EDINBURGH WORLD HERITAGE

Dean Valley designed landscape

Water of Leith, Dean Village to Stockbridge
Conservation Statement

July 2015

Peter McGowan Associates, Landscape Architects

EDINBURGH WORLD HERITAGE

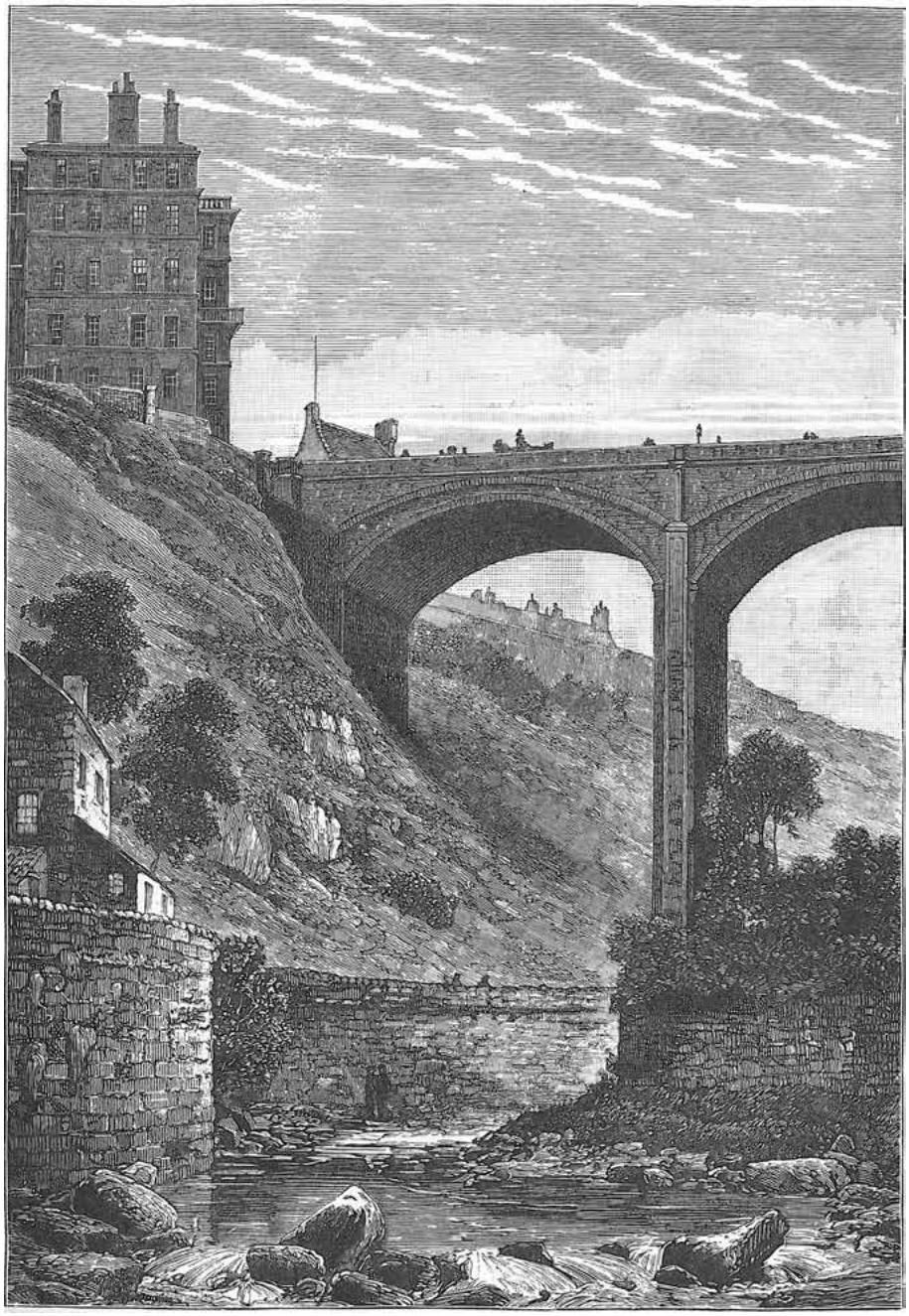
Dean Valley designed landscape

Water of Leith, Dean Village to Stockbridge
Conservation Statement

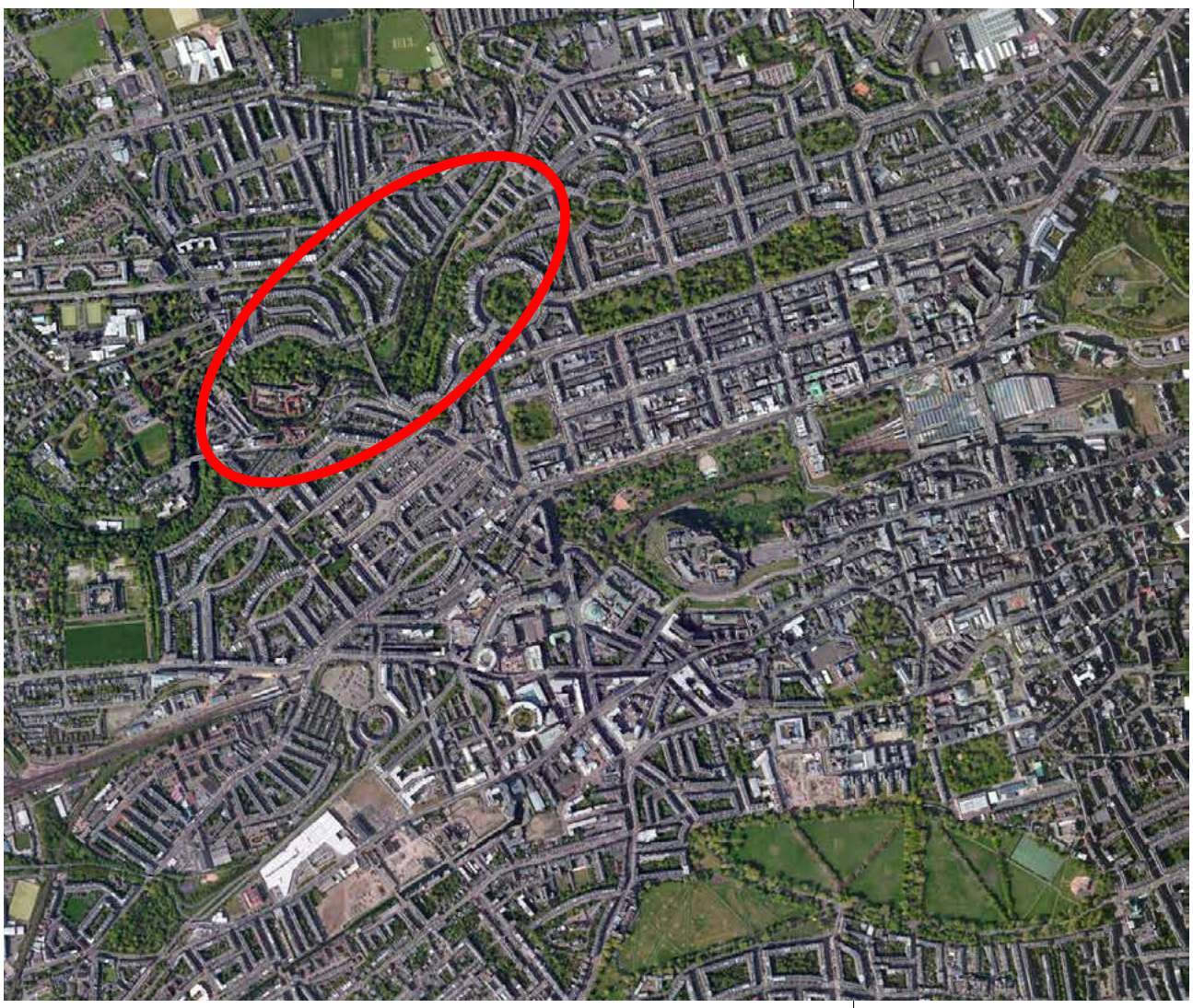
29 July 2015

Peter McGowan Associates, Landscape Architects
86 Constitution Street, Edinburgh EH6 6RB
0131 261 6265 • pma@ednet.co.uk

Contents



Randolph Cliff and Dean Bridge from Old and New Edinburgh c1880



Dean Valley site location, Edinburgh

1 Introduction

1.1 Background and context

The Dean valley, or valley of the Water of Leith, from Dean village to Stockbridge is one of the finest landscape features to adorn any British city, combining dramatic natural topography with bridges, wells and lush tree cover and garden planting within the setting of the later phases of Edinburgh's classical New Town terraces.

The Edinburgh New Town Gardens are the largest and finest group of communally owned gardens in Britain contributing significantly to the essential character of the New Town. The three gardens (Moray Bank Gardens, Dean Gardens and Belgrave Crescent Gardens) of the Dean valley that, together with the river banks and public walkway, comprise the study area for this report are among the finest, largest and most picturesque of the gardens but are atypical of the majority of the 30-plus gardens in the New Town. Most gardens are *Gardens within Planning Grids*, as classified by John Byrom (in draft handbook *The Care and Conservation of Shared Georgian Gardens*) and are geometric in form and occupy relatively flat land. A second group of New Town gardens, the *Grid Edge Gardens*, sited in more naturally picturesque locations or with outstanding picturesque potential, include the valley of the Water of Leith, the valley of the Nor' Loch (Princes Street Gardens) and Calton Hill … all dramatic sites with multi-faceted interest. From among these the Dean valley's picturesque qualities shine out contrasting with its residential setting.

1.2 Purpose to the conservation statement

The purpose of the Conservation Statement is to …

- establish a basic understanding of the three gardens as a group and the river valley landscape and how these areas interact
- address issues affecting the common aspects of the three gardens and river valley landscape as they affect the public realm of walkway, streets and paths, and to develop management policies for the whole site area
- outline a possible early action programme for the river valley landscape.

It is not about the management and maintenance of individual gardens, although it does include recommendations on some issues that may be applicable to the whole site including three gardens, and does consider their landscape as seen from the public parts of the valley.

1.3 Defining issues

Assessment of the gardens and river valley landscape early in the project identified some broad conservation issues affecting the landscape as a whole. The Conservation Statement has been structured to deal with these issues and the special nature of the Dean valley landscape. The issues are:

- The inter-relationship of spaces and views across the three gardens and river valley landscape, and what views we should be managing, ie. restoring or keeping open.
- The management of the Water of Leith valley including the Dean valley for nature conservation and biodiversity, as a Local Biodiversity Site and a Natural Heritage Site (Parks designation)
- Policies for tree and woodland management as they affect both the visual and nature conservation aspects of the valley landscape.
- The condition of the built fabric of the site and the effects of vegetation.

1.4 Methodology

These issues have influenced the methodology and format of the study to give the following structure, following broadly the process of conservation plans or statements.

- Understanding the site, based on research, site surveys and consultation
- Statement of significance, assessing the significance of the site and its features
- Conservation and management issues, including threats to significance
- Overall strategy, conservation policies for the retention of significance and management policies
- Specific proposals for conservation, restoration and management

1.5 Sponsor and stakeholders

The Dean valley designed landscape conservation statement has been commissioned by Edinburgh World Heritage, at the instigation of the stakeholders steering group set up on 7 January 2013, with the financial support of the City of Edinburgh Council and Historic Scotland. A number of other private individuals have also contributed to the cost of the study. The conservation statement has been produced by Peter McGowan Associates, landscape architects with a specialist interest in designed landscapes and other heritage sites.

2 The Dean valley

2.1 General description of site and component gardens

The first impression of the Dean Valley from its most prominent elevated viewpoints is of a wooded gorge with a rocky-bedded river running through it, with steep valley sides rising to a high point at Randolph cliff, contrasting dramatically with the geometrically planned classical terraces of houses at the top of the slopes on either side. Closer inspection at ground level beneath the tree canopy reveals well maintained woodland gardens on the slopes, with ornamentally planted garden areas and parkland on the flatter parts, and the presence of a singular building, a circular Roman temple, on the south bank of the river. These contrasts of natural features and planned buildings and gardens, are augmented by the private or communal-owned nature of the garden areas, compared with a narrow corridor accessible by the public along a path close to the river.

The three gardens are of similar size, are all managed and maintained to a high standard, and have surprising different character given their shared topographic setting. The following areas have been taken from CAD measurements and may not concur with measurements in legal documents or other sources, and are given here for comparative purposes only.

Moray Bank Gardens (incl. Doune Terrace Garden) – 1.91 ha (4.72 acres)

Dean Gardens or Eton Terrace Gardens – 2.76 ha (6.80 acres).

Belgrave Crescent Gardens – 2.48 ha (6.13 acres)

River valley landscape, including walkway and river banks – St Bernard's area only, 0.38 ha (0.94 acres); all riverbank space (excluding river bed) 1.56 ha (3.85 acres)

The site includes approximately 1 km of walkway (actually 1.05 km from Dean footbridge to Stock bridge).

The Walkway has only small areas of land associated with it apart from between St Bernard's well and St Bernard's bridge. However, significant wooded strips of ground along the river banks are included in the above area measurement (all semi-natural river banks / open space in Fig. 1).

Wooded Dean valley from Dean bridge

Natural river from riverbed near St Bernard's well

2.1.1 The river valley landscape

Much of the river valley landscape comprises a narrow strip of land between the Moray Bank Gardens fence and river edge, with the path running between the fence and railings. From St Bernard's well the land broadens as it approaches St Bernard's bridge, with a choice of paths and a more ornamental layout. Downstream from the bridge an important narrow section of the site, between Dean Terrace and Saunders Street, has no access but nonetheless is important in the urban landscape. Upstream, Randolph cliff and adjoining steep slopes lie outwith the Moray Bank Gardens in Council ownership, including the site of Greenland mill, and have particular management issues. Up from the bridge the walkway enters Dean village using the roads (Miller Row, Hawthornbank Lane) with areas of woodland and open space along the riverside, including the site of Lindsay's mill.

The character of the river valley landscape is a wooded valley, created in part by the natural regeneration of ash, elm, and sycamore along the river banks, and in part by the well-planted gardens to either side with mature tree planting. Superb structures enhance the valley's picturesque quality to create an outstanding designed landscape – Nasmyth's St Bernard's Well temple, Telford's soaring Dean bridge, and the Jacobean-ornamented St Bernard's bridge.

Managed designed landscape from St Bernard's bridge

View in Moray Bank Gardens

The Gardens

2.1.2 Moray Bank Gardens, including Doune Terrace Garden

1.91 ha (4.72 acres)

Moray Bank Gardens lie on steep northwest-facing slopes between the back of Randolph Crescent / Ainslie Place / Moray Place and the walkway and are generally wooded or well-treed in character with grass groundcover. Locally, particularly on the lower slope, pruned evergreen shrubs and larger hollies break up the understorey. Some ornamental garden planting beside the top path near the entrance gate, with a copse of planted birch on the slope below. The most notable planted feature is the long lime avenue along the mid-bank slope. Open spaces on the slope appear to relate to important views as well as to the landslips that were a feature of the early development of the garden. The main entrance is from Doune Terrace, with another gate from the walkway; otherwise access is via back garden gates onto the wall-top path along the impressive arched retaining structure that forms much of the garden boundary on the south.

The Doune Terrace extension is an unkempt strip of woodland enclosed by a tall hedge and modern fence along the street boundary, with a high retaining structure forming the north boundary above India Place. A feature of note is a section of railings within the parapet wall providing a *clairvoie* for views, although now impeded by the hedge, trees planted in front of the opening, and trees below on the bank at India Place at the back of the allotment gardens.

The gardens have outstanding views across the valley to Eton Terrace and Trinity church, particularly from the uppermost paths and notably from the wall-top path, and to the Dean bridge closer to the structure at various levels. St Bernard's well is also seen from the east end of the garden.

2.1.3 Dean Gardens or Eton Terrace Gardens

2.76 ha (6.82 acres) to hedge line

The Dean Gardens are more complex in form and character compared to Moray Bank, firstly due to the landform – mainly southeast-facing slopes, but bending to south-facing with the river and continuing under the Dean bridge. The landform has been terraced to form broad walks at upper and lower levels, with diagonal linking paths and, where the site is widest next to the bridge, a substantial level lawn. The gardens have a general wooded or well-treed character, concentrated on the steeper slopes and in the west part, but also feature a well planted mixed border beside the upper path and a broad grass walk, planted with young beech (former elm avenue). A well-equipped play area lies at the south end of the walk, while a seating pavilion and gardener's hut stand beside the lawn.

Upper walk in Dean Gardens

Eton Terrace forms most of the north boundary with a number of entrance gates, with another gateway from the junction of Ann Street and Upper Dean Terrace on the east.

At their east end, the gardens benefit from the best viewpoints of St Bernard's well, also seen from the river edge path (although views are limited by vegetation), and from dramatic views of Dean bridge and views framed by the bridge's north arch. Trinity church also features in views from the lawn area, Eton Terrace is prominent from the upper walk and there is a notable view of the Dean weir 2 from the west of the site.

2.1.4 Belgrave Crescent Gardens

2.48 ha (6.13 acres)

Belgrave Crescent Gardens differ from the other two gardens in the substantial plateau at the street level, laid out as mown-grass parkland with mature trees. Also a well-planted mixed border runs along the north side of the parkland area beside the street boundary, with a hedge beside the railings. Three entrance gates provide access from the street on this side, with a gate and steps from Dean Path on the west and another entrance from West Mill Lane in the centre of Dean village on the south. The steeper slopes down to the river and Dean Path in the south half of the gardens are more similar to the wooded or well-treed character of the other two gardens. The gardens have a more lived-in feel than the other two, with play areas, sitting areas, picnic tables, memorial sundial and huts for various purposes.

Upper level of Belgrave Crescent Gardens

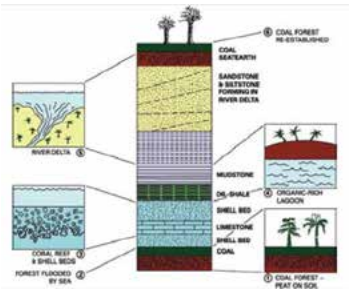
Winter view with Holy Trinity church, Dean bridge and Dean weir in Belgrave Crescent Gardens

Due to its shape, the crescent form of Belgrave Terrace is prominent from the upper parkland and paths, as is Trinity church on the east. From the top of the slope and from the lower parts of the garden various views over Dean village, the west New Town with spires of St Mary's cathedral and a good view of Dean weir 2 are possible. Views of Dean bridge are limited by intervening trees, although better in winter and best from the riverside.

2.2 Geology and geomorphology; natural topographic features

The Water of Leith is Edinburgh's principal river. From its source high in the Pentland Hills, it runs for 38 km (24 miles) on a northerly course to the Firth of Forth at Leith. The valley through which it flows was formed very recently in the Earth's 4.6 billion year history, as a drainage channel for the vast amounts of meltwater which flowed from the Pentland hills as the ice sheets began to thaw at the end of the last Ice Age, between 11,000 and 14,000 years ago.

The course of the river valley that formed was determined by the underlying rock. Where it was loose and sandy or gravelly, the valley is shallow but where it cut through harder rocks, the destructive power of the meltwater, laden with ice and rock fragments, carved steep-sided rocky gorges. The Water of Leith flows through one of these steep gorges between Dean village and Stockbridge, as it passes through the Granton sandstones and Wardie shales.



Typical rock types in a Carboniferous sedimentary sequence, from McAdam & Stone, 1997, East Lothian and the Borders, landscape fashioned by geology SNH/ BGS

The bedrock underlying much of Edinburgh was laid down in the Carboniferous period between 359 and 299 million years ago. At that time, Scotland was situated close to the Equator and had a warm, humid tropical climate. During this time the sea level rose and fell repeatedly and as a result the land has been alternately submerged under the sea or formed beaches, river deltas, coastal swamps and shallow lagoons. Each of these has given rise to characteristic rocks. The diagram shows the typical rock types found in a Carboniferous sedimentary sequence, although not all may be present at any given location. At Stockbridge there are well-developed sandstones and oil-shale but limestone is not seen here. Coal is present in the riverbed between St George's well and the Dean bridge but it is of poor quality and not accessible. Superficial deposits of clay and gravel, laid down in more recent times, have softened the landscape and underlie the gardens on both sides of this section of the valley.

Edited from *Water of Leith, Stockbridge Geological Walk* leaflet, Lothian and Borders GeoConservation 2011. See also 4.1 Geological features and geodiversity for individual geological features in the valley.

