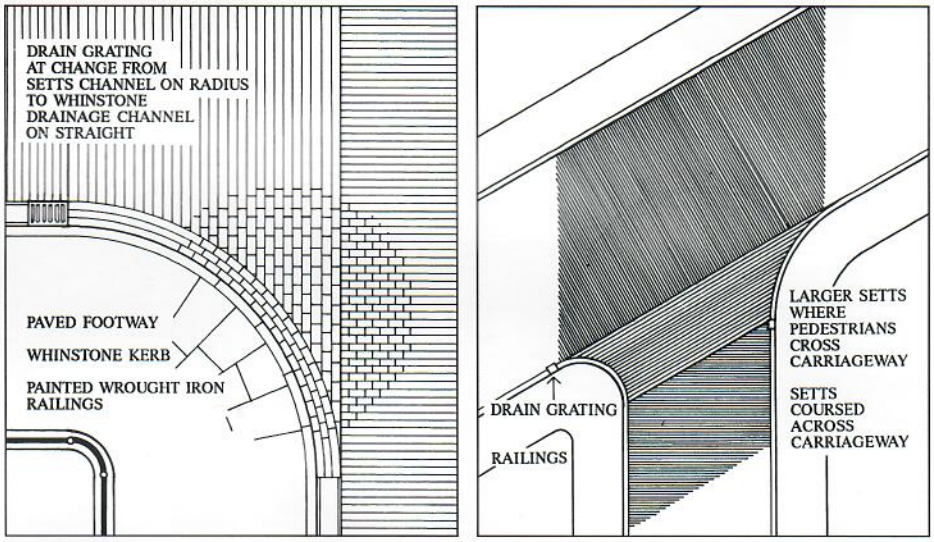


A variation to accommodate a mounting stone

Granite kerbs, sometimes with interesting features such as sandstone mounting blocks, may be double or treble height to accommodate steep cross slopes. But the needs of disabled people should not be forgotten at crossing points.

The direction of the coursing of the setts is normally across the carriageway. In some streets the setts have been laid in a pattern to define places where pedestrians were expected to cross the road.

In certain circumstances, a wide stone drainage channel could provide a smooth surface for cyclists.

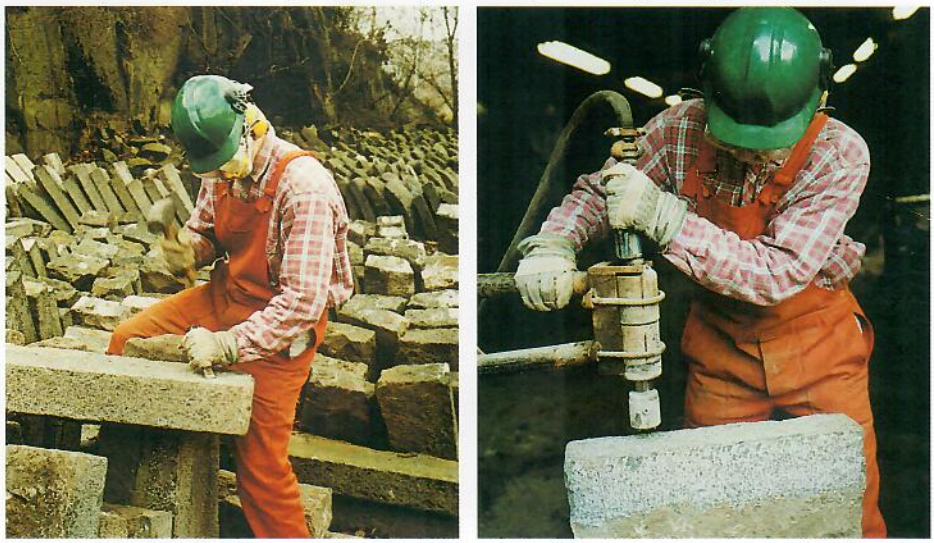


Two examples of the layout of setts, drainage channels, kerbs and footway paving at junctions

Stone dressing is a skilled craft. The high standards expected for laying new setts are also required for any reinstatements.

Joints between each sett should be the correct width, either flush or suitably recessed.

Whether for new work, reinstatement or maintenance, there is a preference in Edinburgh for natural materials that are locally sourced.

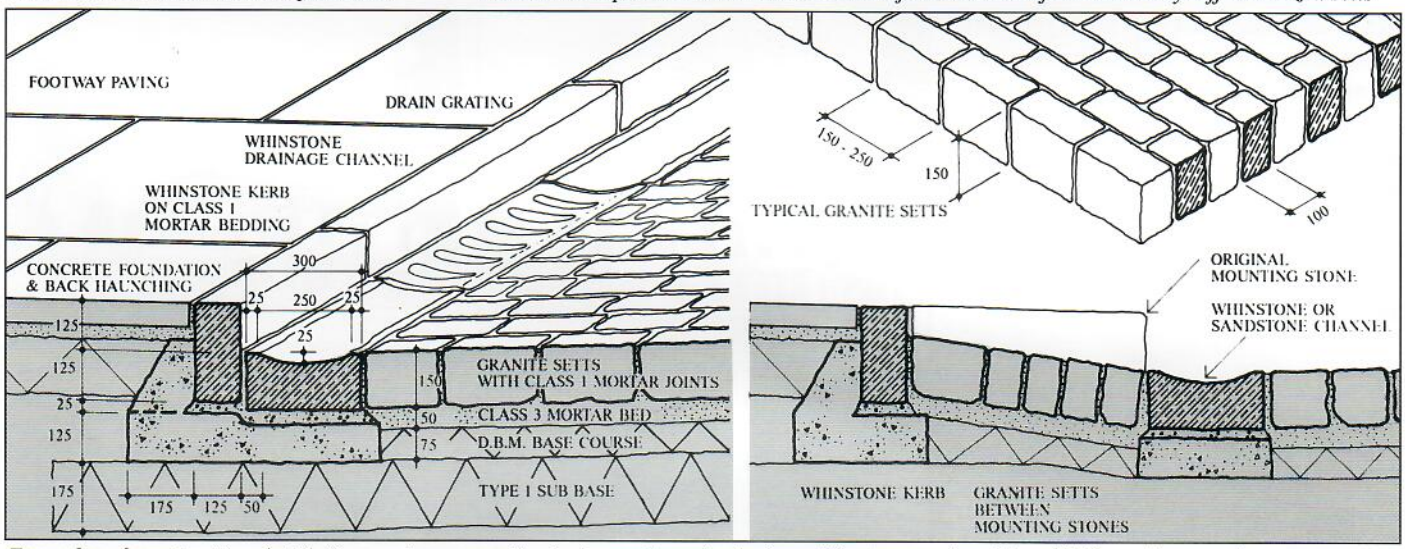


Whinstone kerbs being dressed by hand and by machine for re-use in the streets of Edinburgh

GRANITE SETTS, KERBS AND CARRIAGEWAY DRAINAGE CHANNELS

Setts where vehicles cross the pavement

Places where pedestrians cross the road at junctions are often marked by different sized setts



Examples of construction details for carriageway setts, drainage channels, kerbs and footway paving slabs. All dimensions are in mm

Laying setts across a carriageway

Three rows of setts parallel to stone channel

One of the variations of sett drainage channel

White and yellow lines, necessary to give drivers warning and information, can be reduced so that their impact on the overall scene is not too intrusive.