2.3 Biodiversity and Water of Leith Local Biodiverity Site

Areas considered of local importance for biodiversity are designated as Local Biodiversity Sites (LBS). These form a network of semi-natural habitats spanning the city and rural areas and replaced Sites of Nature Conservation Importance (SINCs). Local Biodiversity Sites are grouped together with Local Geodiversity Sites (see 4.1) under the umbrella term: Local Nature Conservation Sites (LNCS). There are three LBS designated along or adjacent to the Water of Leith: the river as it runs through the city (including Dean valley), Colinton Dell and the rural Water of Leith.

The Water of Leith LBS extends for a length of 11.4 kilometres from the crossing of the Union Canal to the Firth of Forth at Leith Docks. The site includes the river, fringing woodland, waste ground and grassland with a few locally rare plants, insects, mammals and birds. The most extensive habitat is woodland, mostly semi-natural native woodland but with areas of plantation that fringe parts of the river particularly when the valley is deep and steep. The notable plant species include the woodland hart's-tongue fern (Phyllitis scolopendrium) and aspen (Populus tremula), the ruderal squirrel-tail fescue (Vulpia bromoides) and common mallow (Malvia sylvestris), and the wetland water-cress (Rorippa nasturtium-aquaticum). Notable animal species include a wetland water beetle (Ochthebius exsculptus), a woodland micro-moth (Psychoides exsculptus), kingfisher, song thrush (Turdus philomelos), bullfinch (Pyrrhula pyrrhula) and otter. These species occur in the wider LBS, not specifically in the study area.

Otter and all species of bat are listed on Annexes II and IV of the Habitats Directive, which give the species protection at a European level. Otters and bats are priority species in the UK Biodiversity Action Plan (UKBAP), and are listed on the Scottish Biodiversity List of priority species.

The third Edinburgh Biodiversity Action Plan (Edinburgh LBAP, 2010-2015) was launched in March 2010. The new plan focuses on habitat maintenance, restoration and enhancement, delivered by six broad Habitat Action Plans. These plans aim to improve existing habitats and create new links to form green networks across the city. There are also twelve Species Action Plans, including a new plan for bees.

Habitats

The Water of Leith is covered by the Habitat Action Plans (HAPs) of the LBAP, notably the freshwater and wetland HAP, although the remaining plans also have relevance to habitats through which the river flows. The freshwater and wetland HAP aims to maintain the biological diversity of Edinburgh's rivers, canals, lochs, ponds and other freshwater habitat; and to help deliver the requirements of the Water Framework Directive by helping to achieve good ecological status of Edinburgh's wetland habitats.

The plan identifies habitat features that should be maintained or created to maximise the ecological value of watercourses. These are the retention of a buffer of uncut vegetation (at least 2m wide) next to the watercourse, ensuring continuous bank side habitat, riparian strips and aquatic vegetation. Some of these features are currently present along the Water of Leith (eg. extensive riparian strips), and need to be retained. Other features, such as aquatic vegetation, could be enhanced.

The Woodland HAP is also relevant to the Water of Leith, particularly in the Dean Valley section.

Species

Actions for species are generally included within the relevant HAP. For example, there are ongoing actions to assess the distribution of fish species on watercourses at regular intervals and to monitor known kingfisher breeding sites.

Separate Species Action Plans (SAPs) have been prepared for those species that require special attention, which are not covered by the HAPs. Badgers, bats (common pipistrelle, soprano pipistrelle and Daubenton's) and otter are covered by these plans. Many of the specified actions relate to implementation of existing protective legislation, awareness raising and habitat management. All actions relating to otter are also relevant to the Water of Leith generally.

Invasive species

The Edinburgh LBAP includes a separate action plan to address invasive non-native species. Actions are linked to identifying the location of species and controlling them. Himalayan balsam is a particular problem in the Dean Valley and Japanese knotweed also occurs (see also 8.4).

No ecological surveys specific to the Dean Valley have been identified during the preparation of this Conservation Statement. No species records for the area have been collected as this was not the principal focus of the study. However, an ecological assessment of the site area will need to be undertaken in the next stage in order to achieve the balanced approach to management that will be an aim of the ensuing project.

2.4 Dean village and industrial history

What is now called the Dean village (from dene, meaning 'deep valley') was originally Water of Leith village, the largest of Edinburgh's milling settlements, with archaeological importance for its early medieval origins as a milling site and no fewer than eleven working mills at its peak. Set deep in the valley, it developed round the mills that had existed in some form at the foundation of Holyrood abbey in the reign of David I, and in the course of time straggled up Bell's Brae, the approach from the city on the south-east, and Dean Path on the north-west, both routes shelved into the steep banks. The village continued to flourish until the rise of the giant flourmills of the later 19th century. It was kept alive by the tannery that closed c1970 and by 'repeated injections of picturesque architecture'(the most notable of these, Well Court, is covered in 4.5.2). But this also began to decay and resurgence only began in the 1980s with mill conversions, restoration and new infill buildings. The character of the village depends less on architectural consistency than on purposefully siting and countless details from the skyline down to railings, granite setts and carved stone. Its special quality lies in its quiet seclusion in the valley, so close to the city but so different from it.

In the centre of the village is the single arch of the 18th century Bell's Brae bridge with Dean weir 2 and the early 19th century West mill to its east, the only mill still standing and roofed, completely remodelled internally in 1972-3 for the Links Housing Association. Externally the best surviving of the Scots burgh grain mills (Gifford et al 1984) and the site of a mill since at least 1573.

Miller Row along the south of the river was lined with mills. Marr's Mill disappeared in the late 19th century and other buildings including Lindsay's mill and a number of cottages in the 1930s and 50s, and the gaunt close-built character of this bank was lost. An important milling site a short distance downstream was Greenland mill served by the former Great Lade running from the Dean weir 2 / World's End weir that continued to other mills downstream.

2.5 Comparative chronology of the development of the gardens

The following chronology or timeline summarises and compares the main events in the development of the landscape of the river valley and the three gardens, distinguishing the history of each area in colour. The information is drawn largely from Connie Byrom's *The Edinburgh New Town Gardens* (2005) supplemented by a number of other sources given in the References (Appendix 1) or noted (unpublished sources only). Some further history is included with the Visual assessment (section 3) and Main components and features (section 4).

River valley landscape: walkway, riverside, St Bernard's area and common events

Moray Bank Garden, incl. Doune Terrace garden

Dean Gardens (Eton Terrace Garden)

Belgrave Crescent Gardens

1609 Lands of the Dean owned by the Nisbet family; William Nisbet built family home, Dean House, c1614 (dem. 1845); lands extended from Stockbridge / Ann Street to Queensferry Road and Bell's Brae.

1636 Barony of Broughton, known as Drumsheugh or Meldrumsheugh, bought by Heriot's Hospital. House built by later owner Alan Drummond. House and 30 Scots acres of land came to ownership of Francis, 9th Earl of Moray who lived there until his death in 1810.

1760 A natural spring was discovered near Stock bridge and its mineral waters soon became popular adding to the attraction of the valley. The foundation stone of a building to cover the spring or well was laid on 15 September by Alexander Drummond, brother of Provost Drummond, and Provincial Grand Master of all the Lodges in Asia and Europe. 'The cover which was half erected ... was entirely swept away' in a flood in November 1760.

1785-86 First stone bridge erected at Stockbridge, replacing a ford and wooden structure; widened about 1830 (Kerr 1982)

1788 Lord Gardenstone acquired the well, 'with some ground pertaining to it'.

1789 The St Bernard's Well temple was built, 'for the benefit of the public at the sole expense of Francis Garden Esq of Troup' designed by Alexander Nasmyth, with a rockwork base containing a pump-room below. Inspired by the much-visited circular Temple of the Sibyl perched above Tivoli's highest waterfall east of Rome. The well became much visited for its water and its Claudian or picturesque setting.

1791 An over-large statue of Hygeia manufactured in Coade stone was added at the upper level of the temple that was not included in Nasmyth's plans.

1810 St George's well built upstream from St Bernard's well.

1822 Feuing plan for Moray estate by James Gillespie Graham and first house plots sold. Gillespie Graham as architect designed the distinctive chain of spaces that are Randolph Crescent, Ainslie Place, Moray Place and connecting streets with their unified monumental-scale architecture and central crescent, oval and circus gardens. All feuars of houses were to have 'access in common' to the Bank Gardens but responsibilities of the estate and feuars lacked clarity.

Early 1820s A narrow strip of ground parallel to Doune Terrace was added to the Bank Gardens when the Earl acquired the land from the Raeburn estate. In the 1822 Conditions of Sale Lord Moray reserved the right to build there, but the purchasers, mainly the building firm of John Sheenan and John Walker, negotiated that he should give up this right. He intended that there should be a row of stables and a mews lane stretching west for about 50m from the present gardeners' hut.

1820s Speculative proposals for developing the Dean lands, including plans by Alexander Nasmyth and James Gillespie Graham.

1824 St Bernard's bridge built to provide access to the Raeburn estate (before Dean bridge and widening of Stockbridge); architect probably James Milne; comprising a main arch and second arch on south for a riverside path. Large stairs added in 1888, in conjunction with works at St Bernard's well

1825 June – First landslip caused by build-up of spoil on the steep slope; damages Greenland Mill. Remedial measures proposed by Robert Stevenson included a high arched retaining wall carrying a path to rear gardens at the back of Randolph Crescent / Great Stuart Street. All costs met by Lord Moray.

1825 Dean Estate sold to John Learmonth, who was to become the largest house proprietor and one of the largest feu proprietors in the city; speculative plan in grid layout by John Tait (?).

1826 Meetings of feuars committee fail to agree on responsibilities to inclose, dress and take charge of the pleasure grounds, despite proposals and estimates prepared by Gillespie Graham.

1827 March – Second landslip east of the first at back of Ainslie Place, with similar causes, affecting the mill lade and river. The main remedial work after removal of spoil was extension of the retaining structure.

1831 Bank Gardens layout completed by Lord Moray at cost of £324, including £129 on shaping banks and making paths, £90 for planting trees and shrubs and £86 for paling at the foot of the garden.

1832 Dean bridge opened, designed by Thomas Telford, largely financed by John Learmonth to link his Dean lands to the city.

1832, 1833 and later. Gardens Management Committee oversee more expenditure on gardens to deal with steep slopes, drainage, more paths, more planting. Residents start to appreciate established gardens.

1832 Despite opening of Dean bridge, feuing of the Dean Estate did not immediately proceed due to a downturn in the housing market.

1837-38 Holy Trinity church built at the north-west side of the Dean bridge; architect John Henderson; sanctuary added 1900.

1837 October – Third landslip between Ainslie Place and Moray Place, started moving in August 1836, destroying an area of the garden and undermining private garden walls. Works again involved extending the arched retaining wall, regrading the bank and reinstating the garden; continued into 1840; overall cost of £1,549 paid by Lord Moray.

1849 The poor state of the footpath was cited as a need for increased police patrols; newspaper report of man rescued after slipping into the river following recurring drownings in the river or mill lade.

1850s Design for Dean Estate by John Tait for Learmonth, covering Ann Street to Queensferry Road, including Clarendon Crescent (completed 1853) Eton Terrace (begun 1855) and Oxford Terrace / Lennox Street (1860s); plan also had a row of houses at Cambridge Terrace on south side of Eton Terrace close to Dean bridge. Green space included a strip along Oxford Terrace, a garden fronting Clarendon Crescent and the bank from Eton Terrace down to the Water of Leith. Initially the bank was used for dumping spoil and neglected.

1863 Edinburgh and Leith Sewerage Act.

1864 Sewer constructed along the course of the Water of Leith into which many of the earlier 19th century sewers were connected, extended from the Forth to Roseburn; engineers D & T Stevenson.

1863-65 Plan for second stage of Dean Estate south of Queenferry Road, incl Buckingham Terrace, Belgrave Crescent and Belgrave Place; architect John Chesser working for Lt Col Alex Learmonth. Green space included a tree belt beside Queensferry Road and a semi-circular garden at Belgrave Crescent (later extended).

1865 James McNab report praises the 'romantic' garden, but considers it too compartmented and over planted; his advice was largely disregarded.

1867 Feuing and building well advanced. 12-year lease of garden ground to feuars, excluding area of proposed Cambridge Terrace, with responsibility for enclosing and laying out the ground as pleasure garden. Plan prepared by architect John Dick Peddie.

1868 Dick Peddie's plan and detailed planting list by James McNab approved by garden committee. Works proceed and by year end, earthworks and lower slope planted. Plan has not survived but detailed descriptions and photographs show layout.

1870 Elm avenue planted on Middle walk (removed 1981) and walls / railings erected along boundaries, incl Ann Street wall.

1875 The Cockburn Association founded, partly resulting from a campaign for a West End park on land north of Learmonth Terrace in the third stage of Dean Estate development, with a remit to preserve Edinburgh's remaining open spaces.

1876 Col Learmonth agreed to sell the 'unseemly … waste ground' seen from Dean bridge (waiting development as Cambridge Terrace) for £2,250. Half this sum was given by Moray feuars, to preserve their view, the rest from Dean feuars fundraising, incl £500 from events organised by the Dean ladies.

1876-77 Committee led by Sir James Falshaw negotiated sale of lands allocated for Belgrave Place extension, on bank down to river, by Col Learmonth for £4,000; monies raised from 21 feuars and from 'the opposite side' of the Water of Leith, in return for right to keys, most giving £250 each.

1877 New area of Dean Gardens extending from Trinity Church cemetery wall to existing garden, laid out by John Jeffrey & Son to their own plan, approved by McNab, including a fairly level upper area, tennis court, linking paths and planting in character with previous. Proposal for a link with Belgrave Crescent garden turned down.

1870s Royal Commission on River Pollution reported the Water of Leith to be the most polluted in the country.

Late 1870s Garden layout to plan by James McNab, uniting the two areas, creating a simple and uncluttered view from Dean bridge and creating a miniature parkland in the city. After McNab's death, his successor McLeod, advised on completion of walks, planting and forming banks on west side. John Jeffrey & Son again carried out the work. Cope and railing along south of crescent removed and used to heighten wall along Dean Path.

1880 Both Belgrave Crescent housing and the garden area extended westward to Dean Path with new gates from the crescent and steps up from road in cooperation with the builder, James Steel.

1887 Hill writes 'For more than thirty years after its erection no injury was done to this statue [Coade statue of Hygeia], but wanton mischief has now rendered it a total wreck'.

1888 St Bernard's well and surrounding grounds as far as St Bernard's bridge 'purchased, restored and embellished' by William Nelson and gifted to the Corporation for the benefit of the citizens of Edinburgh.' Battered goddess replaced with new marble statue by D W Stevenson. Stairway added to St Bernard's bridge.

1889 Second deeper sewer constructed along the Water of Leith extending inland to Balerno. The removal of effluent from the river channel allowed a trout hatchery to operate near St George's well from 1895. The *Great Lade* was closed soon after (1890), returning more water to the river, and Greenland mill closed.

1888 Burgh Engineer John Cooper recommend measures to deter suicides from Dean bridge; height of the parapet was raised.

1887 Many more trees added along the bank, mixed woodland species. Privet hedge planted alongside the road, with lime and holly trees in the border.

1890s '… a pleasant promenade of red asphalte, with greenery overhead and the stream gushing at its base'.

1900-01 Stock bridge rebuilt in its present form.

1941 & 1943 Garden used for training and drilling of 6th Battalion of the Home Guard and Air Cadets; railings removed and north flowers borders converted to vegetable plots (some remaining till 1960).

1942 Railings at the foot of the garden removed. In 1949 a wire mesh fence secured garden boundary again. This in turn replaced by a weld-mesh fence in 2012.

1947 Abercrombie & Plumstead describe the tree planting in Dean Gardens as 'excessive' producing a 'gorge-like wilderness' and 'obscuring the natural features of the river side and its bank.' Despite the massive growth of planting, the gardens remain faithful to the original design.

1949 The concept of a Water of Leith public path first appeared, but construction of the first sections was not begun until after 1973.

1957 The Institution of Civil Engineers, of which Telford was its first president, installed a plaque on the east parapet of Dean Bridge commemorating his bicentenary; later stolen and replaced in 1982.

1962 After a period of neglect and vandalism, the roof, railings and steps of St Bernard's well were repaired, but vandalism continued to affect both wells.

1970 Lower bank cleared of scrub and saplings to create a picnic area and open up the views to Dean bridge and the weir waterfall; similar works are on-going in 2010s.

1981 Elms along the Middle walk felled; replanted with beech in 1983.

1983 Water of Leith Walkway created through the Valley as part of the 12-mile planned route (completed 2002); project group established; St Bernard's well opens on a regular basis.

1991 Repairs to the arched retaining structure and walkway.

1995 Long-term management plan for the Moray Feu gardens prepared by John Byrom, Head of School of Landscape Architecture at the University of Edinburgh.

1998 Pathways resurfaced and planting renewed, adding to original species variety. Today's attractions include two children's play areas, seating, a barbecue area, fine walks, lawns, wooded banks and mixed flower beds.

2002 The Water of Leith Walkway completed with Millennium Project funding, extending from Balerno to the Leith Docks via Dean valley.

2003 A ramp path, handrail, other paths and a sandstone retaining wall completed as part of the Millennium Project at a cost of £75,000, to provide obstacle-free access for all users of the walkway.

2013 St Bernard's well restored under the Twelve Monuments Project, a joint initiative between Edinburgh World Heritage, Historic Scotland and the City of Edinburgh Council

2010s Project to develop former Grove cottage (aka Gardener's cottage) area of the lower garden

2014 Conservation Management Plan for Moray Feu gardens completed by Land Use Consultants, covering the Randolph Crescent, Ainslie Place and Moray Place gardens as well as Moray Bank Gardens

3 Visual assessment

3.1 Introduction

All landscapes can be considered in visual terms as sequences of spaces and views within and between them. In designed landscapes views have been deliberately planned or exploited and are of many types. In the urban context of the New Town, types of view that can be important include views to gardens, views over gardens, views with gardens (eg. street views), view into gardens, and many views within gardens, that may include panoramas, vistas, peeps, long views, short views and external or 'borrowed' views.

Often there is little direct evidence – such as design documents or contemporary records – of what views were planned. However, much can be concluded from later historic descriptions and depictions and from comparison with analysis of views on the ground today. In the case of the Dean Valley designed landscapes we have both some good documentary evidence of what views were intended and, due to the popularity of this section of the Water of Leith valley, a good range of descriptions, paintings, prints and photographs. As well as the picturesque quality of the valley in its own right, the presence of St Bernard's well as a focal feature and Dean bridge as a viewpoint has meant that the site is among the most recorded places in Edinburgh and Scotland, almost equalling the Castle and Calton Hill. For example in *Scotia Depicta* (1804) St Bernard's well is included with a view of the Castle and a view of Princes Street among only 48 plates of "antiquities, castles, gentlemen's seats, towns, and picturesque scenery" across the whole of Scotland.

3.2 Legal entitlement to views

Some of the clearest evidence for intended views comes from feuing conditions of the Moray Estate properties. In the *Articles and Conditions of Roup and Sale of the Grounds of Drumsheugh* (1822) " … the said Earl has resolved to preserve the beauty of the bank on the south side of the river, between the boundary walls of the feus, on the north of the property and the river, and to reserve the same as pleasure ground" whereas feuars were " … bound to place and keep in proper repair a light iron railing, on said north boundary wall, in order that the view of the river and bank may be preserved to the feuars on that side of the property."

The original individual feu agreements and the 'burdens' included in Moray Estate property deeds ever since (from the evidence of some seen) include these same phrases. While of some theoretical interest in respect of continuing legal entitlements, the practicability of every householder having a view obviously was not considered, particularly when much of the gardens were planted thickly with trees in the 1830s (as seen on the 1850s Ordnance Survey town plan).

Also, while the *Articles and Conditions* contained detailed requirements regarding the front elevations of building and common features of the plan like sewers, road-ways and foot-ways, the rear elevations facing the Water of Leith pleasure grounds were also expected to achieve certain standard of construction and uniformity, for example " … the feuars on the north side of the property … will be taken bound to keep the back elevations of their respective houses of the height, and on a level with, the front elevation and to build them of neat, hammer-dressed stone, laid in regular courses with belts and breakings, and a cornice and block course at the top, as shown on the elevation; that the windows in the back of these houses must be placed in a regular and uniform order …". This presumably with the views from the gardens and lands to the north of the valley in mind.