Road markings are a legal requirement. They give drivers essential information. However, within the constraints of the traffic regulations, there is scope to reduce visual intrusion and clutter.

Yellow 'no waiting' lines are normally 100mm wide. In certain areas of Edinburgh, the standard width is reduced to 50mm.

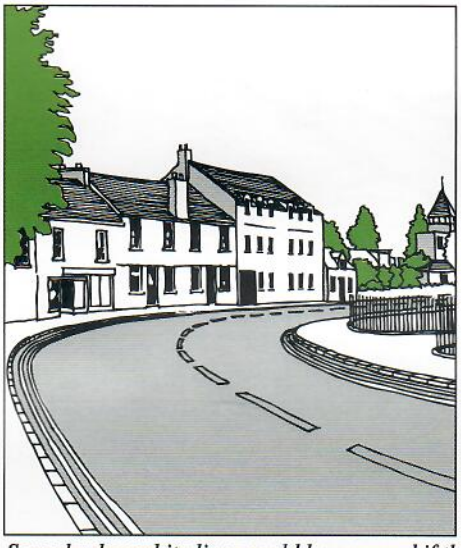
In places that can be recognised as zones, it is permissible, with the agreement of The Scottish Office, to remove the lines completely and replace them with signs.

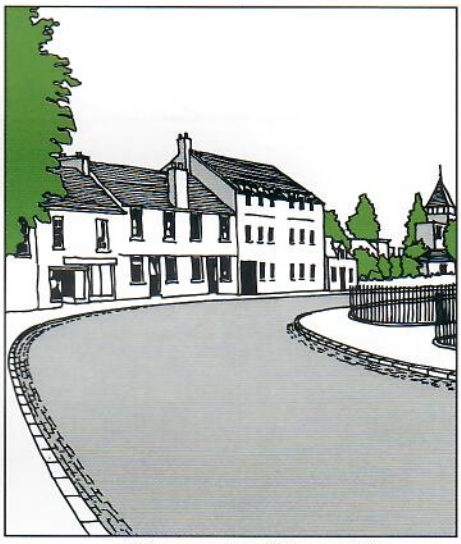
Yellow lines removed in some circumstances

Some white lines can be formed in stone

White line road markings are legal traffic signs, their position and shape are fixed by national regulation.

Broken white lines at the centre of roads are put in place at the discretion of the roads authority. Where they might result in encouraging drivers to travel too quickly, such as in residential areas, they should be omitted.





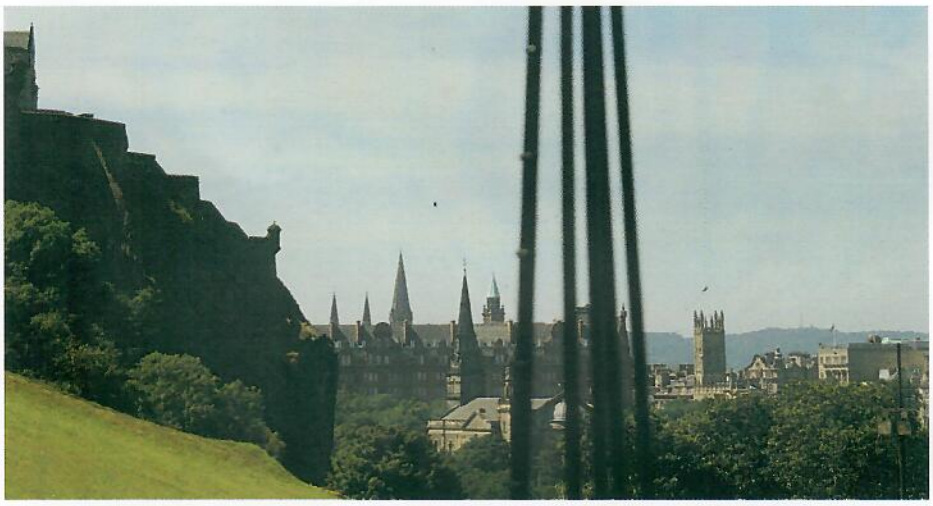
Some broken white lines could be removed if they encourage drivers to travel too quickly

In areas of granite sett carriageway paving some 'white line' marking of parking bays can be formed in light grey stone setts.

At the approaches to pedestrian refuges it may be appropriate to have areas of raised setts instead of hatched white lines.

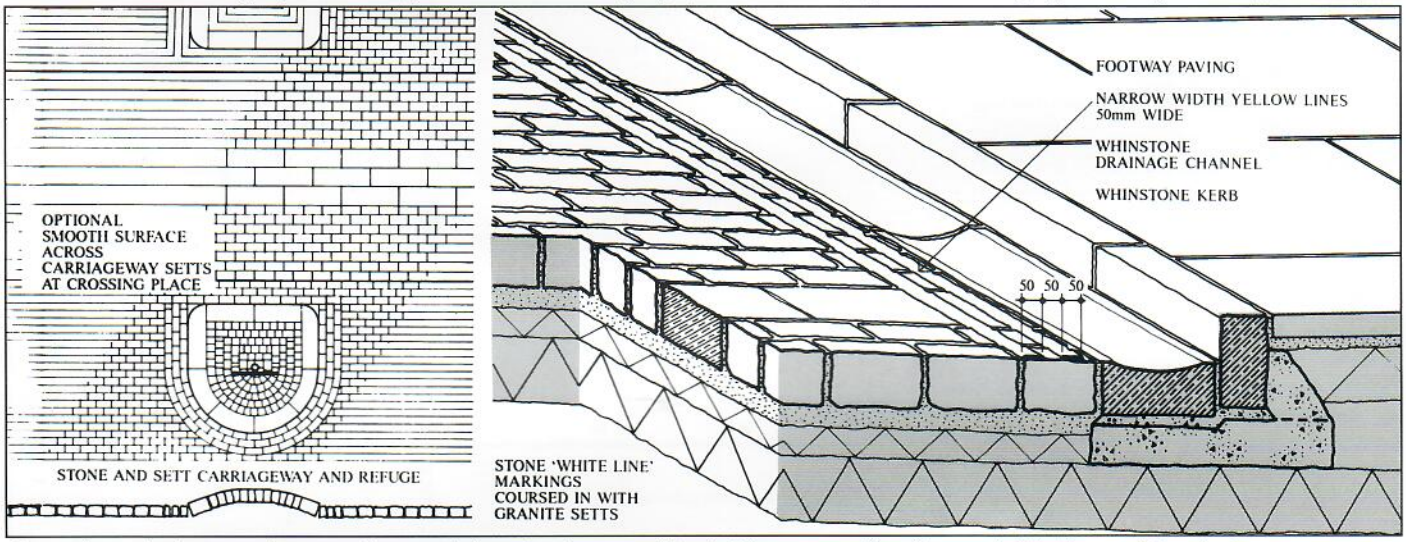
White lines to mark parking bays in sett carriageways can be formed of light grey stone setts

ROAD MARKINGS INCLUDING YELLOW 'NO WAITING' SIGNS



Yellow line road markings operate with information and warning signs, also shown on page 32

Parking signs can be fixed neatly to railings



Some alternative layouts of stone and setts to help pedestrians, combined with narrow yellow lines and white line markings in stone

Yellow lines are difficult to maintain; here at a smooth stone crossing on a sett carriageway, at an enhancement scheme and at a dropped kerb

Lamp posts can be selected and positioned to fit the architectural style of a neighbourhood. Traffic signals can be combined with lamp columns. Equipment boxes are the sort of street furniture that ideally should be hidden away out of sight.

Most types of street equipment can be made to enhance Edinburgh's streetscape. There are several approaches.

LAMP COLUMNS

Some lamp posts and columns have been designed and positioned to enhance a particular locality of Edinburgh.

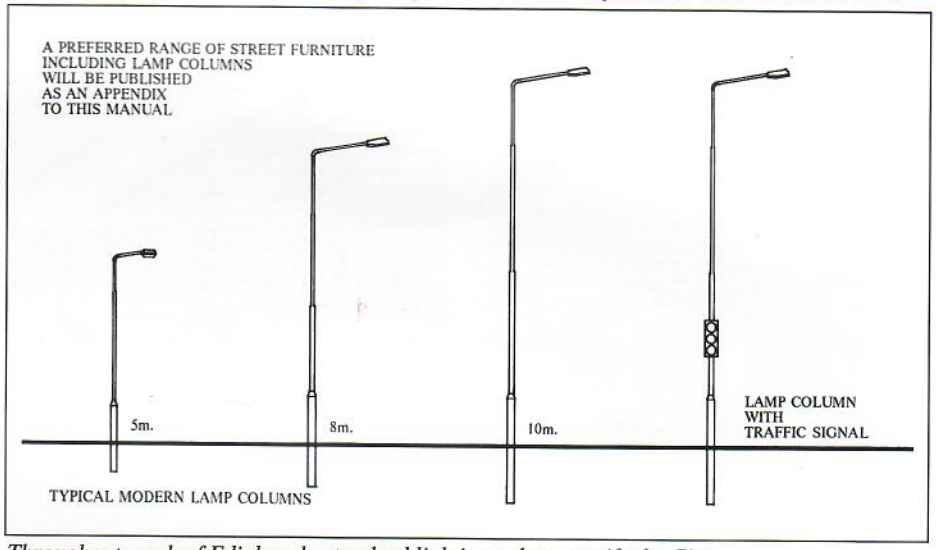
Wall mounted lamps in the Old Town and elsewhere help to reduce clutter and obstruction on pavements.

The New Town has many historic lamp posts in full working order. They are an integral part of the railings of private houses. These lamps contribute to the architectural heritage of the buildings yet are a public service. Some streets have their own style of lamp and railings.

Whilst there is occasionally a case for designing special lamp columns for individual areas, there is a stronger argument for adopting a good standard column throughout the City, to act as a unifying element.

Cables for wall mounted lights need not be unsightly. In the absence of special ducts, the cables should be run behind pipes and under cornices.

Traditional yet functional street lamps respect the character of the New Town and Old Town



Throughout much of Edinburgh, standard lighting columns unify the City

TRAFFIC SIGNALS

The position of traffic signals can seldom be changed. However it is sometimes possible to reduce the clutter of posts and supports by combining traffic signals with lamp columns.

EQUIPMENT BOXES

Essential equipment boxes such as cable TV, telephone and signal control boxes which are usually positioned on pavements may be painted to be less obtrusive and have a textured surface to deter fly-posting.

Where possible they should be located at the back or recessed behind the pavement or, ideally, be completely out of sight.

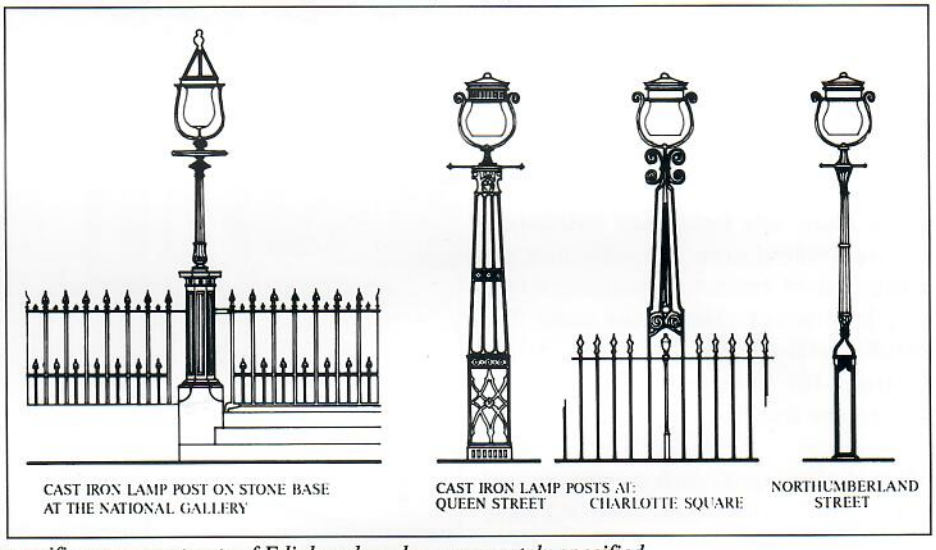
Equipment boxes can be positioned discreetly behind railings or set into boundary walls

LAMP COLUMNS, TRAFFIC SIGNALS AND SERVICE BOXES

Carefully chosen and positioned lamps, traditional to a location, are seen in the foreground of many famous views across Edinburgh

Traditional wall mounted lamps suitable for the Old Town are available through the Old Town Renewal Trust.

The position of wall mounted lights on listed buildings should be referred to the Paving and Street Lighting Group, page 5.



Traditional lamps and lamp post styles relate to specific areas or streets of Edinburgh and are accurately specified

QUALITY OF LIGHT SOURCE

The appreciation of streetscape at night is influenced by the quality of artificial light. All lighting is designed and installed to the standards of BS 5489. Edinburgh's light sources are generally high pressure sodium, temperature 2000 Kelvin and are intended to meet public safety needs of road users and the economics of the local authority budget.

In 1990 an 'Edinburgh Lighting Vision' was produced as a City owned strategy for all external lighting in the City. One of the first of its kind, it has been given international recognition and has encouraged changes particularly in the City centre.

EDINBURGH LIGHTING VISION

The Vision recommended that the warm light used in the High Street is maintained and enhanced and that this concept be applied to the rest of the Old Town. It is also recommended that the cool feel of the New Town be encompassed in the railing mounted and pedestrian scale lighting.

Appropriately, these recommendations are being applied as funding allows.

Elsewhere the remaining low pressure sodium lights are being replaced by high pressure sodium.

The 'Vision' is still available, see page 40.

STREET LIGHTING SPECIFICATIONS

Tungsten halogen, temperature 3000 Kelvin has been used for many years in the High Street wall mounted floodlights. They create a pleasant vista of white light and give good colour rendering.

More recently a number of Old Town closes have been improved with the installation of metal halide lighting.

Since the 1970's, mercury lighting has been used in the historic railing mounted lamp posts to provide pedestrian level illumination which is more friendly and appropriate to the architecture of the area.