Hugh 'Grecian' Williams's view of St Bernard's well and the Water of Leith,1790 (Andrew Kerr)

3.3 Changing views as recorded in descriptions, paintings, prints and photographs

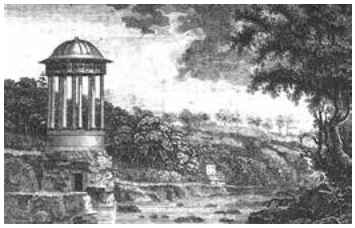
While now seen as one of the great achievements of Georgian urban planning, it should be borne in mind that the intrusion of the Moray Estate development and its effects on the valley of the river were contentious issues at the time. Furthermore the views were prized before development, as this extract from The Scotsman shows at the time when building on Lord Moray's grounds was under consideration …

> They [the Moray grounds] lie on an eminence, and are washed by the Water of Leith, from which they are separated by a beautiful sloping bank, and partly by a perpendicular rock of great height and most picturesque character. The view embraces the greater part of the course of the river, – the whole line of the Forth from Largo-Law to Ben Lomond, – and, more nearly, St Bernard's Well, the Mills, Stockbridge, and several other fine objects. … Looking to them … from the opposite bank … we have St George's Church, the Castle, and the town, seen above the wooded park and river, which form a foreground worthy of the finest picture … (The Scotsman 1821)

With the New Town in its first and second phases encroaching close on the south, the Moray grounds and Water of Leith valley became increasingly valued, as recorded by Lord Cockburn and others, particularly after 'the grounds of the Castle [had] been made into *private property*' (ie. West Princes Street Gardens).

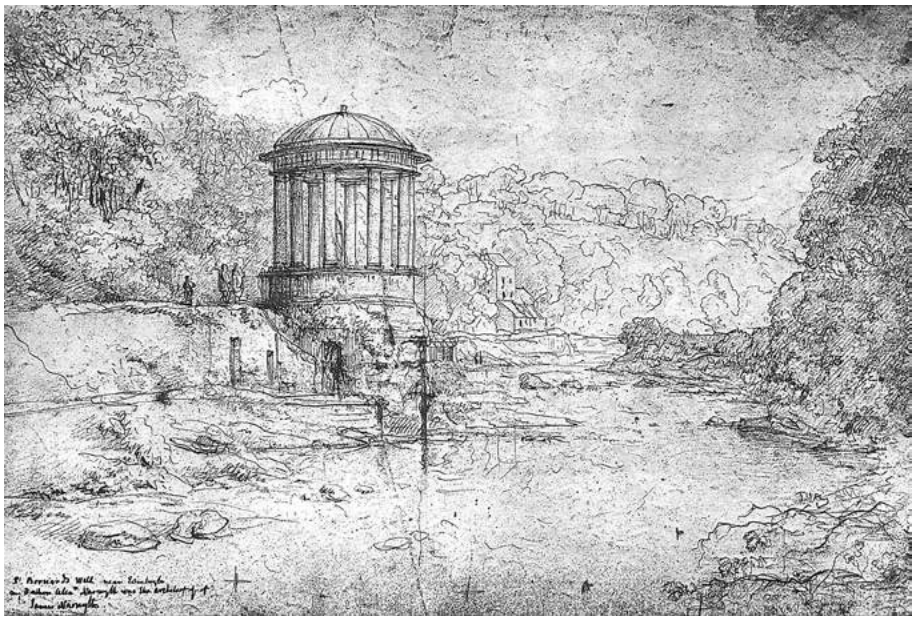
The Stock Bridge from the Edinburgh Magazine 1790

The quoted features of the valley, particularly the well, and its views made it a frequent subject for artists in paintings and prints, both before and after the Moray and later housing developments. The 'perpendicular rock of great height', ie. Randolph cliff, provided a grand viewpoint, but after 1832 the Dean bridge made an even more convenient one.



St Bernard's well from the Edinburgh Magazine 1800

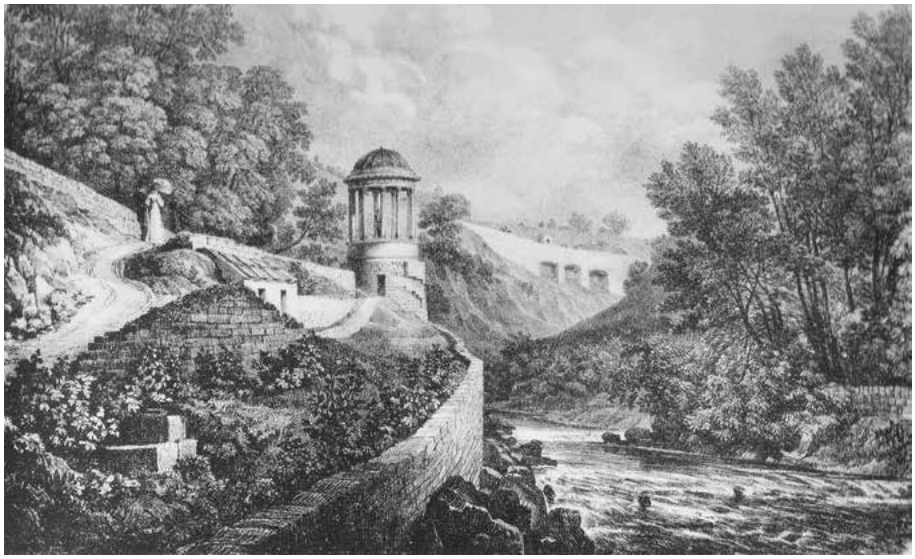
Hugh 'Grecian' Williams's view of the valley and well in 1790 also shows the wooden construction the *Great Lade*, running for almost 2 miles from Dean weir and serving various mills in the valley, with well wooded banks on the Moray side and a bare slope giving way to trees on the Dean side. In contrast an etching from the Edinburgh Magazine in 1790 of *The Stock Bridge* also shows the well with Lord Moray's grounds rising behind as the background. Another Edinburgh Magazine image of 1800, featuring a close view of the well, has the Lord Moray's grounds and bank in more detail with woods near the well and more open slopes and trees belt upstream. Like many subsequent pictures it is from a frequently used viewpoint on the Dean bank of the river and shows the Greenland mill



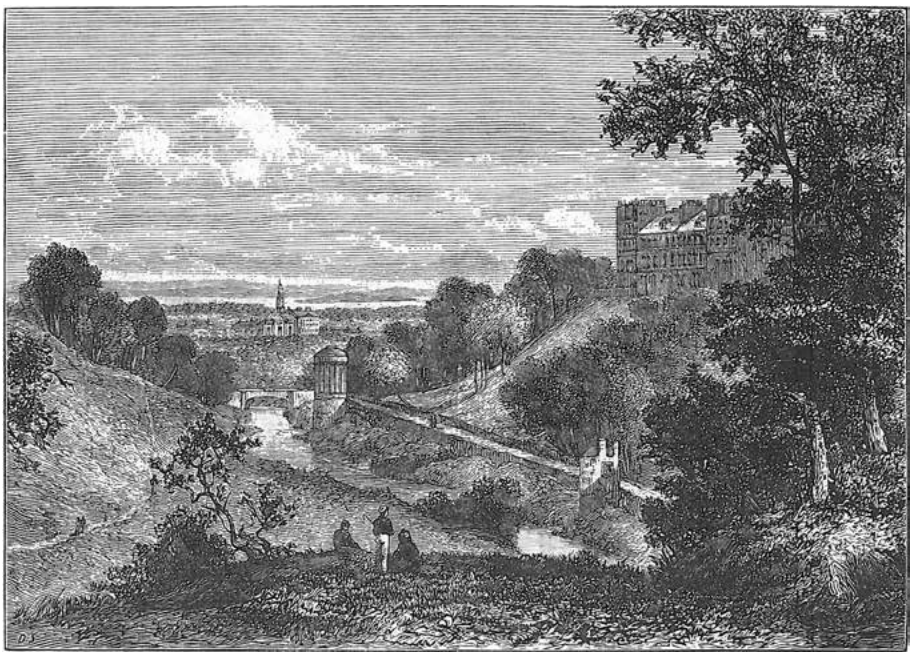
Alexander Nasmyth's sketch of St Bernard's well c1800 (NGS/RCAHMS)

upstream from the well, as does for example, Alexander Nasmyth's pen sketch of about the same time and similar viewpoint and including essentially the same information. This drawing appears to be a study for his oil painting of the St Bernard's well in the Georgian House, Charlotte Square.

T M Baynes Water of Leith valley, St Bernard's well and firth of Forth 1823

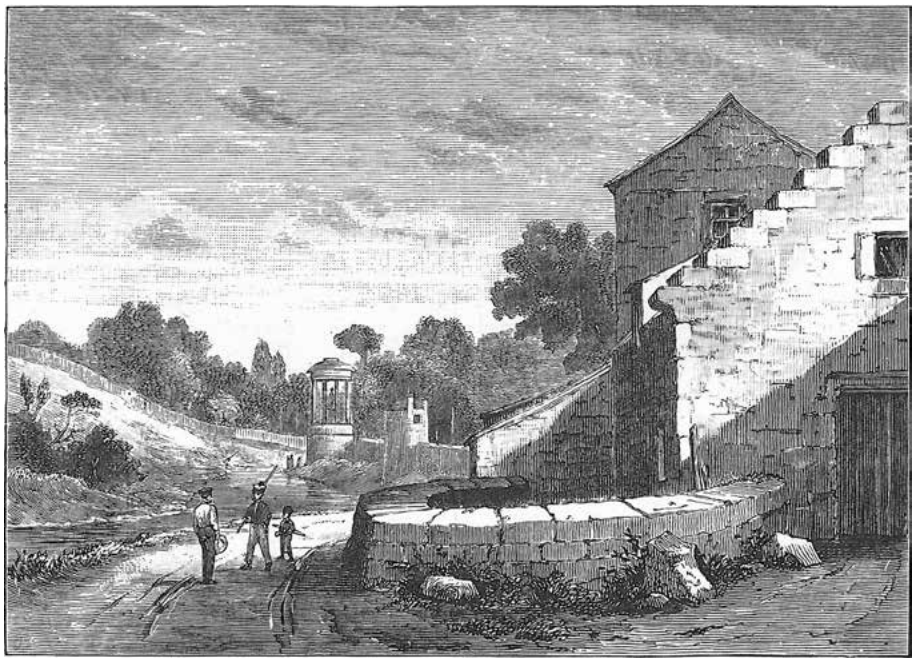


T M Baynes Water of Leith and St Bernard's well 1823

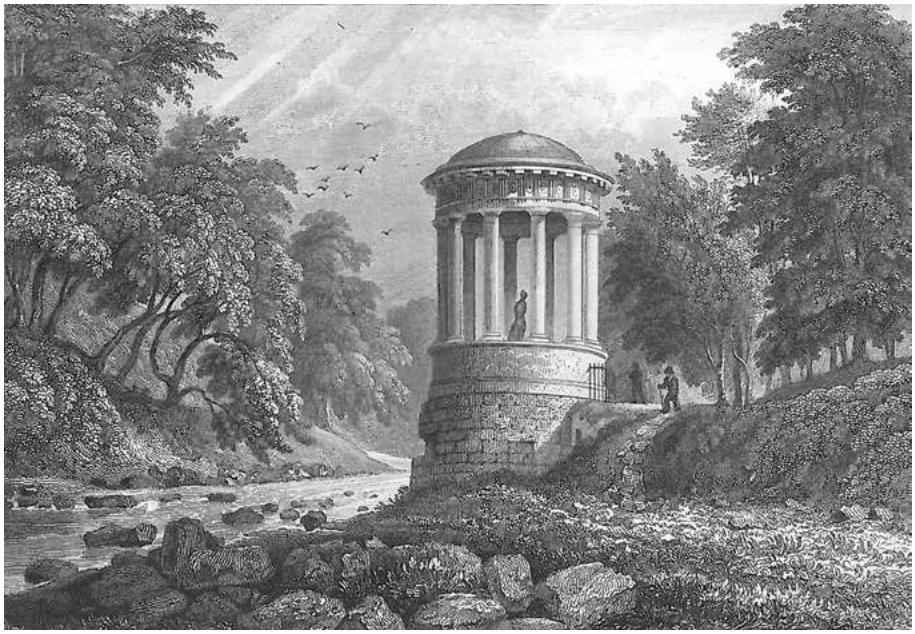


Print from 'Old and New Edinburgh' c1880 after Ewbank Water of Leith 1825

T M Baynes' lithograph of 1823 shows much of the valley view described in The Scotsman with St Bernard's well centrally and a well-established public path. A second view, looking upstream with the well on the left, shows the public path going past it and the first arches of the retaining structure built to stabilise the Moray bank. Both views show the good tree cover on much of the Moray bank compared to the barer slopes opposite. These early depictions establish the elevated and river level viewpoints of the valley that continued to be used by later artists and remain important for users today. From near the same time (1825) come Ewbank's pictures (reproduced here as etchings made in the 1880s for *Edinburgh Old and New*), when Ainslie Place and Moray Place were under construction. His elevated view shows the cliff-like presence of the rear of Moray Place, St George's and St Bernard's wells, a path on the line of the mill lade and St Bernard's bridge. His second view is from upstream with the buildings of Greenland mill in the foreground and St George's and St Bernard's wells beyond – a view now framed by an arch of the Dean bridge, although the temple is not visible now due to the growth of trees.



Print from 'Old and New Edinburgh' c1880 after Ewbank St Bernard's well from Greenland mill 1825

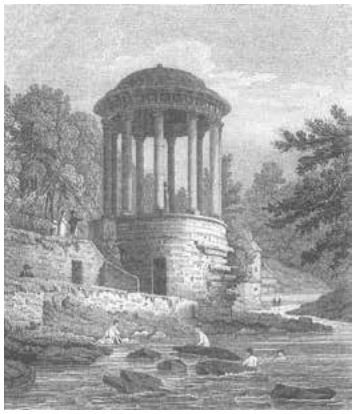


Thomas Shepherd, St Bernard's well from Modern Athens c1830

From the same direction and in an idealized view Thomas Shepherd's etching of St Bernard's well from the late 1820s, apparently from the bed of the river, demonstrates the importance of the site at this time, the well and valley being collected together with images and descriptions of the many other features of Enlightenment Edinburgh under the title of *Modern Athens*, albeit that the well is from a Roman original. A later image, Thomas Miles Richardson's painting of 1854 shows the well and all the other main features of the valley now in place – St George's well, the buildings of Randolph cliff, the Dean bridge and Holy Trinity church, set between the wooded Moray bank and the open Dean slope, plus girls in Italian peasant costumes carrying water. Patricia Andrew notes that "there are several versions of this image, both by Leitch and by Thomas Miles Richardson (1784-1848), in watercolour and lithograph, so similar in composition that one artist appears to have copied from the other" (Andrew 2012).

T McNiven view of Dean bridge and Dean gardens slope, with sheep 1850

Unerstanding of the Claudian inspiration for views such as these by Shepherd and Richardson, and for the origin for the well-temple from Tivoli, was provided by guidebooks. Andrew gives the example of the English traveller Sir John Stoddart who perceived that the 'outline is evidently taken from the celebrated Sibyl's temple at Tivoli ... [It] seemed to be introduced, as into a picture, by the felicitous pencil of Claude' (Andrew 2012 p15). Also with this Claudian character is the J & H S Storer engraving of the well with boys bathing (1820).



J & H S Storer, St Bernard's well 1820

Thomas Miles Richardson, St Bernard's well 1854

Photograph c1860 of valley at St Bernard's well with path on mill lade and bank below Upper Dean Terrace (RCAHMS)

Thomas Begbie, St Bernard's well from downstream c1850s

A lithograph by T McNiven of similar date from an elevated viewpoint (an Ainslie Place window?) covers some of the familiar valley features – the Dean bridge and Holy Trinity church, plus Dean village – with the Dean slope prominent and undeveloped on the right, grazed by sheep, and the Dean Estate lands that would become Buckingham Terrace Gardens visible in the background.

The first photographs of the valley are those of Thomas Begbie in the late 1850s and predictably use the same viewpoints, focusing on St Bernard's well from downstream on the Dean bank and from upstream, also from the Dean side. The photographs confirm the accuracy of artist's topographic views generally and indicate the growth of planting on Moray bank. Begbie also recorded the fine view to the new Holy Trinity church from Bell's Brae bridge, framed by mills (and showing the channelised river), a view that remains notable today although with considerably more trees in the middle distance.

Thomas Begbie, St Bernard's well from upstream, Dean bank c1850s

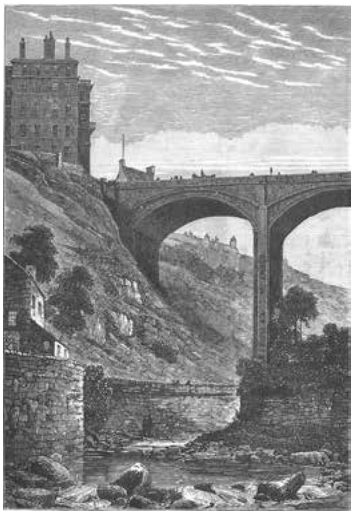
However, the valley is still relatively sparsely treed at this time, with the only substantial mature tree cover being in the east part of Moray Bank, with further scattered trees on the bank below Upper Dean Terrace (compared to the dense trees shown by Ewbank), clearly shown in two photographs of c1860 in RCAHMS, one from upstream of St Bernard's well, the other from beside Greenland Mill. The treeless nature of the immediate river banks is notable. Both images show the narrow path then present, sharing the space at the foot of Moray Bank with the mill lade on the landward side, now apparently contained in a masonry structure. Notable also in these views are the boundary walls defining the Dean Estate on the east and beside the river.

Thomas Begbie, Dean village with Holy Trinity church c1850s

Photograph c1860 of Dean valley from Greenland mill, with St George's and St Bernard's wells (RCAHMS)

LEFT *George Washington Wilson, Eton Terrace Gardens c1880 with planting well established and Moray Bank well treed*
BELOW *Anon., Eton Terrace Gardens c1875 with gardens fully planted*

At this time the dearth of trees on the river banks as compared to today in all these views is likely to have been the result of the polluted river, much of its flow being diverted along the lade. As Helen Brown has noted "There is no doubt in my mind that the gardens were often designed to turn attention away from the river as it was a polluted, sterile, filthy stream devoid of life and charm" (pers comm 17 March 2015). This state is confirmed by the Royal Commission on River Pollution report in the 1870s that the Water of Leith was the most polluted in the country. This treeless state may have been affected by the construction of the Edinburgh main sewer in 1864, running from the Forth to Roseburn along the Water of Leith riverbed, and by a second larger and deeper sewer constructed in 1889, extending inland to Balerno. Sewer manholes in the riverbed can be seen in some views and are visible on the west side of St Bernard's well, below Dean weir 2 and some other prominent locations today. The improved water quality has, in time, led to a much greater extent of tree cover today compared to the 19th century and is now a key issue in the management of views.



Randolph Cliff and Dean Bridge from Old and New Edinburgh c1880

The Dean bridge, opened in 1832, is important not only as an outstanding viewpoint of the valley, probably the one most frequently experienced ever since it was built, but as a feature in views and published images, notably in *Randolph Cliff and Dean Bridge* (from *Old and New Edinburgh*). The poor view from the bridge in the 1850s was also influential in moves to establish the Dean Gardens, with a letter in The Courant (12 December 1858) saying of the bank below Eton Terrace ...

> At present its appearance is an eyesore to everyone crossing the Dean Bridge … nothing but stunted grass overlaid by heaps of rubbish'.

George Washington Wilson, Dean bridge and mills of Dean village c1870

George Washington Wilson, Dean valley c1870 with Eton Terrace gardens partly laid out

ABOVE *George Washington Wilson?, Belgrave Crescent Gardens with Dean bridge and Holy Trinity church, tinted postcard probaly published c1900*

RIGHT *George Washington Wilson, Belgrave Crescent Gardens with Dean bridge and Holy Trinity church c1880*

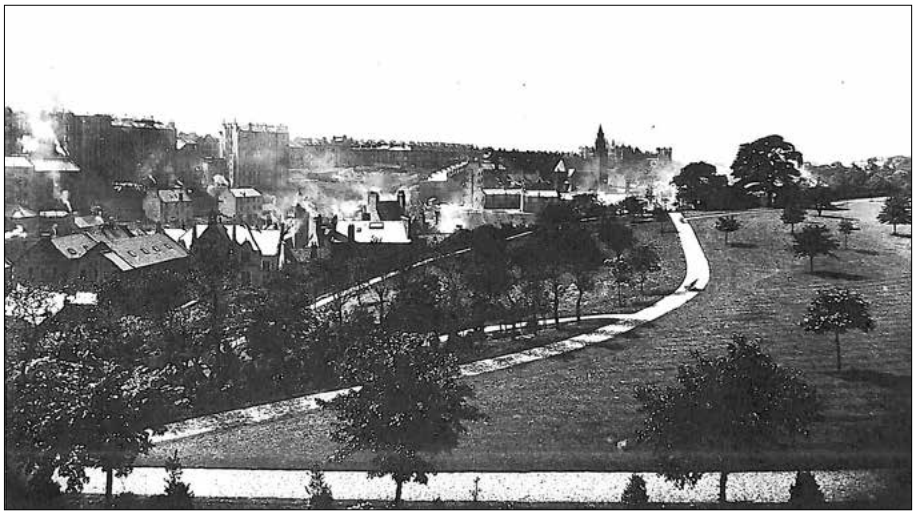
George Washington Wilson, St Bernard's well c1880

The cliff view, among many other later 19th and early 20th century prints and photographs, shows the quite treeless nature of the valley bottom at this time.

Perhaps the best known early photograph of c1875 is from the bridge looking eastwards and shows the newly laid-out gardens of Eton Terrace with well-established belts of trees on the riverside and the bank facing the bridge, the terraced paths at three levels and an avenue of young trees on the lowest terrace. All of Moray Bank visible in this view by now is covered in well-established trees. Equally informative are the views of George Washington Wilson (or his company) of various dates and viewpoints, the earliest of which shows the Eton Terrace gardens in the first phase of their construction, with the terraces freshly formed but without trees and the west part beside Dean bridge still rough and in use by Colonel Learmonth, taken about 1870. From about the same time is a view from the future Belgrave Crescent Gardens site with the bridge and mills of Dean viillage. A later view shows the garden complete and planting similar to the c1875 view and, in comparison, with more of the Moray Bank visible indicating spaces present among the trees. Among the six or more Wilson views of the valley (plus stereoscopic pairs from the same viewpoints, mostly in the GWW Archive at the University of Aberdeen), a view of the Dean bridge from Belgrave Crescent Gardens shows a new path with young trees in that garden and established trees and shrubs in the Dean area near the bridge, taken around

Joseph Brown, Dean weir and the village of Water of Leith, c1896

Joseph Brown, Dean valley from St Bernard's bridge, c1896



Prof Chrystal, Belgrave Crescent Gardens from Dean bridge, c1900-10 (RCAHMS)

1880. Another view shows St Bernard's well with new or restored walls, but not the 1888 scheme and the new statue.

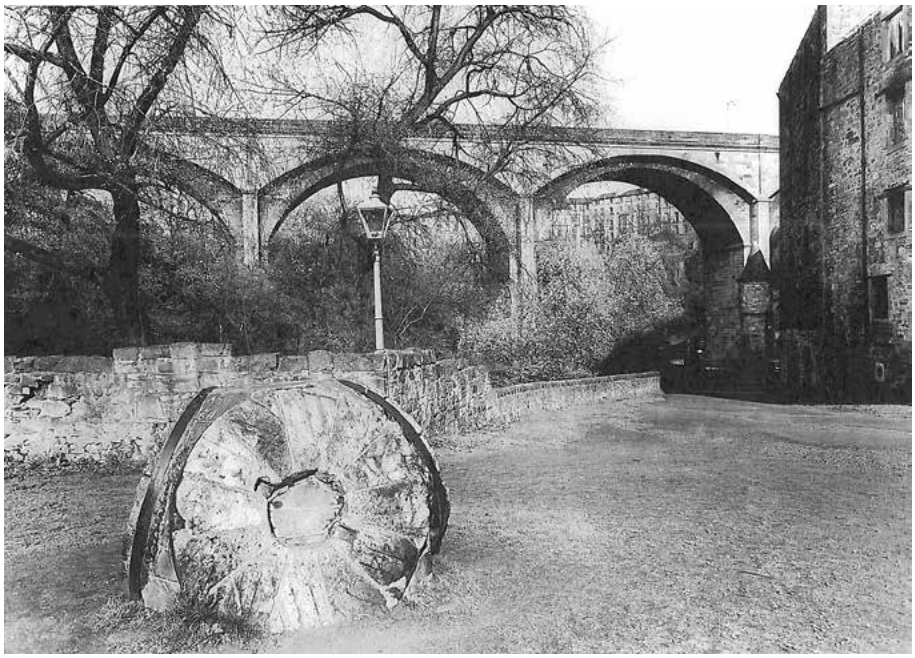
The views continued to be painted. Joseph Brown's pictures from the end of the century (in Geddie 1896) show how the planting in Dean Gardens was growing in a view from St Bernard's bridge. Another view of *The village of Water of Leith* showing the Dean weir may be from a viewpoint in Belgrave Crescent Gardens.

F Hurst, St Bernard's well and walkway, 1926 (RCAHMS)

Even late in the 19th century the shortcomings of the Moray Estate development were still being commented upon, such points being significant in terms of the importance placed on civic views.

> … a century ago and more, when it must have been still more beautiful and much more romantic. An architectural mistake has been made in turning the back of the stately and lofty West End houses, built on Lord Moray's feuing ground in Randolph Crescent, Great Stuart Street, Ainslie Place, and Moray Place, towards the water. They crown the richly-wooded right bank with a featureless and cliff-like wall where there might have been the finest façade in Europe. (Geddie 1896)

Another useful collection of photographs is the Professor Chrystal set of views in RCAHMS, dated to 1900-10 (RCAHMS give 1900-30 for the collection, although the tree growth suggests an earlier date). In terms of viewpoints, they are similar to the Wilson views, but also look west from the Dean Bridge to show the Belgrave



Eric le Mare, Miller Row and Dean bridge 1960s (RCAHMS)

Prof Chrystal, Dean Gardens from Dean bridge, c1900-10 (RCAHMS)

Prof Chrystal, Dean valley with the two wells and walkway, c1900-10 (RCAHMS)

Andrew Kerr, elm avenue in Dean Gardens 1978

Crescent Garden with neat gravel paths, scattered trees on the higher level and denser planting on the slope, with the view to the bridge becoming obscured. The Dean Gardens now have a good cover of trees, although one tree row on the river side of the avenue has been removed. A view of the two well buildings shows iron railings now in place on either side of the path and the river banks still largely devoid of trees. A photograph (F Hurst) from 1926 of St Bernard's well from the path, shows the open and well-maintained layout upstream from the well with perimeter paths. More recently an Eric le Mare photograph from the 1960s shows another significant view, of the Dean bridge from Miller Row, while Andrew Kerr's image from 1978 records the lower walk in Dean Gardens with the elm avenue before it was replaced.

3.4 Analysis of historical and current views

Figure 3 shows the New Town terraces of the valley edges, the landmark buildings and structures of the valley and the other garden spaces close to the valley. It also analyses the views shown in the previous section and the most notable views present today, differentiating the following categories.

- Views depicted historically and still visible today, including panoramic views and narrow views. Many viewpoints were used time and time again, so not each variation is recorded on the plan.
- Other significant panoramic views and narrow views that are visible today. Most of the same views are likely to have been present historically, but have not been recorded, probably because they were inaccessible within private gardens.
- Views depicted historically, but not visible today, including panoramic views and narrow views. All categories of views have changed dramatically over time due to the growth of trees and undergrowth, and this is the main reason for the loss of these views.

Winter view of well from Upper Dean Terrace

4 Main components and features

This section describes the main components of the river valley landscape and three gardens that are of interest, are significant in conservation terms and for future management.

4.1 Geological features and geodiversity

There are no Regionally Important Geological & Geomorphological Sites or RIGS within the study area. A local geodiversity site (formerly RIGS) is proposed in the Dean Valley (Water of Leith, Stockbridge and Dean Bridge), which covers much of the study area. The following information is based on the site record.

Steep-sided, post-glacial river gorge cut in Lower Carboniferous sedimentary rocks, which dip west. Bedrock exposures are limited. The more resistant sandstone layers form features in the river bed, and there is one good accessible mudstone exposure underneath the Dean Bridge (sedimentary rocks from the Strathclyde Group, fossiliferous mudstone with ironstone nodules and sandstone). Two igneous dykes cross the river bed, the western one at St George's Well is clearly visible in contact with sandstone.

Mudstone exposure underneath the Dean Bridge (CEC)

The following descriptions of four geological features are based on the Lothian and Borders GeoConservation 2011 *Water of Leith, Stockbridge Geological Walk* leaflet 2011.

St Bernard's bridge was built in 1824 on the margin of the raised beach which was the former shoreline about 14,000 years ago. It is now about 30 metres above sea level, showing how far the sea-level has fallen and the land has rebounded as it was freed from the weight of the ice sheet (isostatic uplift).

In the river at St Bernard's well the more northerly of two quartz dolerite dykes cuts the river-bed, although the walkway is built partially over it. These dykes were formed when hot liquid magma was forced up through a weakness in the Earth's crust, but solidified before reaching the surface. Subsequent erosion by ice and water has left the harder rock of the dykes as distinctive dark-coloured ridges. Beyond the well-house, the Carboniferous sandstone bedrock is exposed in the riverbed, the beds dipping to the west.

Quartz dolerite dykes cross the river bed

St George's well sits above a quartz dolerite dyke that can be clearly seen in the river bed and on the bank. About 50 metres beyond the well, the river-bed is cut by a poor quality coal seam, the Wardie coal.

Approaching the Dean bridge, on the steep rocky escarpment to the left of the path, are gently dipping beds of Granton sandstone underlying beds of dark crumbly mudstone (including some oil-shale), part of the Wardie shales. It is possible to find plant and occasional fish fossils amongst the loose material at the foot of the cliff.

4.2 Circulation, private and public

Figure 5

While the walkway is the most accessible and intimate route through the valley landscape, the Dean bridge and neighbouring streets are important as ways of experiencing the landscape in the everyday life of the city. The paths of the three gardens, although private, provide some of the most sublime experiences of the valley.

4.2.1 Dean Valley public path / Water of Leith walkway

The valley walkway is accessible from Dean village at the west and St Bernard's bridge / Saunders Street at the east, a length of about 1 km with no other access

Water of Leith walkway, Dean valley

Paths on steep slopes, drybound surface, Moray Bank Gardens

Riverside path and ramped path, gravel surface, Dean Gardens

Upper paths finished in red whin, Belgrave Crescent Gardens

points in between apart from one private gate from Moray Bank Gardens. It is a path with an average of 3m wide surfaced in bitmac, running between river-side railings and the Moray Bank Gardens fence or other boundaries, although with parapet walls and secondary paths in the section from St Bernard's well to St Bernard's bridge.

The walkway is part of the 12-mile long Water of Leith Walkway that was created through the area in 1983 although the whole route, extending from Balerno to the Leith Docks, was not completed until in 2002 following receipt of Millennium Project Funding. The concept of a public path first appeared in 1949, but construction of the first sections was not begun until after 1973. The route is suitable for walking and cycling, and is partially accessible by wheelchairs and by horseback. It is a Core Path (ref. CEC 18) within Edinburgh's Core Paths Plan.

The official title of the route is the Water of Leith Walkway, and this name is used on current signs and maps. It has been suggested, for example during the consultation on the Water of Leith Management Plan, that the name should be changed to *path* to reflect the use of the route for other purposes than walking and in keeping with the Scottish Outdoor Access Code.

See 6.1 for management of the Water of Leith / Dean Valley walkway.

4.2.2 Gardens paths

The paths of the three gardens are similar in nature comprising upper level and lower level routes with many interlinking smaller paths, generally of drybound construction with a gravel or stone chip finish, edged with timber or stone, or with no surviving edging. The condition of paths in each garden is generally good, varying to fair or poor parts, the poorer sections being on the steeper slopes and wilder parts of the gardens and relating to the problems of maintaining drybound paths on steep slopes and erosion and loss of surfacing caused by runoff.

Notable routes, on account of their planting and views discussed elsewhere, include the Lime Avenue walk and wall-top path in Moray Bank Gardens, the Upper and Middle walks and river edge path in the Dean Gardens, and boundary path, top of slope path, and river-edge path in Belgrave Crescent Gardens.

4.2.3 Streets

The streets that form boundaries to the gardens all have fine views of their terraces of houses contrasting with the well-planted gardens behind railings and hedges on the opposite side of the street, ie. Belgrave Crescent, Eton Terrace and Doune Terrace. Upper Dean Terrace has a similar relationship with the St Bernard's section of the valley, including a view of the well, while Dean Terrace and Saunders Street benefit only from the river with its wooded banks. The effect of the continuous Randolph / Ainslie / Moray terrace in creating a wall of

Eton Terrace and Dean Gardens with cross valley view to Moray Place terrace

development that prevents any interaction between the squares and streets with the valley has to be noted here, with the glimpse at the Doune Terrace opening the only significant but not special view.

A series of eight streets between Belgrave Place and Carlton Street interact with the valley at right angles on its north side and have views of gardens or the valley terminating them, including the more complex interaction of Queenferry Road / Dean bridge (see separate entry for bridge).

The roads in Dean village (Miller Row, Hawthornbank Lane) have an entirely different character and relationship to the river valley, being hilly and twisting with a variety of building forms, styles and ages along them and on the opposite bank. Dean Bank is different again, forming the west boundary of Belgrave Crescent Gardens, virtually invisible from the gardens at the foot of a high retaining wall but with the garden trees prominent in the view up or down the curving road.

4.3 Spaces, gardens and planting

Figure 2

The gardens, semi-natural woodland areas, open spaces and other planted features include the following. Species underlined are the dominant species.

4.3.1 River valley landscape, walkway, river banks and associated spaces

The river valley landscape, founded on the rocky river channel and steep valley sides, includes the semi-natural river banks, deliberately laid-out open spaces and other spaces outwith the gardens (including Dean and Upper Dean Terraces riverbanks) which are generally well-wooded, where ground conditions allow, with little variation in tree species being predominantly natural regeneration of elm, ash and sycamore and of various ages (up to about 100 years). Levels of management vary.

Dean Village banks – No woody vegetation of note above Water of Leith bridge, although a private garden on the south bank adds greenery to the mainly built quality of the village.

Dean village from walkway footbridge at upstream end of site area

RIGHT *Lindsay's mill space, Miller Row*

BELOW *Weir viewpoint at Lindsay's mill space with no view*

Gate to Miller Row riverside space

Miller Row and Lindsay's Mill – The open spaces and river bank between Miller Row and the river that formerly included the site of Lindsay's mill, with high retaining structures upstream towards Water of Leith bridge, the site of former cottages, and open ground downstream, that formerly included the start of the Great Lade as it emeged from the mill and served Marr's mill on the the site of the present squash court / factory / offices building of 1913. The main open space features perimeter walls (incorporating former mill walls?) and French quartz millstones, is in a poor condition, with two cracked corners of the walls (caused by roots of large trees on the river side) and rotten wood bollards and handrail, and is in need of general repairs or upgrade. Equally poor is the secondary space just upstream, intended as a viewpoint for the weir, which has its view blocked by elm regeneration. The wooded bank between here and Dean bridge is braided with worn paths between the ivy-covered trees (ash, elm, sycamore and one very large poplar, part of the wall problem); ivy grows into tree crowns, some may be dead; the pathside retaining wall is also heavily covered in ivy. The space has potential for more general public access via the existing gate and to give fine views of the Dean bridge.

Between Water of Leith bridge and Miller Row, the high retaining wall, with various buttresses and other building remains, is heavily vegetated with elm regeneration, ivy and other growth; its structural stability will need investigation.

RIGHT *Miller Row riverside space from Dean bank, with ivy everywhere*

BELOW *Riverbank downstream from Bell's Brae bridge*

Dean bridge to St Bernard's well section

Dean Bridge to St Bernard's well – Typically natural regeneration of ash, elm and sycamore, plus some elder, which has value as semi-natural woodland but has several management issues. The extent of tree growth impedes some key views to St Bernard's well and Dean bridge, self-seeded trees and shrubs in walls damage stonework, and the roots of larger elms are causing uplift and cracking of the walkway surface. As in other areas, ivy on walls is a problem generally, although needs to be seen from the opposite bank to appreciate the full extent, and spreads through the railings onto the path edges.

St Bernard's area (from railings and steps upstream of well to bridge) – A more managed and open area with a grass space between the paths near the bridge, shrub beds and a medicinal herb bed (planted and maintained by WoLCT volunteers) at the base of the central retaining wall near the well (with stump of recently removed large elm). Some large trees including a plane and a Western hemlock, and cherry trees and a few ornamental shrubs (eg. *Viburnum rhytidophyllum*). Ivy is a problem locally on some walls, notably the middle wall below the main footpath. Benches provided near the well; these and the grass area are used for sitting out in summer. The area on the west side of the well was part of the 1888 layout and appears on 1906 and 1913 OS 1:2500 maps and 1926 F Hurst photograph (p26) with a perimeter path. Some work was done in the 2003 improvements but with only a riverside path and with no link back to the main path, and remains quite wild. The area closest to the bridge was altered

ABOVE *St Bernard's area, upstream and downstream from the well*

St Bernard's area from St Bernard's bridge

Riverbank at Upper Dean Terrace

to provide an all-abilities route for the walkway from Saunders Street to the Dean valley section in 2003, together with improvement to the upstream area (see also St Bernard's well in 4.4.2).

Upper Dean Terrace riverbanks – On north bank, below the street, predominantly elm, some large, with several holly, though few good specimens, and some ash and sycamore; infested with ivy, that until recently covered the upper retaining wall and railings. Ivy now removed from railings and cut at ground level by local residents, and being removed from the wall face. Ivy also covers the lower riverside retaining wall almost continuously. Railings in poor condition (see 4.5).

Dean Terrace / Saunders Street riverbanks – Both sides of the river have sections of earth bank between the roadside retaining walls and river's edge, but most are on the north. Tree cover comprises elm (large and regeneration), horse chestnut, poplar and sycamore, with buddleia, cotoneaster, elder and privet undergrowth. Much ivy on ground, in crowns of trees, on retaining wall, and on railings in places. Railings in poor or very poor condition (see 4.5).

Riverbank at Upper Dean Terrace

India Place allotments and wooded bank

India Place allotments / Mackenzie Place bank – A narrow allotment / community growing space with a steep wooded bank above, lying between India Place andf Doune Terrace garden. The allotments were developed in 2010-11 and are neatly laid out with 22 raised-edge plots and a communal building; on the site of the former housing terrace, from which sheds in the rear retaining wall now providing tool stores.

The wooded bank above the allotments and car parking areas on India Place is an important but neglected feature in the townscape of the New Town, although the character of the New Town Conservation Area has been modified by the 1980s flats in four blocks between Saunders Street and India Place. The bank lies below the arched retaining wall that supports and forms the north boundary of Doune Terrace Garden. The bank is, in effect, a continuation of the St Bernard's area and Moray Bank Gardens as far as Gloucester Place. The bank has fairly continuous tree cover, but low diversity and age structure, mainly natural regeneration of sycamore, with some ash and elm, with graffittied arches, fly-tipping, worn paths and an anarchic car parking space at the east end. Trees shade India Street allotments and block the view from the Doune Terrace garden *clairvoie*.

Retaining wall at top of India Street bank and below Doune Terrace Gardens

The Jubilee Gardens, Kerr Street – a small and useful open space at the end of Saunders Street flats and adjoining Stock bridge mostly paved with hoggin and planted with leaning whitebeams, enclosed by raised shrub beds and railings. Provided with bench seats and used for community events including Stockbridge market. Adjoining amenity open spaces between the Saunders Street flat blocks allow views to the river and areas to the north.

Dumping, graffitti and cars off Gloucester Street, India Place bank.

Jubilee Gardens with Dean Terrace in the background

Lime avenue, Moray Bank Gardens

4.3.2 Communal gardens

Moray Bank Gardens including Doune Terrace Garden

Upper border with lavender and roses, Moray Bank Gardens

Well-treed rather than wooded for the most part, with areas of denser planting of trees and shrub understorey. The north-facing site and overall steepness does not suit such diverse garden planting of shrubbery and mixed borders, compared to the other two gardens. Tree species include elm, gean, lime, hawthorn, holly, and rowan, and mature specimens and regeneration of ash and sycamore. Specimen planting of manna ash, weeping ash, laburnum, horse chestnut, weeping elm and others. Much evergreen shrubbery including aucuba, box, cherry laurel, holly, laurel, privet and yew together with Berberis spp, *Cotoneaster simonsii*, lilac, flowering currant; several sections of hawthorn and privet hedges, and many evergreens heavily pruned.

Particular planted features include:

Lime avenue, widely spaced mature lime rows

Birch glade

Rose border with lavender

Birch grove, Moray Bank Gardens

Doune Terrace Garden – An narrow, unkempt and unappealing area, heavily shaded by tree cover, with a few shrubs that was never laid out to the same standard as the main garden; the only part of the Moray Bank / Doune gardens with a street frontage, so publicly visible. Tree species include elm, gean, lime, hawthorn, holly and regeneration of ash and sycamore, including large specimens. Shrubs include aucuba, box, elder, variegated hollies lilac and lonicera. A planning application for a cycle storage hut in this space, against the policy for New Town gardens generally, was recently approved on appeal.

Doune Terrace Garden

LEFT *The lawn, Dean Gardens seen from Dean bridge*
BELOW *Upper border*

Dean Gardens

Woodland planting on banks between terraces of ash, beech (incl purple beech), birch, elm, gean, hawthorn, hazel, holly, larch, poplars, sycamore and willows; much ash regeneration of various ages. Many additional ornamental or occasional species such as Japanese cherries, rowans, sweet chestnut and yew.