Edinburgh's MacRae street lamps combine the function of safety bollards and 'keep left' signs. Clutter can also be reduced by combining and co-ordinating the design of separate types of street furniture.

Traffic signs are necessary for driver and pedestrian safety and convenience. But they are often visually intrusive. From the streetscape viewpoint there should be as few as possible. They should be the smallest practical size and not cluttered.

Signs, their supports and other street equipment can even contribute to a street scene. In the 1930's the MacRae lamp post showed how one structure could elegantly serve several functions.

This tradition continues in Edinburgh where the style of guard rail, while conforming to national standards, has been adapted to help motorcyclists and to mark motorcycle parking positions.

In order to further reduce clutter, we are seeing if it is sensible to combine guard rails and traffic sign supports.

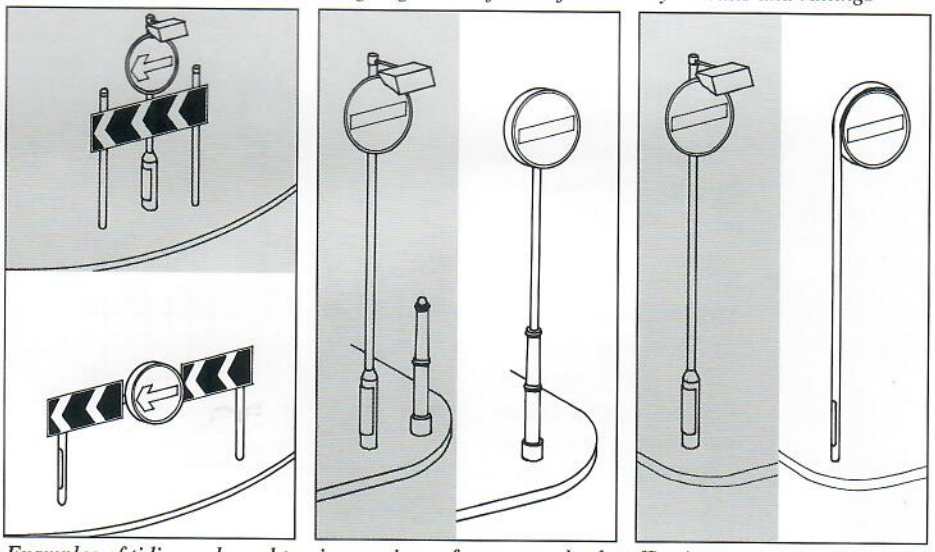
In the future new technology switch-gear in illuminated sign supports and the wider use of reflective surfaced signs may help reduce clutter even more. The results will create more appropriate settings for Edinburgh's impressive streetscape and fine monuments.

Many traffic signs, such as waiting and loading restriction signs, need not have separate support posts. They can be fixed neatly to walls so that they fit exactly the bonding pattern of stonework. If fixed to railings, they should be positioned to relate exactly to the pattern of the vertical bars. Consultation, outlined on page 5, is needed for signs fixed to listed buildings.

Some standard no waiting 'at any time' signs can be fixed direct to bollards or guard rails.

Several styles of stone, concrete, cast iron and steel bollards are used. It is sensible to reduce clutter by restricting the number of designs. The preferred range is shown in the appendix to this manual.

Parking information and 'No waiting' signs can often be fixed neatly to walls and railings



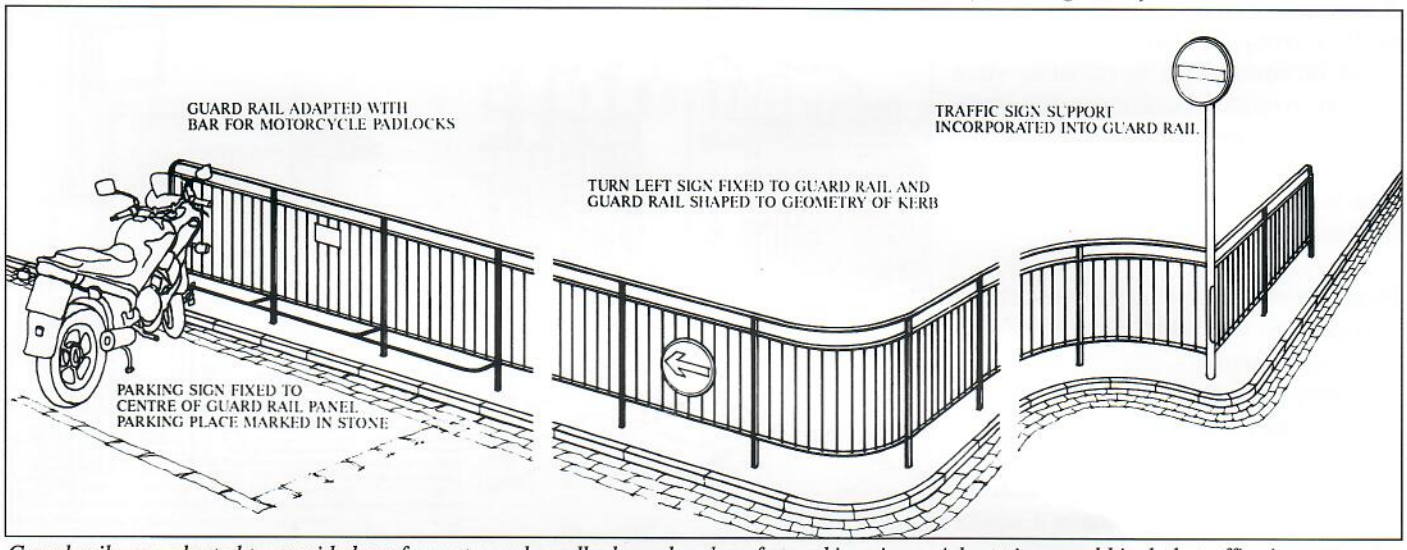
Examples of tidier or less obtrusive versions of some standard traffic sign support structures

Stone bollards at Charlotte Square, cast iron bollards seen in the New Town and Old Town

TRAFFIC SIGNS, THEIR POSTS AND FRAMES, GUARD RAILS AND BOLLARDS

A typical robust Edinburgh guard rail

Street lamps designed by E. J. MacRae (1881-1951) Edinburgh's City Architect 1925-1946



Guard rails are adapted to provide bars for motorcycle padlocks and a place for parking signs. Adaptations could include traffic sign supports

A guard rail adapted to help motorcyclists

A recent alternative guard rail design

COMBINED EQUIPMENT

Guard rails are required to conform to national standards and a new local design is being tested in the City together with a high visibility guard rail intended to prevent accidents.

There is a tradition in Edinburgh for guard rails to be fabricated specially to fit each site, taking account of curves and inclines. They are also adapted to provide security bars for motorcyclists and to mark motorcycle parking places.

Further adaptations to combine street equipment are being tested.

Where the appearance of individual pieces of street furniture can not be designed or chosen specially to fit their location, it may be possible for their colours to conform to a co-ordinated colour theme or relate to the predominant colours of the area.

On other pages in this manual we show how the clutter of unnecessary posts can be reduced by mounting signs on existing walls and railings. Less obtrusive sign formats can also be used and there are opportunities to combine the function of different items of street equipment.