Great range of shrubbery along both sides of the upper terrace and elsewhere, common and more choice varieties, including many evergreens. Among these species: Japanese maples, rose species and cultivars, *Berberis* spp, *Cotoneaster* spp, *Hydrangea* spp, flowering currant, laurels, mock orange, fuchsia, cordylines, elder, cut-leaved elder, *Parrotia persica*, *Garrya ellipica*. Much ivy locally, for example, on banks and covering chain-link fence at the lawn. Low privet hedge along river boundary (and more elsewhere); runs along a retaining wall that is covered in ivy for much of its length, deterring inspection.

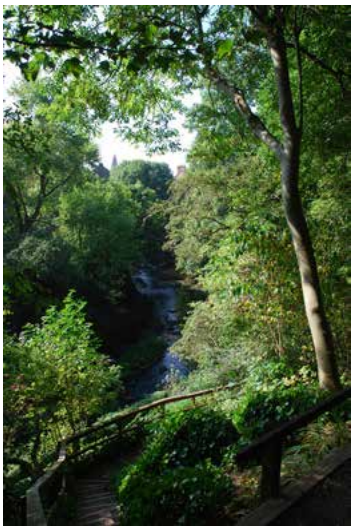
Particular planted features include:

Upper terrace mixed border, including displays alongside ramps and steps to entrances

Middle walk, planted on one side with beech in 1983 (in place of original elms felled in 1981)

Pavilion lawn

Viewpoints overlooking St Bernard's well and Dean weir 2.



Viewpoint to Dean weir, west of Dean Gardens

LEFT *Middle walk and avenue, Dean Gardens*
BELOW *Elm stumps and new beech row*

RIGHT *Parkland, Belgrave Crescent Gardens*
BELOW *Wooded bank, paths and steps to lower garden*

Secluded garden and seating, Belgrave Crescent Gardens

One of two play areas, Belgrave Crescent Gardens

Belgrave Crescent Gardens

Parkland at street level with good mature trees (birch, elm, lime, sycamore, gean) and younger ornamental or replacement planting (laburnum, maple, rowan, oak, blue Atlas cedar). Fine mixed border mainly of choice shrubs and small ornamental trees (eg. *Acer griseum*, magnolias), with sections devoted to herbaceous plants, roses and rhododendrons.

Woodland planting on the main bank includes ash, birch, cypresses, elm, hawthorn, hazel, holly, horse chestnut, larch, poplars, sycamore and willows; shrubs include *Cotoneaster simonsii*, elder, privet, rhododendrons (groups of species or hybrids) and weigela; much ivy. On the bank above Dean Path: more of the same plus more hazel, a few limes and group of Scots pine; some problematic large trees at the top of the retaining wall. At the riverside level, the former Gardener's cottage area creates an open sitting and activities space with views of Dean weir, Dean village and the west the New Town.

An area outside the riverside retaining wall, has ash and other regeneration that impedes the view to Dean weir 2; much of the area including the wall is ivy covered, preventing inspection.

Particular planted features include:

Mature parkland well stocked with trees

Birch glade

Small garden spaces in bank

Childrens' play areas

Viewpoint overlooking Dean weir.

ABOVE *Former Gardener's cottage area, Belgrave Crescent Gardens*
RIGHT *View to west New Town and St Mary's cathedral*

Dean bridge from Belgrave Crescent Gardens

4.4 Buildings, bridges and other structures

Figure 2

4.4.1 Bridges and other structures

Dean bridge Listed Cat. A

Prominent segmental arched 4-span road bridge with plain classical detailing, built in Craigleith sandstone ashlar to the design of Thomas Telford, 1829-31. Four large semi-circular arches set beneath larger segmental arches, spring from narrow, hollow rectangular section piers supporting footway. Moulded band course with plain parapet over. It carries the main Queensferry Road at a height of 32m above the Water of Leith, and the four arches span a total distance of 136m across the valley. Later heightening of parapets in 1912 to deter jumpers.

Dean bridge elevation, from Atlas to the Life of Thomas Telford, Civil Engineer 1838

The bridge is a late design by Telford and makes a dramatic entry into the city on account of its elevation, setting and views. The bridge includes many engineering innovations including hollow piers, to reduce the weight of the structure, which Telford first used at Pont Cysyllte. An original 3-span design had to be abandoned because of difficulties in driving the foundations. The bridge was provided by Lord Provost John Learmonth with the assistance of the Cramond Road Trustees. Learmonth funded most of the construction to give better access to his lands to the north of the New Town and provide the potential to develop the area around Learmonth Terrace. Although the bridge was a success in public use, it was not until the 1850s that Learmonth was able to benefit from development of his estate at Clarendon Crescent etc, due to economic recession in the interim. The bridge provided a key high level arterial route into the city, avoiding the steep gradients at the Dean village and Water of Leith bridge.

St Bernard's bridge aka Mackenzie bridge Listed Cat. B

A well-detailed bridge forming the entrance to part of an outstanding example of early 19th century urban planning with a classical design scheme by prominent architect James Milne. The bridge was designed to provide easy access to the

St Bernard's bridge

Raeburn Estate – the land of Sir Henry Raeburn – which Milne was developing, and provided a processional entrance at Dean Terrace. The provision of a bridge made access to and from the area easier as the high level Dean bridge upstream had not yet been completed and the Stock bridge, 200m downstream, was not widened until c1830. At the right of the bridge (looking downstream) is a blocked-off arch provided for the former *Great Lade*. The large Jacobean stairs were planned as part of the 1888 restoration and improvement work of the nearby St Bernard's well that was funded by the publisher William Nelson. The coat of arms of the City on the staircase is severely weathered.

Stock bridge Listed Cat. B

Stock bridge

Single segmental arch bridge, with ashlar voussoirs, ashlar parapets with partial crenellation, city arms on east face, built 1785-86, widened about 1830 and rebuilt in its present form in 1900-01 to the design of David Proudfoot. Snecked rubble spandrell and retaining wall. Railings of different designs continue from the bridge along the riverside retaining walls of the streets either side.

A long-established bridging point of the Water of Leith; an earlier timber bridge is shown in late-18th century prints. The bridge forms the downstream termination of the Dean Valley site and of the section from St Bernard's bridge.

Water of Leith bridge, Bell's Brae and Dean Path Listed Cat. B

A well proportioned single span bridge dating from early 18th century on the site of a historic river crossing on the Water of Leith. Single span with later roadway and pedestrian walkway; coursed random rubble with sandstone ashlar parapet, splayed to either end.

The bridge was an important crossing point on what was once one of the main routes into the city. It is also at the centre of the historic Dean Village, with nearby Old Tolbooth dating from 1675 and makes an important contribution to the historic setting at the centre of the village.

Footbridge, Hawthorn Terrace, Dean village

Iron footbridge dated to 1877 now carrying the Water of Leith walkway over the river on the west side of Dean village, and marking the west end of the site. Shallow deck supported by cross-braced balustrades that form lattice-beams; abutments and steps in sandstone. A ford adjoins on the downstream side.

Dean weir 2 / World's End weir and the former 'Great Lade'

Dean weir 2 from Belgrave Crescent Gardens

Dean weir 2 is a c4.0m high vertical weir on the river between Water of Leith bridge and Dean bridge built to divert water to the former *Great Lade*, a long mill lade that ran for almost 2 miles as far as Powderhall, some of it in an elevated wooden trough that is seen in several prints and early photographs, most prominently in Hugh 'Grecian' Williams's view of 1790 (p17). It lies between the West mill (converted to housing in 1970s) and the former Lindsay's mill, now an open space, where views of the weir are now impeded by tree growth (see entry). Dean weir 1 lies upstream outwith the site boundary.

The *Great Lade* figured prominently in the valley for centuries, providing power to six or eight mills and water supply to a number of processing industries including tanning. The lade became a health hazard due to the severely polluted condition of the river in the 19th century and was abandoned following damage by a landslip in 1881. The weir features in views from Belgrave Crescent Garden and Dean Gardens, and can be heard from these places. Dean weir 2 has been identified as one of the two most feasible sites on the whole Water of Leith for a micro hydro scheme, although a detailed feasibility study shows such a project to be very costly with environmental impacts (see 8.15).

Arched retaining structure and footway, Moray Bank Gardens

Robert Stevenson (1772-1850) was appointed by Lord Moray in 1825 to sort out the problems arising from the first landslip in Moray Bank Gardens behind Ainslie Place. He was responsible for this massive high retaining structure formed of 27 arches supporting a footway giving access to rear gardens that is such a feature of Moray Bank Gardens. The structure was extended eastwards following a second landslip in 1827, again to Stevenson's design, assisted by James Jardine. The structure and its footway continues to be one of the most impressive features of these gardens and Dean Valley as a whole and is an outstanding viewing terrace and an experience to walk along. Beyond the end of the footway at Randolph cliff the structure takes the form of a vertical wall of riven stone blocks. Assumed listed Cat. A with Randolph Crescent and other Moray Estate terraces, but not mentioned in list descriptions.

Arched retaining structure, Moray Bank Gardens

4.4.2 Buildings

St Bernard's well Listed Cat. A (including stair, walls, railings and plaque)

A Roman Doric temple over a mineral spring pump room, comprising an open rotunda with 10 columns, a peristyle of unfluted Doric columns on a rusticated stonework base, built to the design of Alexander Nasmyth in 1789 (his first architectural commission), modelled on the ancient Roman temple of Vesta in Tivoli. Surmounted by a lead dome, with gilded pine-cone finial; 10-panel studded timber door at north-east of base, leading to pump room, with tooled ashlar lintel, reading *ST BERNARD'S MINERAL WELL*. Nasmyth had designed a cave-like entrance to the pump room, giving it the appearance of a grotto, combining 'two fashionable landscape garden features in one building' (temple and grotto) (Andrew 2012). The doorway was substituted by workmen after the death of Gardenstone who commissioned the building.

The well was restored by Thomas Bonnar Junior in 1887-88, with significant new work to its setting. Restored again in 2013 under the Twelve Monuments Project.

The architectural setting includes an ashlar T-plan stair with landings, to east, with saddleback copes. Squared and snecked sandstone walls, with triangular coping and capped with roll moulding extend from the well to the bridge. All were part of the 1888 work; also to the west. Close to the well, ashlar copes are surmounted by cast-iron railings with spear-headed finials to the walkway side; decorative cast-iron railings to a timber platform for a path on the river side.

St Bernard's well from Dean side

In the wall east of the well is a pink granite wall-mounted plaque, comprising a round arch supported by Corinthian columns, with a metal medallion with profile bust of William Nelson by John Rhind, centred in a recess, headed by an inscription reading, 'The Liberal Deviseth Liberal Things' (from Isaiah 32.8, King James Bible translation).

The main inscription reads …

> Erected by the Lord Provost Magistrates and Council of the City of Edinburgh to commemorate the public spirit and generosity of the late William Nelson of Salisbury Green who having purchased, restored and embellished St Bernard's Well and the surrounding grounds gifted them to the corporation for the benefit of the citizens of Edinburgh in all time coming. January 1888. The Right Hon Sir Thomas Clark Bart., Lord Provost

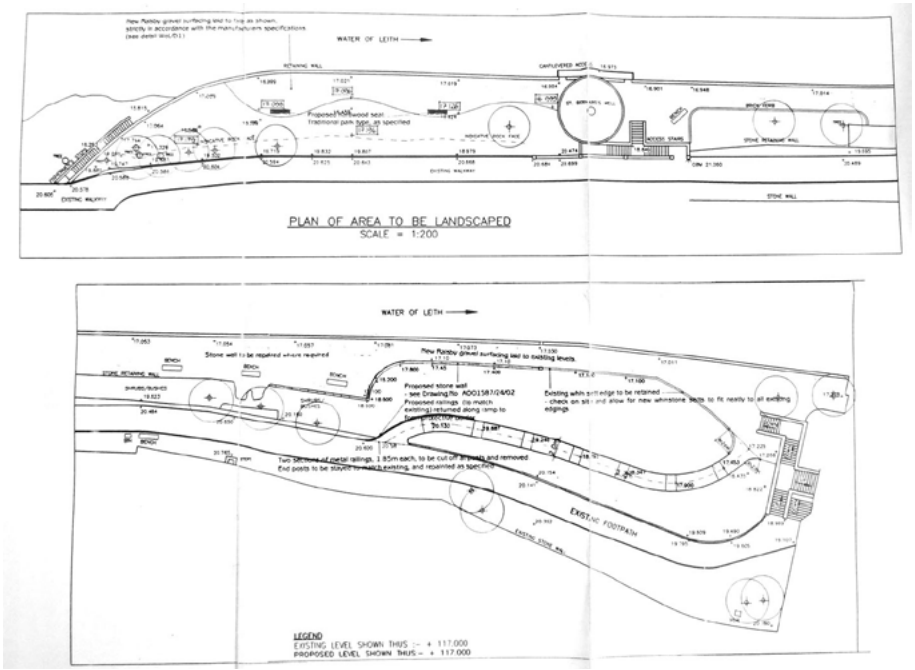
St Bernard's well was commissioned in 1788 by Lord Gardenstone – 'in grateful remembrance of the benefit received by him from drinking of the mineral spring which it encloses' – replacing a well-house of 1760-61, built by John Wilson. Two years after the well was completed Gardenstone added a 9 foot high statue of Hygeia, the Greek godess of health, inside the colonnade, contrary to Nasmyth's plan. The original figure of Hygeia made of artificial Coade stone was considered 'too large for the situation' and was widely criticised or ridiculed due to its size.

Wider area of St Bernard's well with memorial and designed setting, from Dean bank

William Nelson memorial, St Bernard's well

Hill 1887 records the works being undertaken by William Nelson to the grounds, costing £4,000, as well as the new features of the building, including 'a new approach from the higher ground has been given by a broad massive stair from St Bernard's Bridge; a low parapet wall with ornamental coping separates the grounds from the river, and these grounds are being laid out with all the skill of gardening art'. The work included a smaller replacement statue of Hygeia by D W Stevenson in marble and of a more appropriate size than the much-criticised original. There was also a new pump-room with a Renaissance-inspired interior, vividly coloured with stained glass, mosaics and tile work, with a white marble pedestal and urn at its centre, designed by Thomas Bonnar.

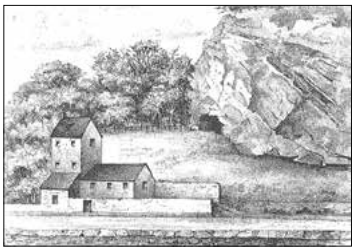
The City Architect, John Lessels, laid out the path, steps, balustrades and cast-iron railings linking the well with St Bernard's bridge and the space on the upstream side. Plans of this work have not yet been found, although parts of the space are visible in some historic photographs (eg. 1926 F Hurst, p26) and early 20th century OS maps, showing a perimeter path on the upstream side. The Millennium works in 2003 upgraded the area, although not to the historic layout, with just a riverside path in the upstream area. Approaching St Bernard's bridge, the 2003 works added a ramped path and handrail, with a new section of retaining wall to support the resulting steepened bank, to provide obstacle-free access to the walkway.



Layout plans of 2003 Millennium works at St Bernard's area (WoLCT)

The well was restored in 2013 under the Twelve Monuments Project, a joint initiative between Edinburgh World Heritage, Historic Scotland and the City of Edinburgh Council, with the aim of restoring some the city's most important monuments and statues. A key part of the work to the well was repair of its domed roof. Close examination of the decorative pine-cone on top of the roof revealed traces of a primer used to provide a stable base for applying gold leaf. Two special donations enabled the pine-cone to be re-gilded, which was carried out by conservation volunteer Georgina von Hof. The total cost of the project was approximately £233,000.

St Bernard's well is named after St Bernard of Clairvaux, founder of the Cistercian order, who is supposed to have discovered the spring in the 12th century while taken ill when living in a nearby cave (although most biographers do not record his stay in a Scottish cave). The cave in question was at the foot of Randolph cliff and is illustrated in Hill 1887. Hill recounts the traditional story of St Bernard's visit to Scotland and records that the cave 'entrance was covered up by the building of the wall that bounds the back of Randolph Crescent'.



St Bernard's cave, Randolph cliff, from Hill 1887

St George's well Listed Cat. B

Single storey and basement building enclosing another medicinal spring, dated 1810; may have been built by Mr MacDonald of Stockbridge, but also attributed to the eccentric antiquarian David Steuart Erskine, 11th Earl of Buchan. Droved ashlar sandstone, rusticated at basement with gabled front with metal door centred at principal floor facing on to the walkway; recessed gable roundel reading *1810*; decorative finial and acroteria; blank side elevations and bowed rear elevation; grey slate roof. Window(s) built-up and roof altered since c1860 photograph (p23).

Named to commemorate the jubilee of George III. The 1st edition OS map shows *St George's well, Chalybeate* (compared to *St Bernard's Well, Sulphureous*). As a source of mineral water, St George's well enjoyed only a short life. Hill stated in 1887 that 'no use has been made of it for many years, and the building was latterly occupied as a dwelling by a single old woman'. Its local name, surviving to the present day, was Inky Well, a description of both its diminutive size and the reputed taste of its water. Disused since the 1940s; the well was finally blocked up in 1969 (Andrew 2012).

St George's well from walkway

Holy Trinity church (formerly Scottish Episcopal Church) Listed Cat. B

A rectangular plan, neo-perpendicular Gothic church with three stage pinnacled lancet tower, on a prominent site at the north-west of the Dean bridge, built in sandstone ashlar to the design of John Henderson, 1837-8. In 1900 a sanctuary was added by John Robertson; church converted to an electricity substation in 1957; now back to church use once more. Five-bay arcaded basement to south. Stepped buttresses to each bay, all extending above parapet as triangular finials over moulded cornice, topped with thistle motif. Tall pointed arched windows to each bay in recessed chamfered surrounds; hoodmoulded and with timber tracery.

Holy Trinity's prominent position means it is seen in street views from Belgrave Crescent and Eton Terrace, and features in views from all three gardens and in association with the Dean bridge from mid-slope viewpoints. The design is reminiscent of the early churches of Charles Barry, making clever use of its site with a deep arcaded basement to the south accommodating a hall and also bringing the building up to the level of the Dean bridge.

Holy Trinity church from Dean bridge

Kirkbrae House, Randolph Cliff Listed Cat. B

Scots Baronial house incorporating late 17th century tavern, by J G Fairley, 1892. Two storeys to Randolph Cliff, 3 basement storeys to Miller Row, roughly L-plan with prominent crowstepped gables; on prominent site at south end of the Dean bridge.

Well court, Dean village

Well Court Listed Cat. A

A fine example of a picturesque composition, in a Renaissance freestyle, exploiting its prominent site beside the Water of Leith. It comprise a courtyard of 54 flats, clock-tower and separate former common hall (Woodbarn Hall). It forms a significant example of 19th century social housing, designed by architect A G Sydney Mitchell, built 1883-86. The building was commissioned by John R Findlay, the proprietor of the Scotsman newspaper, as social housing for artisans and tradesmen from the Dean Village.

A recent owner-led conservation project, part funded by £1.1m from EWH, covered work on stonework, roof, windows, the clock tower and communal areas.

St Bernard's cottage, Mackenzie Place

St Bernard's cottage, Mackenzie Place

Private villa c1800 and garden lying to the east of Moray Bank Gardens and adjacent to St Bernard's well on its south-east, at the end of Mackenzie Place.

Housing terraces

The terraces of houses that adjoin the valley are important for several reasons in the assessment of the gardens: they visually contain the valley, residents' views from house windows are highly important in the way the gardens are appreciated, each is of high architectural merit and involved notable national or local architects, all are listed, and they are integral to the development of the gardens and they house the garden users or keyholders.

Terraces facing valley, all on north except Doune Terrace

Belgrave Crescent, listed Cat. B, John Chesser, designed 1874, 3-storey townhouses in free Renaissance style; part of development by James Steel.

Eton Terrace, listed Cat. A, John Tait, designed 1855, 3-storey town houses in Italianate classical style. Tait was also responsible for adjoining **Oxford Terrace**, **Lennox Street and Clarendon Crescent**; all developed by the Heriot Trust on land bought from Learmonth.

Upper Dean Terrace, listed Cat. A, James Milne, designed 1816-17, 2-storey town houses in plain classical style; originally Mineral Street; part of Raeburn estate.

Dean Terrace and riverside trees looking towards Stockbridge

Dean Terrace, listed Cat. A, James Milne, designed 1824, 2-storey town houses in plain classical style; part of Raeburn estate.

Doune Terrace, listed Cat. A, James Gillespie Graham, designed 1822, 3-storey and basement, 27-bay slightly curved symmetrical classical palace block on falling ground; part of Raeburn estate.