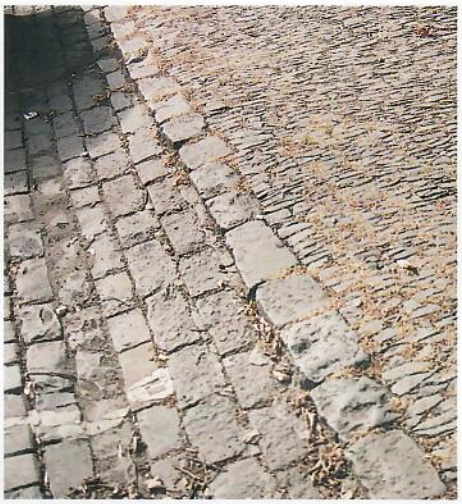
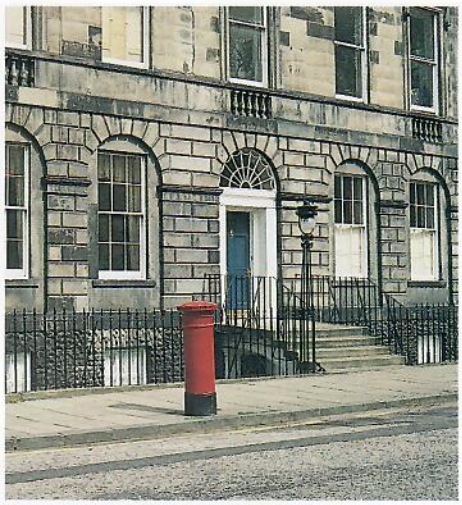
In many streets of the City there are groups of street furniture consisting of a bus shelter, lamp column, traffic sign post, guard rail and litter bin. In the short term it may not be practical to co-ordinate their design. But it might be possible to co-ordinate their colour.

A common colour theme can help to unify a group of individual pieces of street furniture. This is valuable when similar groups, comprising the same pieces, are seen many times across the City. Alternatively a colour theme can help to relate a group of assorted street furniture to a particular setting.

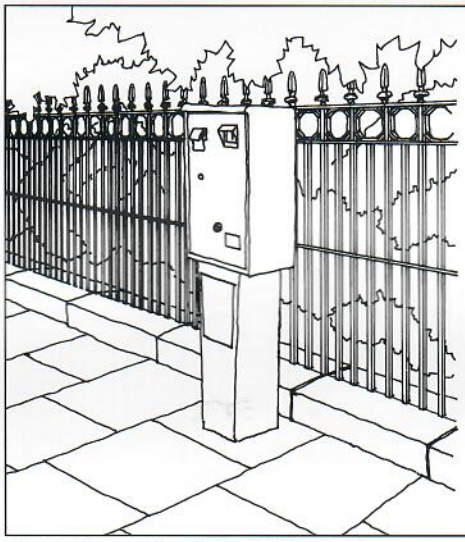
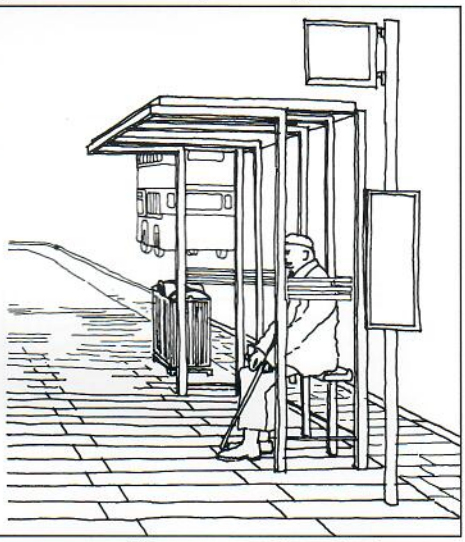
Examples of the use of colour themes:
* Traditional lamp posts fixed to railings of the same colour.
* Parking ticket machines set in front of railings and painted the same colour as the railings.
* Bus shelters and litter bins, which are usually seen together, painted in a similar or matching colour.
* All the pieces of public street furniture in one location painted in a single or co-ordinated colours:

Bus shelters
Grit bins
Guard rails
Lamp columns
Litter bins
Service company cabinets
Parking ticket machines
Traffic sign supports
Traffic signal posts
Traffic signal control boxes.

The effectiveness of colour co-ordination is demonstrated on page 35.

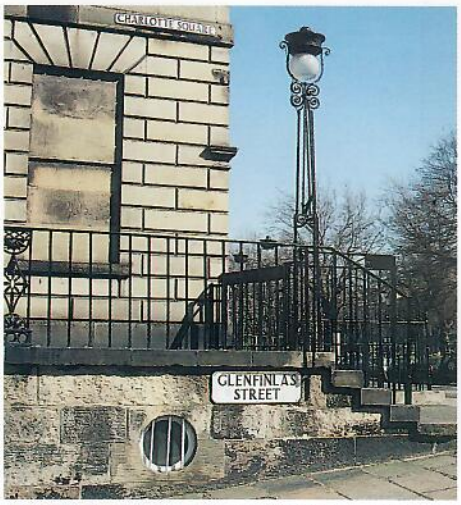
Horonized paving and sandstone facing. Some of the subtle colours of Edinburgh

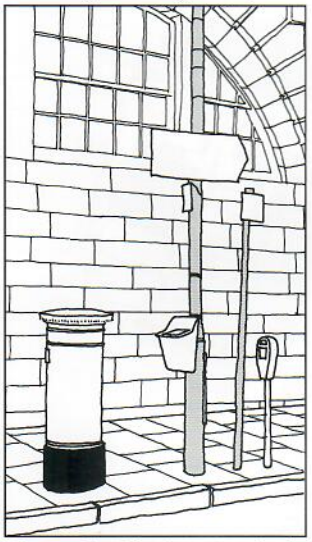
Types of street furniture which are often seen as a group could have a co-ordinated colour


The colours of stone change dramatically when wet. The grain patterns are seen more easily

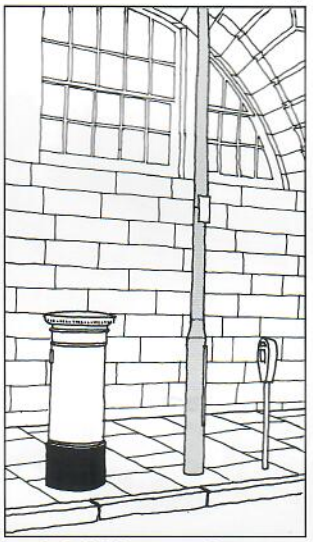
BUS SHELTERS, PARKING TICKET MACHINES, LITTER AND GRIT BINS



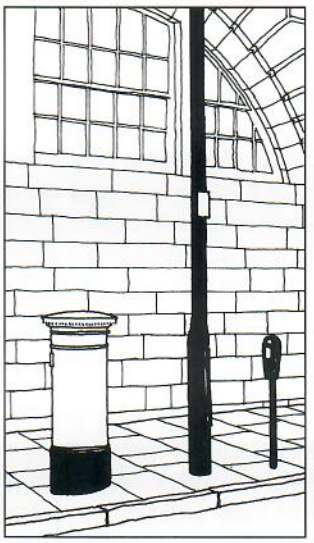
Edinburgh stone: granite, whinstone, sandstone, Caithness stone. Each is used for a particular purpose, each has its own colour



Typical group of street furniture



Stage 1. Reduce clutter



Stage 2. Co-ordinate colour

To test the effectiveness of colour co-ordination it is helpful first to reduce unnecessary clutter

The demonstration: A random group of street furniture was first tidied and then painted a similar colour. As a result it appeared more unified

Information signs, festival flags, street trees and benches add to the pleasure of Edinburgh's residents and visitors. These sorts of street furniture have an advantage. They can be designed and positioned to form part of the visual composition of the City's streetscape.