Cross valley view to Eton Terrace from Moray Bank Gardens

Backs of Moray Estate terraces from Dean bridge

Terraces with backs to valley, all on south

Randolph Crescent, listed Cat. A, James Gillespie Graham, designed 1822; 3-storey, attic and basement, 26-bay classical terrace with concave curved frontage; part of Moray estate.

Great Stuart Street, both sections, listed Cat. A, James Gillespie Graham, designed 1822, two terraces each of 3-storey and basement classical terrace flanked by pair of advanced 4-bay terminal pavilions; part of Moray estate.

Ainslie Place, listed Cat. A, James Gillespie Graham, designed 1822; 3-storey, attic and basement, 47-bay classical palace block; part of Moray estate.

Moray Place, listed Cat. A, James Gillespie Graham, designed 1822; multi-bay symmetrical classical palace block, comprising 4-storey and basement; part of Moray estate.

Saunders Street flats

Saunders Street housing

Virtually all of the Raeburn estate south of the river was demolished in 1966-67 to be replaced by four parallel 5-storey housing blocks, originally Council owned, by Michael Laird and Partners 1974-75. The blocks contrast with the buildings all around, built across the contours rather than parallel with the river, in short blocks rather than linked terraces, and in grey concrete blockwork rather than the prevalent stone. While of architectural merit, they are discordant in their context. Amenity open spaces between the flat blocks allow views to the river and areas to the north from India Street.

Railings, Walkway

Railings, Dean Terrace

4.5 Enclosure and containment: walls, retaining walls, railings, fences and hedges

Figure 4

The barriers that enclose, support and otherwise define the boundaries and spaces of the gardens and river valley landscape are important functional features of the fabric with visual effects that influence the way we see the gardens. They are often seen close to routes, so their condition can be a visual as well as a functional issue.

It has not been the purpose of the Conservation Statement to provide a condition survey of all these elements, but the main lines of each type of wall, fence etc are shown on Figure 4, with notes of their general condition below. In some cases original railings have been replaced with a modern substitute, and this is shown on the plan. The intention is to highlight where there are management issues that require to be addressed in this respect.

4.5.1 Railings and fences

Original or in style replacement railings enclose the street boundaries of the north gardens and are generally in good to fair condition. The Dean Terrace and Upper Dean Terrace railings (Playfair-style cast iron) are in poor or very poor condition. Doune Terrace Garden railings have been replaced with modern weld-mesh

type of fence, apart from the Gloucester Street corner. Similarly the walkway boundary of Moray Bank Gardens, where the weld-mesh fence is prominent from the public path. It is functional and transparent for this type of barrier, but out of character with the gardens and river valley landscape. St Bernard's well railings have been conserved and are in good condition. The riverside walkway wrought-iron railings (of two types) are variable to poor in places, with ivy smothering the footings; repainting is overdue.

4.5.2 Retaining walls

The river is contained by retaining walls for practically all of its length through the valley, although the type of structure varies and sometimes it is set back from the river edge. In the Dean Terrace / Upper Dean Terrace section, high walls contain the river and support the road on one or both sides. Ivy growth and penetration of roots affects many parts of these walls, although the surface growth has been removed at Upper Dean Terrace. The structural condition of these and all other walls has not been assessed, but it is recommended that a survey of all these structures is undertaken in the next stage. More elaborate walls occur in the St Bernard's section and appear in fair condition. The river edge of Belgrave Crescent Gardens, Dean Gardens and the river valley landscape is formed by walls of various quality that do not appear to receive any regular maintenance and are in places hidden or otherwise affected by tree growth and ivy.

Retaining wall under Dean bridge. Most of the riverbanks have retaining structures along them, not benefiting from design by Telford but similarly affected by ivy

Within the gardens, particularly Belgrave Crescent Gardens and Dean Gardens, retaining walls, often in drystone, support parts of the slope. On a civil engineering scale, the arched retaining structures supporting the slope at the top of Moray Bank and below Doune Terrace, are important as architectural / engineering features and for their functional purposes. The Moray Bank structure was repaired in 1991.

4.5.3 Hedges

Hedges of privet or hawthorn accompany railings and fences along street boundaries at Belgrave Crescent, Eton Terrace and Doune Terrace. Visually they are a barrier to views into the gardens for adjoining residents and other street users and are unlikely to have been intended in the original design. Some were added when railings were removed during WWII. They are a high maintenance item, requiring not only regular trimming but also impeding maintenance (eg. painting) of railings.

Riverside hedge, Dean Gardens

Within each garden hedges are significant features, for example between the parkland and slope in Belgrave Crescent Gardens, along the river boundary in Dean Gardens, and in various fragments in Moray Bank Gardens, where a new hedge has been planted beside the weld-mesh fence.

4.6 Planned and significant views

Figure 3

The views that have been recorded historically and those that have been identified by survey today are discussed in section 3.4 and shown in Figure 3. Views can be considered as important features of the gardens as much as the more physical elements.

View from Water of Leith bridge to Holy Trinity church

View of lawn in Dean Gardens with Dean bridge and Holy Trinity church

5 People and the Dean valley

The Dean valley has many stories to tell about the people who helped plan and design the street and gardens, who have lived close to the valley, who have used the valley in their leisure, who painted and photographed the place and who worked there. Interpretation of the valley's history and the people who populated it should be a component of future improvement and development of the valley landscape. This is not the place to deal with these aspects in depth, but simply to highlight the interest of the valley in terms of past uses, and the prominent people who lived close by.

5.1 Industry and recreation

Industry is dependent on a source of power and prior to the development of steam power in the early 19th century, running water was often harnessed to provide that power. Where the Water of Leith flows in the steep gorges such as at Dean valley, Craiglockhart and Colinton Dells the river is fast flowing and ideally suited to turning water-wheels to power mills. Over 70 mills were established along the length of the river, manufacturing paper, cloth, snuff and flour. Water of Leith village (aka Dean village) became the centre of flour milling for the city.

The illustrations and descriptions in section 3.3 show how the valley had been appreciated in the past and how it has been used by local people for walking and other activities. The earliest depictions and writing show a path through the valley. Recreationally the St Bernard's area was at its height when *taking the waters* at the well was most popular in the later 18th century and drew many people to stay in the area. The 1888 improvements gave this location a new lease of life as a picturesque walk, rather than for the waters. Works to create the Water of Leith Walkway in the valley in 1983 and 2002 re-established it as a major recreational resource for the people of Edinburgh and visitors. While from the 1820s onward the successive development of the three gardens gave residents an unrivalled shared recreational asset.

5.2 Prominent people

A small selection of prominent residents of the locality and of people associated with the development of the valley includes the following.

Francis Garden, Lord Gardenstone (1721–93) an advocate, Sheriff-Depute of Kincardineshire, an assessor to the magistrates of Edinburgh and joint Solicitor-General; he took his seat on the bench in 1764 with the title Lord Gardenstone. A life-long batchelor and eccentric, with a fondness for pigs and a well-meaning, if reckless, philanthropic streak. He purchased the estate of Johnston at Laurencekirk in 1862 and developed the village and local industries, a venture that proved ruinous. His debts were relieved to a degree in 1785 when he succeeded to family estates and income. The further building of St Bernard's well at his 'sole expense' cost him £1500. The only known likeness of him is a caricature by John Kay.

James Gillespie Graham (1776–1855) a Scottish architect, born in Dunblane, most noted for his work in the Scottish baronial style, as at Ayton castle, but he also worked in the Gothic revival style, influenced by the work of Augustus Pugin. He also worked successfully in the neoclassical style as at Blythswood House near Glasgow. Graham designed principally country houses and churches and is also well known for his interior design. His principal churches include St Andrew's cathedral, Glasgow, and St Mary's Roman Catholic cathedral and the Highland Tolbooth church (now The Hub) in Edinburgh.

From 1822 he was the architect for the layout or feuing plan for the Moray Estate, and for all the architectural plans, elevations and specifications for Randolph

Crescent, Great Stuart Street, Ainslie Place, Moray Place and its other streets, as well as proposals for the associated gardens.

John Learmonth, a Lord Provost of Edinburgh and owner of the Dean estate on the north bank of the Water of Leith, proposed a new high level bridge across the river in place of Water of Leith bridge in Dean village. Learmonth was prepared to meet the cost himself, estimated at £18,556, but in 1828 the Cramond Road Trustees, responsible for public roads in the district, agreed to part-fund a new bridge on condition that it would be designed by Britain's foremost bridge builder and be toll-free. Learmonth died in 1858 before completion of most of his envisaged residential development. Owing to a recession affecting house building, Clarendon Crescent was not started until the 1850s, and Buckingham Terrace, Learmonth Terrace and Belgrave Crescent appeared only in the next decade.

Francis, 10th Earl of Moray (1771-1848) was responsible for developing the land of the estate of Drumsheugh, comprising a mansion house (originally built by Alan Drummond, a surgeon), policies and parks, bounded by what are now Randolph Cliff, the north side of Randolph Place, Randolph Lane, Glenfinlas Street, Saint Colme Street, the west side of Gloucester Lane, Doune Terrace, and by a mill lade along the south side of the Water of Leith. Drumsheugh House itself was on the south-east side of what is now Randolph Crescent. The estate, extending to 30 Scots acres, was first purchased by his father Francis, 9th Earl of Moray (1737-1810).

By 1822 the estate was surrounded by the new buildings of the growing New Town, and Lord Moray decided to demolish the mansion house and to develop the area for housing using a layout plan by James Gillespie Graham. This shows the proposed houses, their private gardens, the communal gardens and streets almost exactly as built. The street names all have connections with the Moray family.

Alexander Nasmyth (1758-1840) was a Scottish portrait and landscape painter. Aged 16, he went to London to work in the studio of portrait painter Allan Ramsay, returning to Edinburgh in 1778, where he worked as a portrait painter. Nasmyth left in 1782 for Italy, where he remained two years devoting most of his attention to landscape painting and studying works by Claude.

Nasmyth returned to Scotland and continued his career as a portraitist, but his strong Liberal opinions offended many of his aristocratic patrons and he turned instead to landscape painting. Some works were painted to illustrate the effects that new buildings would have when he was employed by landowners in the improvement of their estates. The circular temple at St Bernard's well was his first architectural commission and he also painted the scene (picture hanging in the Georgian House, Charlotte Square). His experience as a designer of gardens and landscapes led to him to design various buildings, including bridges at Almondell, West Lothian, and Tongland, Kirkcudbrightshire. In 1815 he submitted proposals for the expansion of the New Town.

Nasmyth set up a drawing school and his pupils included David Wilkie, David Roberts and John Thomson of Duddingston. He died in Edinburgh and was buried in St Cuthbert's churchyard.

Sir Henry Raeburn (1756-1823) – Raeburn was one of Scotland most prominent artists and Scotland's first significant portrait painter since the Union to remain based in Scotland. He was born in Stockbridge and acquired the house and grounds of Deanhaugh through marriage, before adding adjacent land at St Bernard's. He occupied St Bernard's House until his death in 1823 when it was demolished to accommodate the growing residential development of the estate, making space for the eastern side of Carlton Street.

Thomas Telford (1757–1834) – Telford was one of the most influential and innovative engineers of the 19th century. After establishing himself as an engineer

of road and canal projects in Shropshire, he designed numerous infrastructure projects in his native Scotland, as well as harbours and tunnels. He built a number of major bridges, most famously the Iron Bridge in Shropshire and the Menai Straits bridge, both of which were major engineering innovations. Such was his reputation as a prolific designer of highways and related bridges, he was dubbed *The Colossus of Roads*. He worked mainly on roads in Scotland, building a number of important bridges including an unusual circular arch road bridge at Bannockburn. The Dean bridge design used a similar design to a smaller bridge he built at Lothian bridge (1827-31) near Pathhead in Midlothian.

Robert Stevenson (1772-1850) was a Scottish civil engineer famed for his role in lighthouse design and construction. He was appointed by Lord Moray in 1825 to sort out the problems arising from the first landslip in Moray Bank Gardens behind Ainslie Place. He was responsible for the massive high retaining structure formed of 27 arches supporting a footway giving access to rear gardens that is such a feature of these gardens. The structure was extended eastwards following a second landslip in 1827, again to Stevenson's design, assisted by James Jardine.

Stevenson served for nearly fifty years as engineer to the Northern Lighthouse Board, until 1842, during which time he designed and oversaw the construction and later improvement of numerous lighthouses. His most important work is the Bell Rock lighthouse, off Arbroath. Besides his work for the NLB, he acted as a consulting engineer on projects including roads, bridges, harbours, canals and railways, and river navigations.

David Smith WS (1802-80) first elected convener of the Moray Feuars and, at other times, their secretary and treasurer, and one of the first residents of Moray Place, who played a pivotal role in negotiations with the Moray Estate, in resolving the problems of the landslips and resultant garden mitigation and planting works. He was a founder member of the Cockburn Association and an active member of the Caledonian Horticultural Society (later RCHS)

John Wilson (1785-1854), better known as Christopher North, the most celebrated resident of Ann Street and one of its first (according to Andrew Kerr in his *History of Ann Street*, 1982). He was an advocate, literary critic and author, the writer most frequently identified with the pseudonym Christopher North of Blackwood's Edinburgh Magazine. He was professor of Moral Philosophy at Edinburgh University (1820–51). Wilson is commemorated by a statue in Princes Street Gardens.

Andrew Kerr's history (1982) includes mention of about eight other notable residents of Ann Street. Other streets would provide equally illustrious lists and there are good sources that may be of use in future interpretation. Hill 1887 gives *Sketches of Distinguished Natives* and of *Distinguished Residents* of Stockbridge, the Dean and Water of Leith. Ann Mitchell in *No More Corncraiks, Lord Moray's Feuars in Edinburgh's New Town* (1998) gives accounts of early residents of all the streets in the Moray Estate included judges Hope and Jeffries, publishers Blackwood and Chambers, and architect William Playfair, as well as a broad spectrum of distinguished tenants and owners. Histories of all these houses and many of their 19th century occupants are given in detail – street-by-street, number-by-number.

6 Statutory designations, policies and plans

6.1 Statutory and other designations

The Dean Valley is covered by multiple conservation and planning designations of the highest national importance, covering the cultural and natural environment, that are central to understanding the valley's significance and for management. In summary, these are as follows.

The Old and New Towns of Edinburgh World Heritage Site

The WHS was inscribed on the World Heritage List in 1995 by UNESCO (United Nations Educational, Scientific and Cultural Organisation) World Heritage Committee. World Heritage properties reflect the shared values of people across the globe. In the case of Edinburgh, World Heritage status recognises the remarkable juxtaposition of the medieval Old Town, high up on a dramatic ridge, and the classically inspired New Town across the Princes Street Gardens valley. The Old Town is the place of birth of the Scottish Enlightenment and the New Town is the embodiment of its thinking and ideals.

The WHS covers most of the Old Town and New Town conservation areas, and parts of other adjoining conservation areas including a large part of the Dean Conservation Area. The WHS area includes most of the Dean Valley site area, apart from the area between Dean Terrace / Upper Dean Terrace, St Bernard's bridge and India Place.

Conservation Areas

The Dean Valley site is covered entirely by Conservation Areas, mainly by the New Town Conservation Area, with the west part lying in the Dean Village Conservation Area. The New Town Conservation Area ranks as one of the most important in the United Kingdom, in terms of both its architectural and historic interest. Its significance is reflected in the extensive number of Listed Buildings, the number of premier tourist attractions in the area, its Outstanding status and its international recognition as part of the UNESCO designated World Heritage Site.

Listed Buildings

Category A listed buildings and structures within the site include the Dean bridge, St Bernard's well and Well Court.

Category B listed buildings and structures within the site include Holy Trinity church, St Bernard's bridge, St George's well and Stock bridge

New Town residential terraces form the edge of valley. All are Category A listed (Eton Terrace, Upper Dean Terrace, Dean Terrace, Doune Terrace, Moray Place, Great Stuart Street, Ainslie Place, Randolph Crescent) apart from Belgrave Crescent which is Category B.

Tree Preservation Orders

All trees within Conservation Areas are covered by Tree Preservation Orders.

Special Landscape Area

The general area of the CS is proposed as a SLA in the draft Edinburgh Local Development Plan 2014, as SLA No. 12 Water of Leith – New Town (incorporating the Inventory New Town Gardens and Local Biodiversity Site). This designation supersedes that of *Area of Great Landscape Value* following a CEC review (Jan 2010) prompted by SNH's aim for consistency in this type of designation between local authorities.

Inventory of Gardens and Designed Landscapes in Scotland

The New Town Gardens are included in the Inventory (compiled and maintained by Historic Scotland on behalf of Scottish Ministers) as a group covering all the communal and public gardens within a defined area. The three gardens – Moray Bank, Dean Bank and Belgrave Crescent – are included.

Local Biodiversity Site

The Water of Leith valley is part of a Local Biodiversity Site.

Water of Leith, Natural Heritage Site (Parks designation)

The Council has classified 18 parks within Edinburgh as Natural Heritage Sites – including the Water of Leith – managed by the Natural Heritage Service, part of CEC Parks and Greenspace. Edinburgh's NHSs conform with the Local Nature Conservation Site (LNCS) – a non-statutory designation recommended by Scottish Natural Heritage to be given by local authorities to areas of locally important nature and landscapes, including regionally important geological sites (RIGS).

Regionally Important Geological / Geomorphological Sites

While there are at least four locations of geological interest in the valley (see 4.1), none is defined as RIGS sites. Local geodiversity sites are selected by voluntary geoconservation bodies such as local Geodiversity groups and Regionally Important Geological / Geomorphological Sites (RIGS) groups.

CEC18 Core Path, Water of Leith

The Water of Leith Walkway us one of the paths included in the Core Path Plan (adopted by Council May 2008) as required by the Land Reform (Scotland) Act 2003.

6.2 Principal policy documents relating to Water of Leith and Dean Valley

The following policy documents from various sources have been identified as relevant to the Dean Valley and its natural and designed landscape.

City of Edinburgh Council June 2005 Edinburgh Local Development Plan, Second Proposed Plan

The LDP sets out policies and proposals relating to the development and use of land in the Edinburgh area. For the first time in over 30 years, Edinburgh has one plan covering the whole of the Council area.

Edinburgh World Heritage Trust 2011 *The Old and New Towns of Edinburgh World Heritage Site, Management Plan 2011-2016*

The plan is intended to provide a framework for the management of the Edinburgh Old and New Towns World Heritage Site that will sustain its outstanding universal value, for the period until 2016; prepared by a partnership of Edinburgh World Heritage, Historic Scotland and the City of Edinburgh Council. The objectives identified in the Plan also form the basis of an Action Plan.

The plan recognises the role of the gardens in the historic New Town layout from the outset … "Contained and integrated with the townscape are gardens, designed to take full advantage of the topography, while forming an extensive system of private and public open spaces. The New Town is integrated with large green spaces."

City of Edinburgh Council Jun 2005 *New Town Conservation Area Character Appraisal*

A Character Appraisal is seen as the best method of defining the key elements that contribute to the special historic and architectural character of a Conservation Area. It will guide the Council in making planning decisions and, where opportunities arise, preparing enhancement proposals. The Character Appraisal will be a material consideration when considering applications for development within the Conservation Area.

City of Edinburgh Council 2008 *Edinburgh Core Paths Plan*

A Core Paths Plan is required of Councils under the Land Reform (Scotland) Act 2003 to identify a system of routes that provides the community and visitors with reasonable non-motorised access throughout the local authority area. It should include paths suitable for all types of user including walkers, cyclists, horse-riders, those seeking access to inland water, and for people with varying abilities.

It is recognised that good path systems can deliver a number of wider benefits.

Core Paths can be rights of way, signposted paths, cycle tracks, footways, or any other routes that provide the public with access to places they want to go. Core Paths will form the basic system of paths around the Edinburgh area and will:

- link into and support a wider network of local paths
- connect with paths in adjoining local authority areas
- provide a basis for promoting off road access.

This Core Paths Plan supports a number of other key plans, policies and strategies, directly supports the implementation of Edinburgh's Outdoor Access Strategy, provide a focus for future paths management delivered locally within a Community Planning context, supports the aims of Edinburgh's Local Transport Strategy, in particular Edinburgh's aims to reduce the environmental impacts of travel and promote health and fitness.

City of Edinburgh Council 2010 *Edinburgh Local Biodiversity Action Plan, Phase 3, 2010 – 2015*

The Edinburgh Local Biodiversity Action Plan (LBAP) was launched in March 2000 as a new initiative to conserve and enhance Edinburgh's natural heritage. The plan was prepared by a partnership of many organisations actively engaged in nature conservation. It puts forward an ambitious programme of actions to conserve and enhance natural habitats within the city, and to address the decline in biodiversity, with a focus on priority species which have suffered a sustained decrease in population, loss of habitat, or persecution.