Much of the streetscape quality of Edinburgh derives from the care with which buildings and spaces have been laid out. There are consciously designed relationships between the position of one and another.

We deal here with the items of street furniture which simply provide amenity. Their design and position on the City's pavements can usually be changed or adjusted. It is therefore easier to make them fit in with the design concepts which were borne in mind when Edinburgh was first built.

Street name signs in the Old and New Towns usually relate to the architecture.

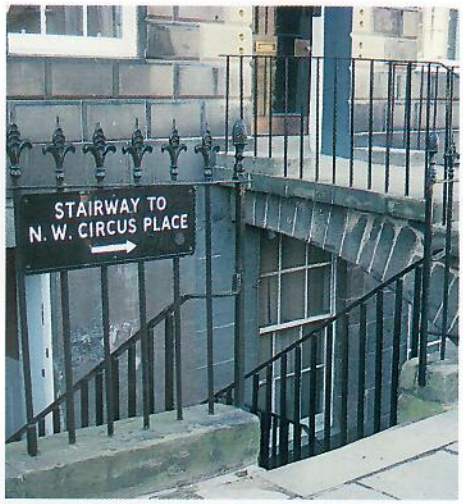
Because people on foot have more time to look than drivers, direction signs for pedestrians can be fitted into the street scene with great care and create added interest. Information and direction signs can be set into the pavement or be designed to fit into the architectural features of a building.

Flag poles, traditionally painted white, are usually welcome when being used to fly flags. When not in use they are removed. Fixing the poles directly into recesses, rather than separate concrete blocks on the pavement, reduces visual clutter and obstruction.

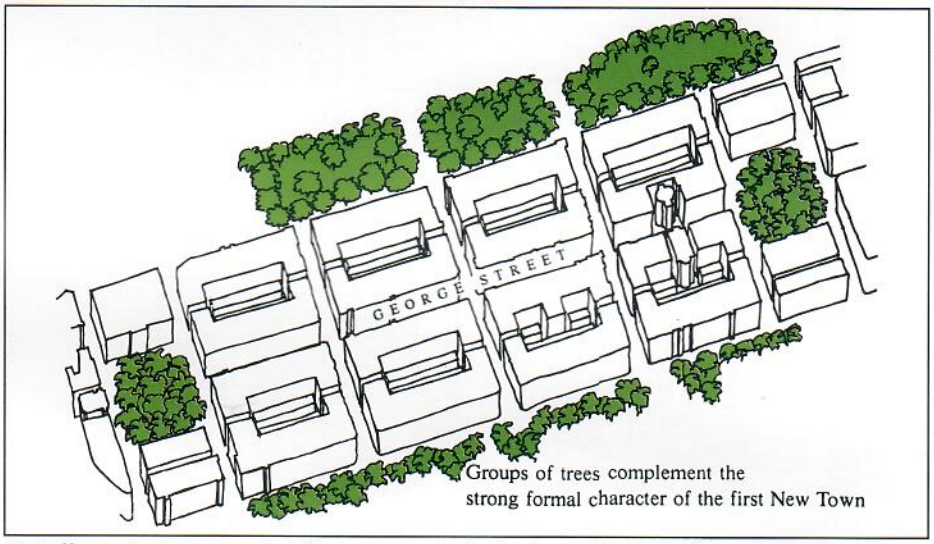
Trees can add life to a street although not all streets are appropriate for trees, particularly those with a strong formal character and no tradition of planting. There are recognised theories concerning the grouping of trees in order to achieve an overall effect.

Litter bins and street benches are easily moved. They can be put exactly where they add to the quality of the street scene.

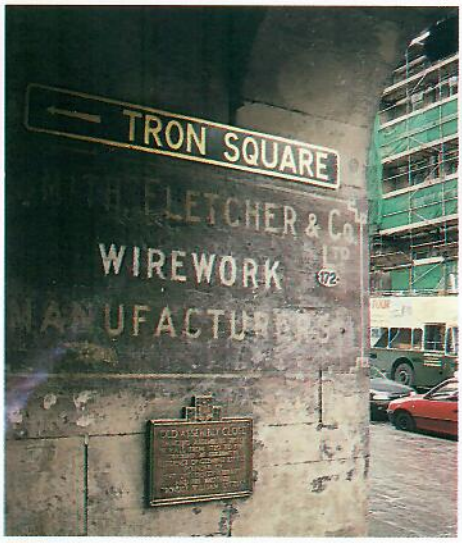
The effectiveness of visual composition is demonstrated on page 37.



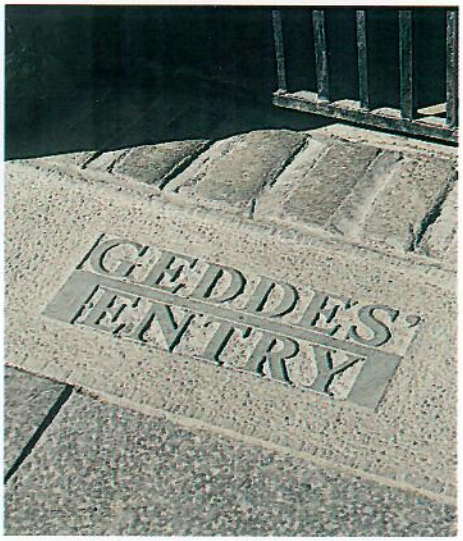
Street name signs and a pedestrian direction sign positioned in relation to the architecture



Not all streets are appropriate for trees, particularly those with no tradition of planting

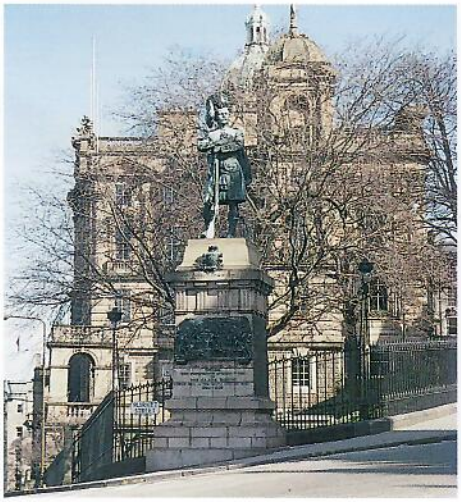


Formal and informal reminders of the past

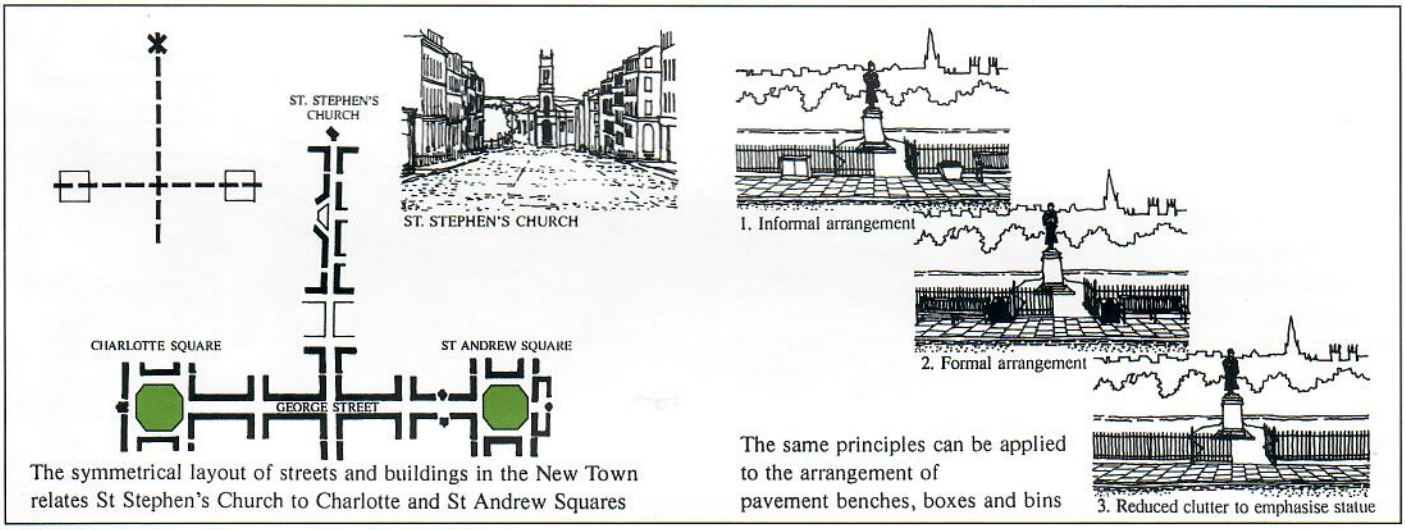


Local information signs fit into the streetscape

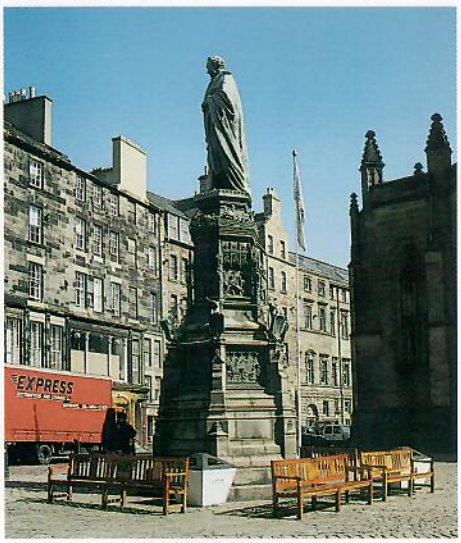
STREET NAME SIGNS SIGNS FOR PEDESTRIANS, FLAG POLES, TREES & BENCHES

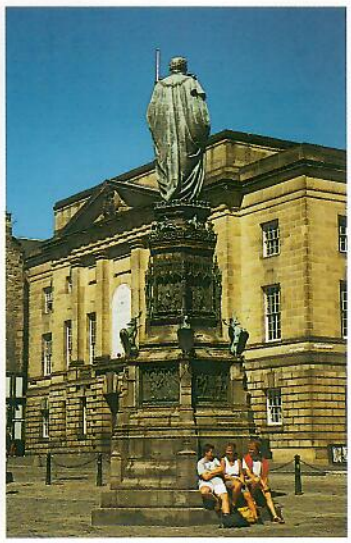


The street name sign at the corner of Market Street and North Bank Street provides information but fits into the overall visual composition



Some principles of visual composition to consider





The demonstration: Parliament Square appeared to have more presence when the litter bins and benches were removed from around the statue

Some types of street furniture provide essential services to residents and visitors. Traditional red telephone kiosks and post boxes are often the focus of attention in the foreground of a scene. This status is justified by their important function.

We have stressed in this manual that new work and maintenance to Edinburgh's streetscape should have regard to the visual qualities of the particular location. The co-ordinated design of essential equipment and co-ordinated colour themes for individual items reduce unnecessary street furniture clutter and enhance the sense of order in the City. There are also opportunities to arrange some pieces of street furniture within a visual composition.

All the policies and practices described here are intended to enhance the overall quality of the street scene.

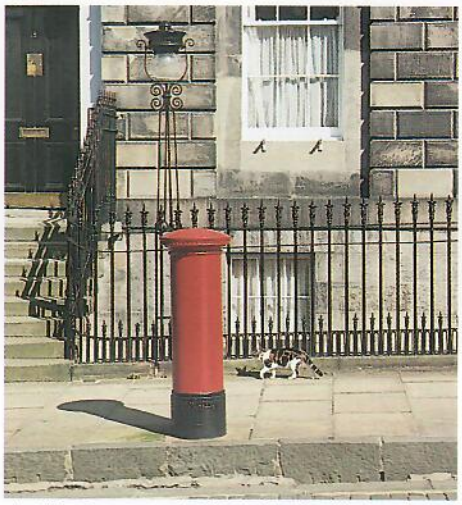
However we look at the streetscape as a whole, as a complete, though altering picture. As we move about, we see the City as a series of vistas from changing view points.

Unobtrusive quality in the design of foreground paving and street furniture can complement and enhance the main attraction of a scene, which is usually a distant building or view.

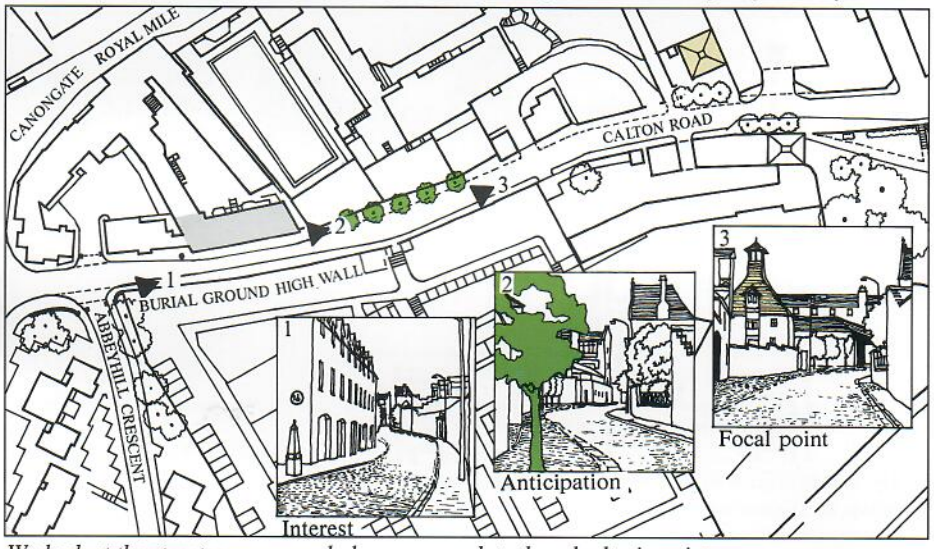
Some types of street furniture such as those which the public need to find and use: phone boxes and post boxes, should be noticeable. Post boxes are possibly the oldest type of street furniture still in continuous use. The traditional red phone boxes and oval pillar boxes add to the interest of the central areas of the City.