The current document describes the aims and actions for the third phase of the Edinburgh LBAP covering the period to 2015. Its core objectives remain to protect and enhance priority habitats and species in Edinburgh, and to raise awareness of biodiversity to local communities via education, engagement and promotion of access to natural and semi-natural spaces. There are two key elements to the Edinburgh LBAP process: partnership working and community involvement.

City of Edinburgh Council Jan 2014 *Trees in the City, Trees and Woodlands Action Plan*

This document has the following general objectives:

1. To set out clearly policies that will inform how the Council manages trees and woodlands in its own ownership
2. To provide guidance to inform the public on tree-related matters and on their rights and responsibilities

3. To set out the Council's action plan in response to the Forestry Commission Scotland's Edinburgh & Lothians Forestry and Woodland Strategy 2012-17 (ELFWS), which was approved by Planning Committee on 4 October 2012
4. To present recent research evidence of the financial benefits that trees provide.

The document does not attempt to create policies on trees in relation to planning or development control. These policies and guidelines are set out elsewhere.

Sue Bell Ecology Jul 2010 *Water of Leith Management Plan,* prepared for Water of Leith Action Group

A 10-year management plan for the Water of Leith as a river covering all the major uses of and interests in the Water of Leith in a comprehensive, well-structured and detailed way. It includes actions to deliver environmental improvement for the Water of Leith, while balancing the needs of all stakeholders and user groups.

Sue Bell Ecology Jul 2010 *Topic Papers to support the Water of Leith Management Plan*, prepared for Water of Leith Action Group

Papers in support of the Management Plan covering Management generally, Biodiversity; Habitat and Species Management; Fisheries; Archaeology, Cultural and Built Heritage; Recreation and Access; Education and Interpretation; Geodiversity; Landscape; Planning; and Water … with objectives and actions for each area of interest.

City of Edinburgh Council 2008 *Water of Leith Walkway Maintenance Plan* (not seen)

A review of the condition of all features along the path. The report lists defects and recommended remedial actions on all paths, facilities, furniture and infrastructure on the Water of Leith Walkway, but excludes all waymarking, signage and interpretation as these aspects had been previously reviewed.

Historic Scotland, website viewed 2014*, Inventory of Gardens and Designed Landscapes in Scotland*

The New Town Gardens entry describes the New Town gardens generally and evaulates them as a group with the following ratings …

Work of Art, Outstanding

Historical, Outstanding

Horticultural, Arboricultural, Silvicultural, Some

Architectural, Outstanding

Scenic, Outstanding

Nature Conservation, High

Archaeological, High

Work of Art, Outstanding

Only Dean Gardens from the three gardens in the Conservation Statement site are specifically mentioned, and no conservation policies are given. Scottish Government policy on designed landscapes is given in Scottish Historic Environment Policy 2011

Historic Scotland Dec 2011 *Scottish Historic Environment Policy*

SHEP sets out Scottish Ministers' policies for the historic environment, provides policy direction for Historic Scotland and provides a framework that informs the day-to-day work of a range of organisations that have a role and interest in managing the historic environment. It includes Gardens and Designed Landscapes, although gives them no statutory protection (see 6.3).

Forestry Commission Scotland 2102, *Edinburgh & Lothians Forestry and Woodland Strategy 2012-17* (ELFWS), approved by CEC Planning Committee on 4 October 2012

The Scottish Forestry Strategy (SFS) 2006 marked an important shift in the emphasis of forestry policy. The strategy set an ambitious target of expanding national woodland cover from 17% to 25% by the second half of the century focusing on delivering sustainable development and conveying a range of social, economic and environmental benefits. The ELFWS is designed to help deliver the vision of the SFS at regional level and allow the Lothian local authorities to produce locally-focused action plans.

It is a comprehensive and balanced document that gives due recognition to protecting and enhancing the historic environment and to historic gardens and designed landscapes as an important characteristic of Edinburgh and the Lothians, with corresponding policies (see 6.3 under Trees in the City below, where policies are included).

Woodland habitat networks and strategies

The city and region have a bewildering number of different initiatives for green networks, forest and woodland strategies, habitat networks and the like. Given the undoubted importance of the Water of Leith valley as a linear habitat and recreational resource, it features prominently in green network and forestry and woodland plans for Edinburgh, the Lothians and wider areas.

These plans are at a strategic level, while this CS deals in some detail with part of a major strategic resource that is significant in all the plans. The CS aims to understand better the inter-relationship of the natural and cultural values of the valley in the Dean Valley section and enhance both aspects. So while it is important to recognise the existence of these plans, much of the content is not relevant here.

A good summary of these strategies is given in *Trees in the City* 2014 and is quoted in 6.3.

European Union 2000 *Water Framework Directive*

The EU Water Framework Directive establishes a legal framework to protect and restore clean water across Europe and ensure its long-term and sustainable use.

The directive establishes an innovative approach for water management based on river basins, the natural geographical and hydrological units, and sets specific deadlines for Member States to achieve ambitious environmental objectives for aquatic ecosystems. The directive addresses inland surface waters, transitional waters, coastal waters and groundwater.

The Commission's 3rd Implementation report on the Water Framework has been adopted – focusing on River Basin Management Plans 2009-2015.

Among the provisions of river basin management is the return of rivers to their natural state, without weirs or channelised banks. While the Water of Leith is a heavily modified river (with many former mills and weirs, as noted previously) and is not a priority to return to a natural state, the objective is still significant in respect of planning any changes to the watercourse.

6.3 Significant policies

World Heritage Site Management Plan

While the current WHS Management Plan gives due recognition to the open spaces of the New Town in its evaluation, and its objectives for *Protection of Historic Buildings and Spaces* and *Architectural Quality* could be interpreted to include the landscape of its gardens, the objectives specific to gardens come,

curiously, under Natural Heritage, but do recognise the special importance of the gardens generally and the Water of Leith valley in particular.

5.57 Open spaces within the [WHS] Site and those on its edges contribute to its setting. They range in scale and character from the substantial formal gardens and designed landscapes of the New Town such as Princes Street and Queen Street Gardens …. Dramatic topographical features such as the Castle Rock, Calton Hill and Arthur's Seat (outwith the site), and the Water of Leith valley provide additional significant contribution to visual character and vistas.

5.58 The deeply incised Water of Leith Valley provides a particularly dramatic contrast with the built elegance of the New Town. The Valley provides a strategically important wildlife corridor linking rural habitats in the Pentlands with other green networks and urban green spaces, and ultimately with the sea at Leith. The Water of Leith Management Plan and Edinburgh Biodiversity Action Plan provide a framework for ensuring that these resources are protected and enhanced.

Objective

• To ensure that the natural heritage is managed in a manner which supports the outstanding universal value of the Site.

Edinburgh Local Development Plan, Second Proposed Plan June 2014

Policy Env 7 Historic Gardens and Designed Landscapes

Development will only be permitted where there is no detrimental impact on the character of a site recorded in the Inventory of Gardens and Designed Landscapes, or upon component features which contribute to its value. Elsewhere, adverse effects on historic landscape features should be minimised. Restoration of Inventory sites and other historic landscape features is encouraged.

Policy Env 8 Protection of Important Remains

Development will not be permitted which would:

a) adversely affect a scheduled monument or other nationally important archaeological remains, or the integrity of their setting

b) damage or destroy non-designated archaeological remains which the Council considers should be preserved in situ.

Policy Env 9 Development of Sites of Archaeological Significance

Planning permission will be granted for development on sites of known or suspected archaeological significance if it can be concluded from information derived from a desk-based assessment and, if requested by the Council, a field evaluation, that either:

a) no significant archaeological features are likely to be affected by the development or

b) any significant archaeological features will be preserved in situ and, if necessary, in an appropriate setting with provision for public access and interpretation or

c) the benefits of allowing the proposed development outweigh the importance of preserving the remains in situ. The applicant will then be required to make provision for archaeological excavation, recording, and analysis, and publication of the results before development starts, all to be in accordance with a programme of works agreed with the Council.

164 The objective of the above policies is to protect and enhance archaeological remains, where possible by preservation in situ in an appropriate setting. In some cases, depending on the nature of the remains and character of the site, the Council may require provision for public access and interpretation as part of the proposed development. When preservation in situ is not possible, recording and/or excavation followed by analysis and publication of the results will be required.

165 Developers should seek early advice from the Council's Archaeologist for sites where historic remains are known or thought likely to exist. Where a development may affect a scheduled monument or its setting, early contact should be made with Historic Scotland.

Policy Env 11 Special Landscape Areas

Planning permission will not be granted for development which would have a significant adverse impact on the special character or qualities of the Special Landscape Areas shown on the Proposals Map

170 This policy aims to protect Edinburgh's unique and diverse landscape which contributes to the city's distinctive character and scenic value. Special Landscape Areas (SLA) are local designations, which safeguard and enhance the character and quality of valued landscapes across the Council area.

171 A Statement of Importance has been prepared for each SLA and can be viewed at www.edinburgh.gov.uk/downloads/file/1561/review_of_local_landscape . This sets out the essential qualities and characteristics of the area and the potential for enhancement. The Statements of Importance should be used to guide development proposals in SLAs and will be a material consideration in assessing planning applications. A landscape and visual impact assessment is likely to be needed in support of proposals affecting a SLA.

Policy Env 12 Trees

Development will not be permitted if likely to have a damaging impact on a tree protected by a Tree Preservation Order or other tree worthy of retention unless necessary for good arboricultural reasons. Where such permission is granted, replacement planting of appropriate species and numbers will be required to offset the loss to amenity.

172 This policy recognises the important contribution made by trees to character, biodiversity, amenity and green networks. In assessing proposals affecting trees, the Council will consider their value, taking into account status such as Tree Preservation Order, heritage tree, Ancient Woodland and Millennium Woodland, and information from tree surveys.

173 Where necessary to protect trees, the Council will use its powers to make and enforce Tree Preservation Orders.

Policy Env 15 Sites of Local Importance

Development likely to have an adverse impact on the flora, fauna, landscape or geological features of a Local Nature Reserve or a Local Nature Conservation Site will not be permitted unless it can be demonstrated that:

a) the reasons for allowing the development are sufficient to outweigh the nature conservation interest of the site
b) the adverse consequences of allowing the development for the value of the site have been minimised and mitigated in an acceptable manner.

176 The purpose of this policy is to protect sites of local nature conservation value and designated Local Nature Reserves from damaging development. The network of Local Nature Conservation sites and Local Nature Reserves is shown on the Proposals Map. Many of these provide connectivity between internationally and nationally important sites and contribute to green networks. A Site Report has been prepared for each LNCS.

Policy Env 16 Species Protection

Planning permission will not be granted for development that would have an adverse impact on species protected under European or UK law, unless:

a) there is an overriding public need for the development and it is demonstrated that there is no alternative

b) a full survey has been carried out of the current status of the species and its use of the site

c) there would be no detriment to the maintenance of the species at "favourable conservation status"

d) suitable mitigation is proposed.

177 European Protected Species (EPS) are covered by the Habitats Regulations. EPS found in the Edinburgh area are bats, otters, and great crested newts. Other species specific legislation to be taken into account includes the Protection of Badgers Act 1992 and those species listed in the Schedules of the Wildlife and Countryside Act 1981. If the presence of an EPS or other protected species is suspected, appropriate survey work must be carried out to enable the Council to assess the likely impact of development on the species.

* The EU Habitats Directive defines 'favourable conservation status' as the distribution and population of the species being at least the same as when the Directive came into force in 1994.

Trees within conservation areas are covered by the Town and Country (Scotland) Act 1972, as amended by the Town and Country Planning (Scotland) Act 1997. The Act applies to the uprooting, felling or lopping of a tree having a diameter exceeding 75mm at a point 1.5m above ground level, and concerns the lopping of trees as much as removal. The planning authority must be given six weeks notice of the intention to uproot, fell or lop trees. Failure to give notice renders the person liable to the same penalties as for contravention of a TPO.

Scottish Historic Environment Policy

Confirms that there is no primary legislation that gives protection to gardens and designed landscapes. National planning policy, however, confirms that maintaining and enhancing the quality of the historic environment and preserving the country's heritage are important functions of the planning system. Designed landscapes are part of that heritage. At the strategic planning level development plans routinely include policies which identify designed landscapes and outline the policy criteria which will apply to their appropriate protection, conservation and management within the planning system in accordance with national policy.

Where relevant, such polices will inform planning authorities' consideration of individual planning applications within development management. Some additional statutory provisions also apply at this stage. Regulation 25 and paragraph 5(4)(a) of Schedule 5 of The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008 requires planning authorities to consult Scottish Ministers on 'development which may affect a historic garden or designed landscape'. Historic Scotland's views on such applications will be a material consideration in the planning authority's determination of the case.

New Town Conservation Area Character Appraisal

The document relegates consideration of the New Town gardens under Natural Heritage, rather than as an integral component of the plan and of the visual structure of the New Town. It does redeem itself however under enhancement and reference to policies with the following statements.

Opportunities for enhancement

Natural Heritage

Measures to further protect and enhance the river valley of the Water of Leith should be pursued, whilst complementing its designation as an Urban Wildlife Site in accordance with the Edinburgh Biodiversity Action Plan, NPPG 14 and its historic character.

Statutory Planning Policies

Conservation Area

Within the Conservation Area, the existing architectural character, historic and landscape character is to be preserved and enhanced.

Open Space

Princes Street gardens, Queen Street gardens and the formal squares, crescents and circuses scattered throughout the area are regarded as open spaces of outstanding landscape quality and townscape significance where no development will be allowed. The Water of Leith valley is also covered by policies that declare the valley as an urban wildlife site and promote the enhancement of its amenity and recreational value. Calton Hill is a Site of Special Scientific Interest where no development is to be allowed.

Edinburgh Local Biodiversity Action Plan Phase 3, 2010 - 2015

Overall aims:

1. To maintain and enhance the biological diversity of Edinburgh's rivers, canals, lochs, ponds and other freshwater habitat;

2. To help deliver the requirements of the Water Framework Directive by helping to achieve good ecological status of Edinburgh's wetland habitats.

Actions

Hold awareness raising events relating to the Water of Leith.

Provide a focus for the encouragement of community and volunteer participant in the practical improvement of the Water of Leith.

Promote the effective management of the Water of Leith river valley.

Funded actions

The following list of actions will be carried out by Partnership organisations during the lifetime of this Plan, and progress will be recorded in the Biodiversity Action Reporting System … some apply, eg. Annual community habitat project carried out on Water of Leith.

Edinburgh & Lothians Forest and Woodland Strategy 2012-2017

Trees in the City, Trees and Woodlands Action Plan

And related woodlands, woodland habitat and tree strategies or plans

The Scottish Forestry Strategy set the context for a number of policy documents and initiatives which expand upon the role of woodland and forestry in meeting a broad range of objectives. Scottish Government has produced an advice document *The Right Tree in the Right Place - Planning for Forestry and Woodlands* which provides the detailed framework for the development of local strategies and action plans.

Trees and woodlands have significant interactions with the planning system. Scottish Planning Policy includes a presumption in favour of protecting existing trees and woodland resources, and acknowledges the suite of benefits that they convey to people and the environment alike.

The National Planning Framework (NPF2) sets the spatial strategy for Scotland's development to 2030, and designates national developments of strategic importance to Scotland. As a national development, the Central Scotland Green Network (CSGN) represents a major opportunity to build high quality, multi-objective woodland management and expansion into the region's planning policy framework - as NPF must be taken into account in the relevant Strategic and Local Development Plans.

The ELFWS is designed to ensure that woodland expansion and management contributes to the CSGN by making the links between its high-level objectives, the Scotland Rural Development Programme (SRDP), and other funding opportunities and appropriate activities 'on the ground.' The Strategic Development Plan for Edinburgh and Southeast Scotland (SESPlan) clearly promotes 'increasing woodland planting to increase competitiveness, enhance biodiversity and create more attractive, healthy places to live' and includes explicit policy protection for trees and woodland. The plan includes a policy supporting the CSGN and highlights the role of Forestry and Woodland Strategies in contributing to delivery.

The Forestry Commission Scotland (FCS) *Woods In and Around Towns* (WIAT) programme provides the focus for FCS work on improving quality of life in towns and cities. It creates major opportunities to bring neglected woodlands in urban areas into positive management, improving local environments, contributing to sustainable development and supporting people in using and enjoying their woods.

The ELFWS actions which relate to the City of Edinburgh Council Area are highlighted in the extracts below:

Existing woodlands

The City of Edinburgh is fortunate in possessing significant networks of established woodlands – much of which is high quality and makes a substantial contribution to biodiversity and townscape character. 40% is described as being ancient or long established.

Designed landscapes, wooded hills and the Water of Leith corridor are important features of Edinburgh's woodlands, along with parks, gardens, and street trees.

Managing these assets to secure public safety, safeguard character and contribute to the implementation of green network objectives will be the priority. However, this poses significant challenges for the local authority and private owners as the effects of climate change take hold, increasing uncertainty as to the impact of severe weather events, invasive pests and pathogens. Where assets are under-managed, sourcing material for biomass could provide a financial incentive to improve management regimes and deliver enhancement.

Sensitivities

The ELFWS designates a significant proportion of central Edinburgh within the 'sensitive' category due to the presence of multiple designations, including the Old and New Towns World Heritage Site, Conservation Areas and Inventory-listed gardens and designed landscapes.

While there is little potential for significant expansion within these sensitive areas, there will be opportunities to reinforce key assets and succession planning for feature trees.

Ancient and long-established woodlands are also included in this category, such as those lining the Water of Leith and the Almond. These woods provide important habitat linkages through the heart of the urban area, and woodland creation and enhancement in the vicinity could add significant value to connectivity

Trees in the City, Trees and Woodlands Action Plan

The plan sets out the statutory and policy background to tree and woodland management in the city, and gives detailed policies (42 of them) about how the Council will manage trees in its ownership and react to applications or requests to prune, lop or fell trees.

At a strategic level it gives the useful summaries of the context, as included above.

The following is a selection of policies chosen to show the range and type of issues covered, these being assessed as the most relevant to the Water of Leith / Dean Valley.

Trees in the City also includes a 5 year action plan with some actions directly relevant to the Water of Leith / Dean Valley, many drawn from ELFWS, included the following selected actions.

Trees and the sustainable City

1.9 Env 19 Promote positive management of historic gardens and designed landscapes and heritage trees to maintain their historic and cultural significance and increase resilience to climate change. (ELFWS action)

1.10 Env 19 Encourage forest restructuring to improve the setting of historic sites and landscapes. (ELFWS action)

1.12 CC6 Promote positive and proactive management of key tree species and woodlands improve their resilience to climate change. (ELFWS action)

1.13 CC7 Identify important individual historic trees and species that are vulnerable and begin succession planning to maintain contribution to character and significance. (ELFWS action)

Trees, woodlands and Green Networks

3.1 Identify sites where trees could be planted to enhance the linkages between green spaces, and to assist in the delivery of the Edinburgh Living Landscapes project.

3.5 Env 2 Where there are suitable opportunities, enhance ancient and semi-natural woodland.

3.6 Env 4 Increase the proportion of existing woodland brought into positive management. (ELFWS action)

Water of Leith Management Plan, July 2010

The Water of Leith Management Plan includes a comprehensive range of policies covering biodiversity, fisheries, archaeological cultural and built heritage, recreation and access, education and interpretation, geodiversity, landscape, planning and water, any of which may have some relevance the Dean Valley landscape and can be referred to in the WoLMP.

The only action specific to designed landscapes, in the Landscape section of the plan, is ...

L2: Progress detailed surveys of gardens and designed landscapes, which lie on the Water of Leith corridor or within its immediate visual envelope.

This Conservation Statement can be considered to carry forward that action.

7 Assessment and significance

7.1 Dean Valley landscape, general assessment and the place in its cultural context

The central point of this statement is that the three communal gardens and river valley landscape of the Dean Valley form a unified and special designed landscape on the edge of Edinburgh city centre. Like all designed landscapes, it is based on natural features, and like many designed landscapes it has developed high nature conservation value as a result of garden planting and natural processes. In this case the dramatic natural topography and rocky river bed is of such quality as to create an outstanding picturesque design that is enhanced by two superb structures, the iconic small Roman temple of St Bernard's well and the elegantly engineered Dean bridge, with the latter, among it many uses, providing the public with the most accessible viewpoint of the valley landscape.

In its Edinburgh New Town context the valley's three gardens are grouped with the other 'Grid Edge Gardens' (as defined by John Byrom in his draft handbook for Edinburgh World Heritage Trust, on *The Care and Conservation of Shared Georgian Gardens*), the others being Princes Street Gardens (East and West) and Calton Hill (the hill proper, Regent gardens and London Road gardens). Although in reality they have little in common apart from dramatic topography and their edge of New Town positions. In contrast, the majority of the New Town gardens are closely enclosed by the streets and buildings that define their geometric shapes and are called 'Gardens within Planning Grids' by Byrom.