Edinburgh police boxes have a distinctive design and colour. This will remain as a distinguishing feature.

Many types of street furniture are not provided by the local authorities. They are supplied by several independent service companies or agencies who are not required to co-ordinate the design or the position of their equipment. Their contribution to the City's streetscape, outlined in this document, will rely on even greater co-operation in the future.



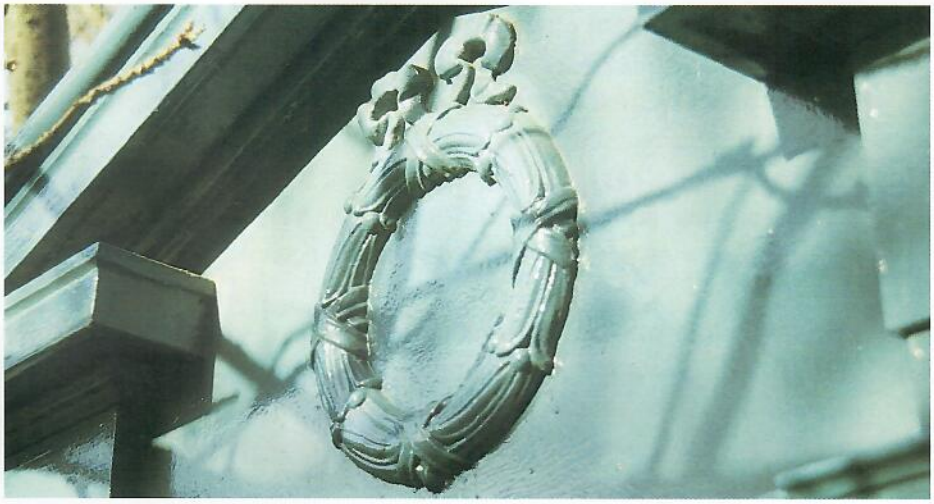
A pillar box or red phone box is often a pleasant focus of attention in the foreground of a scene



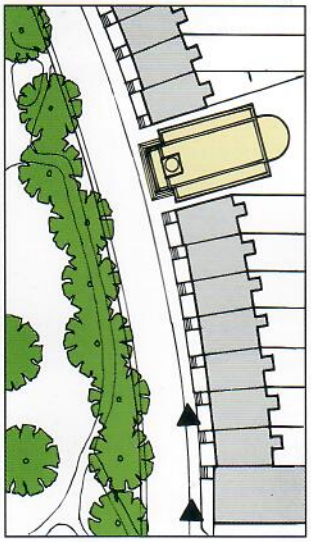
We look at the streetscape as a whole, as a complete though altering picture

The foreground of a view contributes to the overall effect, rigid formality or ordered informality

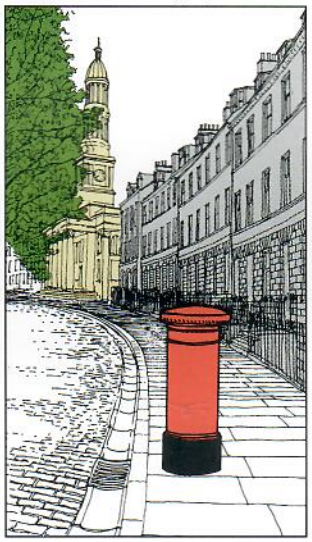
POLICE BOXES, POST BOXES AND TELEPHONE KIOSKS



The distinctive classical design and embellishments of the Edinburgh police box is a another distinguishing feature of the City



We see the City as a series of vistas from changing viewpoints.



Quality in foreground paving and street furniture

can complement and enhance the main attraction of a scene: usually a distant building.

Quality in the foreground complements the main attraction of a scene: often a distant building

Together they make up the total picture

CONCLUSIONS

TOTAL QUALITY

We have stressed that co-ordinated design, the choice of materials and quality of workmanship all contribute to the quality of streetscape.

Although this manual covers most of the categories of street furniture and paving, the quality of the total street scene is also affected by the appearance of temporary items: barriers for street processions, flags, advertising boards on pavements, even pavement chairs, tables and umbrellas, skips, scaffolding as well as street vendors' stalls and vans.

On-going maintenance is essential. The removal of fly posters, cleansing of litter bins and the maintenance of pavements damaged by heavy goods deliveries need constant attention.

However the manual provides an overview of the opportunities to enhance the appearance of Edinburgh. We hope it will encourage even closer co-operation between the agencies responsible for all the items that make up the City's streetscape.

APPENDICES

To give further guidance, technical appendices are being prepared as a separate loose-leaf document. The appendices will complement the manual and not detract from its contents. They will consider:

- Additional design options
- Specification details
- Suitability and choices of natural stone
- Street furniture preferences
- Documents required to accompany design submissions
- Control and enforcement standards.

INDEX

REFERENCE

'EDINBURGH LIGHTING VISION' is available from:

Lothian and Edinburgh
Enterprise Limited
99 Haymarket Terrace
Edinburgh
EH12 5HD

and

Lothian Regional Council
Transportation Department
18-19 Market Street
Edinburgh
EH1 1BL.

ACKNOWLEDGEMENTS

Members of the Edinburgh Streetscape Manual Working Group

Colin McPhail, Chairman	Lothian Regional Council, Transportation Department
Jim Barton	The Scottish Office, Industry Department
David Beveridge	City of Edinburgh District Council, Planning Department
Jim Clark	Edinburgh New Town Conservation Committee
Fiona Creamer	Lothian and Edinburgh Enterprise Limited
Colin Davis	Colin J. Davis & Associates
Richard Emerson	Historic Scotland
William Garrett	City of Edinburgh District Council, Planning Department
Richard Griffith	Edinburgh New Town Conservation Committee
Jon Mengham	Edinburgh Old Town Renewal Trust
Paul Scott	City of Edinburgh District Council, Environmental Services Department.

The group wish to thank:

Desmond Hodges	The Architectural Heritage Society of Scotland
Andrew Holmes	Lothian Regional Council, Transportation Department
Mark Turnbull	Turnbull Jeffrey Partnership.

Thank you also to those who joined in the Streetscape Tour and the Workshop Seminar, both of which helped to shape this manual:
Representatives of Spokes
Edinburgh Civic Forum
Cockburn Association
British Gas
Edinburgh Old Town Association
The Police.

Designed and illustrated by
Colin Davis and William Spencer.

Additional photographs by
William Garrett
Alan Laughlin
Jon Mengham.

Cover by Alison Davis.

Printed by Time Design.

EDINBURGH STREETSCAPE MANUAL 1995

EDINBURGH STREETSCAPE MANUAL
is available priced £4 from
Lothian Regional Council, Transportation Department
18-19 Market Street
Edinburgh
EH1 1BL.