Most of Edinburgh's New Town gardens were developed at various times during the 19th century (albeit that several earlier gardens were conceived in the later 18th century, but were delayed in being planted), when the *Picturesque* derived from the *Natural* or English landscape garden style was prevalent, in all its variations and manifestations. The style had to be adapted from its origins in the country house landscape garden, as demonstrated in the often seen pair of illustrations from Richard Payne Knight's *The Landscape, a didactic poem* (1794) that compared the bare and tidy forms of the *Beautiful*, as practised by Capability Brown, with the *Picturesque* and its roughness and irregularity. The style had to be adapted to the very geometric and formal situations of the New Town spaces – rectangular squares, octagonal squares, elliptical squares, triangular squares and so on, even square squares. Inevitably many compromises had to be made to fit the naturalistic lines of the Picturesque to these geometric forms, and various more formal, ordered and decorative elements of layout and planting that were part of later 19th century landscape gardening came to be included. But where the Picturesque excels is in 'Grid Edge Gardens' developed in more naturally picturesque locations, or locations with outstanding picturesque potential, since many were in a poor condition at the time of their adoption as gardens. And among these 'Grid Edge Gardens', the Dean Valley had both the highest picturesque potential in its prior state and achieved the greatest true Picturesque quality, and continues to do so today.

However, at the time that St Bernard's well was built the valley was identified more directly with pictures and with the one painter whose work more than any other influenced the original development of the the Natural style, Claude Lorrain. As Patricia Andrew has shown (Andrew 2013) the association of St Bernard's well with the Temple of Vesta at Tivoli, 20 miles east of Rome, and its 'bosky surrounding landscape and dramatic waterfalls' and the whole Dean Valley with paintings of Claude was key to the perception of the landscape in the late 18th and early 19th century. She notes that ...

> Guidebooks assisted the ignorant to recognise references to Claudian painting and to Tivoli, for example the English traveller Sir John Stoddart perceived that the 'outline is evidently taken from the celebrated Sibyl's

> temple at Tivoli ... [It] seemed to be introduced, as into a picture, by the felicious pencil of Claude'. (Andrew 2012 p15)

The Claudian influence is evident in depictions of the valley and well by the Storers, Leitch, Shepherd and Nasmyth himself (see pp20-22).

The Dean Valley group in its mature state forms one of the best examples of Picturesque landscape garden in Scotland, with hints of the outstanding classically-inspired gardens in England, such as Stowe and Stourhead (although not in the same class), thanks to its temple. The combination of rocky river, steep gorge, lush tree cover, shaded paths, and classical eye-catcher creates here a type of landscape garden for which it is difficult to find a direct parallel and is very special. Some comparison can be made with the enriched glens are part of many country house designed landscapes in Scotland, although these generally are more rugged and with little ornamental planting. Nonetheless one postcard c1900 did refer to it as 'A highland glen in the city'. But a glen embellished with fine landscape gardens, positioned on the edge of the city centre and juxtaposed with outstanding classical terraces as in the New Town is exceptional and possibly unique.

For all its fine parks, Bath has nothing comparable that combines natural topography and picturesque design, although Royal Victoria Park and Sydney Gardens have planned relationship to Royal Crescent and Great Pulteney Street respectively. Within Scotland, an echo of Edinburgh's terraces and gardens exists in Glasgow between the Park / Claremont / Woodside Terraces and Kelvingrove Park and the Claremont / Woodside gardens to the east.

Dean Valley is a landscape that can be experienced in several ways. In the private gardens and from the public river valley landscape, from the adjoining streets, from low on the riverside, the mid valley sides and elevated positions above the trees on the Dean bridge and Moray arched retaining structure. Moreover, depending on your viewpoint, different impressions can be formed of the valley, from natural wooded gorge to fine and exclusive gardens, and all are true.

7.2 Significance as evaluated in the Inventory of Gardens and Designed Landscapes in Scotland

Importance of Site

A site in the Inventory is assessed for its condition and integrity and for its level of importance. The criteria used are set out in Annex 5 of the Scottish Historic Environment Policy (December 2011). The principles are represented by the following criteria to each of which a value has been assigned by Historic Scotland on a scale ranging from outstanding value to no value. All sites included in the Inventory are considered to be of national importance. In the case of the New Town Gardens evaluation, only the whole group is assessed (no individual gardens), as follows.

Work of Art, Outstanding

The Edinburgh New Town Gardens are integral to the civic planning and fabric of the city and as such are recognised internationally as an outstanding Work of Art.

Historical, Outstanding

The Edinburgh New Town Gardens are highly significant in the history of town planning, even for their contribution to the later idea of the garden city. The history of their design and the development of design ideas is particularly well documented and involved many of the key architects, designers and horticulturists of the day. They are also important in terms of social history, and are a good example of 19th century public pressure and involvement.

Horticultural, Arboricultural, Silvicultural, Some

The trees and shrubs within each garden offer some Horticultural interest.

Architectural, Outstanding

As a comprehensive design, the New Town Gardens and buildings are internationally renowned and of outstanding architectural value, and are part of a World Heritage Site.

Scenic, Outstanding

The gardens are outstanding for the contribution they make to the Edinburgh townscape, and in providing a setting for the surrounding buildings and monuments. The views from or into many of the gardens are magnificent.

Nature Conservation, High

Individually, the New Town Gardens have some Nature Conservation value, but collectively have high value in relation to their urban setting.

Archaeological, High

The area of Princes Street Gardens to the south of the railway line forms part of the scheduled area of Edinburgh Castle, in recognition of its high Archaeological value.

7.3 Existing designations as background to significance

Statutory designations provide an important reference point because a site can only be granted protection if it meets certain criteria, ie. it achieves a set level of significance. Although a site may have several different designations, eg. covering both the cultural landscape and natural landscape, the management requirements of each designation may be different. The assessment of significance undertaken within the context of a Conservation Management Plan or Conservation Statement has the advantage of using all relevant criteria across many disciplines, so that types and levels of significance can be compared and balanced management priorities subsequently developed.

Existing statutory designations at the Dean Valley have been covered in 4.4 and 6.1. In summary, they are as follows.

World Heritage Site – the site lies within The Old and New Towns of Edinburgh World Heritage Site (apart from a small area) giving it international significance.

Conservation Areas – the site is covered entirely by conservation areas, mainly by the New Town Conservation Area, with the west part lying in the Dean Village Conservation Area, giving it national significance.

Listed Buildings – the principal buildings, structures and housing terraces of the site are Category A listed, giving them 'national or international importance'. Most of the other buildings are Category B listed giving them 'regional or more than local importance' (see 4.4 for details).

Inventory of Gardens and Designed Landscapes in Scotland – the New Town Gardens are in the Inventory as a group covering the whole New Town. The group includes Moray Bank, Dean Bank and Belgrave Crescent. All sites in the Inventory are considered to be of national importance.

Local Biodiversity Site – the Water of Leith valley is a Local Biodiversity Site giving it local nature conservation significance.

Proposed Local Geodiversity Site – a major part of the Dean valley site is proposed as a Local Geodiversity Site giving it high local geological significance.

Special Landscape Area – the site is included as a candidate SLA in the emergent development plan, recognising it as a landscape of local importance.

7.4 Statement of significance, Dean Valley landscape and its components

7.4.1 The Dean Valley as a whole

The valley is an outstanding landscape whether considered as part of a wooded river gorge through the city or as a designed landscape based on dramatic natural topography with individual garden areas. While it has **international significance** as a notable component of the World Heritage Site, it is also a **nationally important designed landscape** and is a **valued local asset** as a recreational resource and for it nature conservation values. It features nationally important and iconic buildings and bridges that are essential to its character and identity, and equally important building groups in the form of classical housing terraces and the Dean village that overlook and define the valley sides.

Evaluation of the main individual areas and features follows (backed by detailed descriptions elsewhere), but to summarise the principal values of the Dean Valley are:

- An **outstanding designed landscape of national value** laid out in a natural river gorge comprising a grouping of gardens and public river valley landscape, each individually notable, with their buildings, bridges, walks and varied and extensive planting.
- The only contiguous grouping of private gardens in the New Town gardens system and an **important and distinct part of the New Town layout**; the largest grouping of communal gardens.
- The valley is **outstanding scenically or in townscape terms** in views from the streets and bridges of the area contrasting with the built form and providing many outstanding views.
- **Outstanding architecturally at an international and national level** due to the Dean bridge, St Bernard's well and other Category A listed buildings and their setting, and for the wooded valley juxtaposed with the built forms of the New Town and Dean village.
- **Outstanding archaeological value at a local level** due to its history from the early medieval period onwards of milling and other industries in Dean village and the valley downstream, the Great Lade and other features, as well as for the 19th century gardens and designed landscape.
- **Outstanding recreation value at the city level** due to the site's attractiveness and accessible city centre location, the valley walkway and its position in the long-distance Water of Leith walkway. For keyholding residents the gardens provide an exceptional **recreation resource of outstanding local value**.
- An **important local wildlife resource** with added value as a section of the Water of Leith valley woodland and freshwater habitats and wider green networks.

7.4.2 Significance of the principal spaces of the Dean valley

Dean Valley landscape and St Bernard's area

The individual spaces in river valley landscape have little separate significance, except for the St Bernard's area, since the value of the Dean Valley landscape so reliant for its attraction on its setting, provided by the three communal gardens and their mature planting. However as a part of the whole valley landscape, as previous, they share in the values of that area.

The St Bernard's area, however, is a cohesive part of the river valley landscape with its own history and coordinated design, focused on St Bernard's well and with a grand entry at St Bernard's bridge. The stairway at the bridge, the coped

riverside walls, the steps, walls and railings at the well and the local paths and planting all contribute to an outstanding composition, again heavily reliant on its gorge setting and neighbouring gardens. This landscape has **national value** but is let down to a degree by the standard of upkeep (excluding the recently restored well itself), with areas left wild and one path abandoned. The area's history is fascinating, from discovery of the spring, through the first well-house of 1760 and Lord Gardenstone's acquisition of the site and commissioning Nasmyth's design of the temple building in 1789, to the restoration of the well and layout of the wider site by William Nelson in 1888, and his gifting the place to the city. The 1888 work completed the layout as we now know it and should be considered as integral to the well building, more than just its setting or curtilage. As such it has **outstanding national historical, architectural and designed landscape value**.

While this layout is not original, ie. not contemporary with the well building, it is in the form that the whole assemblage of well and landscape setting was gifted to the city in 1888.

Dean Valley walkway (Water of Leith Walkway)

The walkway is an **outstanding local asset**, forming as it does part of a long distance city pathway following the river through landscapes that are highly attractive, varied and interesting. The Dean Valley section must rank as one of the most dramatic and most attractive, as well as being accessible from densely populated parts of the city.

Moray Bank Gardens

The earliest of the three Dean valley gardens where problems associated with the steep slopes of the site dominated their early development and the garden design that could be achieved, further limited by a northerly aspect. While a part of James Gillespie Graham's plan for the Moray estate, the gardens suffer from being overlooked by the backs of the housing terraces, albeit this is more of an issue in external views and the backs are little seen from the gardens themselves due to retaining structure, slope and tree cover. The slope problems also resulted in the gardens' most impressive feature, the arched retaining structure and footway designed by Robert Stevenson, giving an unrivalled experience and fine views. The garden layout is dictated by the landform with fairly level paths running with the contours and steeper diagonal paths between levels with fairly continuous tree cover, of limited species range, with localised mainly evergreen shrubbery. Fine cross valley views and views to the Dean bridge, Holy Trinity church and the arched retaining wall make up for the limitations of the aspect, although some views may have been lost. There is no direct relationship to the river, the walkway interposing, and views of the river for all householders are a long-forgotten promise.

Considered individually, and separately from the Moray/Ainslie/Randolph terrace architecture and from the whole New Town Inventory evaluation, the Moray Bank Gardens have: **high design value**; **outstanding national/local historical valu**e; **outstanding architectural or engineering value** (arched retaining structure); **some horticultural and arboricultural interest** (as Inventory); **outstanding scenic value** (view from Dean bridge and walkway); **some-high nature conservation value**, higher value if considered as part of valley; and **low value for early archaeology** (little will survive from before early 19thC earthworks) but **some archaeological value** in respect of the development of the gardens.

Doune Terrace Garden

A late addition to the gardens managed by the Moray Feuars and originally intended for development, hence the high retaining wall on the north. While an important landscape element in the local area, it has little garden merit in its present condition, being heavily treed and shaded, negating much nature

conservation value. A significant feature is the *clairvoie* (of uncertain date) giving a view northward, although now blocked by trees. The only street-side part of the Moray Bank Gardens.

Considered individually, and separately from the Doune Terrace architecture and from the whole New Town Inventory evaluation, the Doune Terrace Garden has: **low design value**; **some local historical value**; **high architectural or engineering value** (arched retaining structure on north); **low horticultural and arboricultural interest**; **high scenic or townscape value**; **some nature conservation value**; and **low value for early archaeology** (little will survive from before early 19thC earthworks) but **some archaeological value** in respect of the development of the gardens. There is an opportunity to enhance design, horticultural, townscape and nature conservation values through management.

Dean Gardens

The Dean Gardens benefits from all the natural and built features of the valley and few of its problems: a southerly aspect on a bend of the river giving varied views, flatter ground for a lawn as well as steep slopes for woodland, slopes generally sufficiently shallow to form terraces, the best views of St Bernard's well, fine views of Dean bridge from each side, views of Dean weir 2, overlooked by the fine John Tait designed Italianate classical Eton Terrace and a direct relationship to the river. The garden proposals by architect John Dick Peddie and detailed planting list by James McNab give design and historical value, with the historical record enhanced by drawn and photographed views from the bridge. Horticulturally the aspect and landform allows variety in the planting with a well planted mixed upper bank and a range of select trees and shrubs through the garden.

Considered individually, and separately from the Eton Terrace architecture and from the whole New Town Inventory evaluation, the Dean Gardens have: **outstanding design value**, well related to the setting and to views of features; **outstanding national/local historical value**; **outstanding architectural or engineering value** (Dean bridge stands in the gardens); **high horticultural and arboricultural interest**; **outstanding scenic value** (views from Dean bridge, walkway and Eton Terrace); **some-high nature conservation value**, higher value if considered as part of valley; and **low value for early archaeology** (little will survive from before mid-19thC earthworks) but **some archaeological value** in respect of the development of the gardens.

Belgrave Crescent Gardens

Belgrave Crescent Gardens benefit from only some of the Deans Gardens' assets –southerly aspect, views of Dean bridge (limited) and weir, bounded by a fine crescent (John Chesser designed townhouses in free Renaissance style) and a direct relationship to the river. In addition, the extent of flatter ground adjoining the street enables a fine area of traditional parkland and a well-stocked border of choice planting. Trinity church is prominent in views at this level. The steep slopes south down to the river and south-west to Dean village are well wooded, with good views over the village and west New Town including St Mary's cathedral spires from the upper parts. Other well-maintained new garden areas and planting occurs in other areas and the whole garden has a well-used community feel, with a number of play areas and well provided with seats and outdoor furniture.

Considered individually, and separately from the Belgrave Crescent architecture and from the whole New Town Inventory evaluation, the Belgrave Crescent Gardens have: **outstanding design value**, well related to the landform and to views of features; **high national/local historical value**; **no architectural value** (no significant buildings with the gardens); **high horticultural and arboricultural interest**; **outstanding scenic value** (views from Dean bridge, Dean village, Dean Parth and Belgrave Crescent); **some-high nature**

conservation value, higher value if considered as part of valley; and **low value for early archaeology** (little will survive from before later 19thC earthworks) for pre-19th century but **some archaeological value** in respect of the development of the gardens.

Other spaces

Several other spaces are important components of the wider and highly valued landscape but are of low significance individually. Many are highlighted in section 8.10 as areas of neglect and can therefore be considered as having **negative significance** in their present state. These include the Dean Terrace / Upper Dean Terrace riverbank, India Place bank and Miller Row riverside. Other areas like the walkway riverside upstream of St Bernard's well and the land below Randolph Cliff also need to be brought into active management.

7.4.3 Significance of the principal buildings of the Dean valley

Dean bridge

In this assessment of the Dean Valley, the Dean Bridge is of special importance as the best viewpoint of the valley – giving views upstream to Belgrave Crescent Gardens and Dean village and downstream to Dean Gardens, Moray Bank Gardens and the north of the city to the Forth and beyond – and as an impressive structure seen from each of the gardens, most closely from Dean Gardens. The structure is a large scale, high-level road bridge of elegant and innovative design by Thomas Telford, one of Scotland's most eminent civil engineers, that is vital in the infastructure of Edinburgh's roads and makes a dramatic entry into the city centre. It is an outstandingly significant feature of the New Town Conservation Area and WHS site, and is Category A listed giving it **outstanding national value**. Its use as a viewpoint for numerous historical prints and photographs and in the history of the development of the land to the north, also gives the bridge **high historical value**.

St Bernard's well

St Bernard's well is an eye-catching building in the wooded valley landscape, with its fascinating history and designed setting from 1888, as noted in 7.4.2 above. It is a focus for views from the walkway, Dean Gardens and St Bernard's bridge and may be considered the highlight of the whole valley, as well as being a significant feature of the New Town Conservation Area and WHS site, and is Category A listed. Its design by Alexander Nasmyth and his status as Scotland's pre-eminent landscape painter, as well as occasional landscape consultant and architect, and his painting of the building in its setting, further justifies its rating of **outstanding national value in architectural, aesthetic and historical terms**.

St Bernard's bridge

The bridge was designed as a key part of the development of the land of Sir Henry Raeburn and is thought to be the work of prominent architect James Milne (original parts) and is a significant feature of the New Town Conservation Area and WHS site, and is Category A listed giving it **high national value**. The bridge makes an ornate, even theatrical, entry point to the site or an eye-catching termination of this section of the walk, and a viewpoint for the valley including St Bernard's well. The Jacobean staircase was an important component of the 1888 work to provide a setting for the well accessible to the public.

Stock bridge

A bridge that is perhaps more **important historically or symbolically as the gateway to Stockbridge** (or to the New Town) and derivation of its name rather than architecturally; listed Category B and of **regional or more than local importance**. Positioned at the east end of the Dean Valley site it gives views of a less interesting part of the river.

Water of Leith bridge

An old crossing of the river on a former main road into the city that continues in use as an important pedestrian and vehicular link. As a Cat B listed structure and focal point in the townscape of Dean village, as well as a fine viewpoint, the bridge has **outstanding local historical, architectural and scenic value**.

Footbridge, Hawthorn Terrace

A distinctive iron structure dating from 1877 when it served the industrial side of Dean village and located at a fording point of the river, the unlisted bridge has **high local historical and architectural value**.

Moray Bank Gardens arched retaining structure and footway

This amazing structure is seen by few people, only glimpsed from the main walkway, but is one of the architectural or engineering wonders of the Dean Valley. Surprisingly it does not seem to be covered by any individual listing and is not mentioned under the list descriptions of the Gillespie Graham Moray Estate terraces. Built to the design of Robert Stevenson, one of Scotland's several eminent civil engineers and famed for his lighthouses. It retains the land on which the northerly Moray terraces are built and their gardens, and provides an exhilarating walk elevated above the communal gardens with outstanding views. It is an unusual type of structure and a sophisticated solution of the problem on land slippage and foot access and so of **outstanding national architectural or engineering value**.

Holy Trinity Church

Holy Trinity is prominently sited at the north-west side of the Dean Bridge and features in views from each of the three gardens and river valley landscape, most picturesquely from the Bell's Brae bridge. The church retains its original form and detailing despite conversion to an electricity transformer station in 1957; now returned to church use. As a Category B listed building it is of **regional importance** in this context.

Dean Weir 2 / World's End weir

The weir is an **important local feature of the river and valley historically, archaeologically, visually, aurally and in term of the management and use of the river's flow** in the past and future. It was the start of the Great Lade that figured prominently in the valley for centuries, providing power to mills and water to a number of industries. The weir features in views from Belgrave Crescent Garden, Dean Gardens and Miller Row, and can be heard from these places. Recently the weir has been investigated for a micro hydro scheme (see 8.15).

8 Management issues and threats to significance

This section draws together the management issues raised in the preceding sections, particularly those that pose problems or affect the significance to the site as described in Section 7. There may be other management considerations beyond those raised here, some of which will be covered by the statements of objectives and policies in the next section.

8.1 Existing management and maintenance

Management along the Water of Leith corridor generally and in Dean valley is divided between the neighbourhood teams, specialist teams and the Natural Heritage Service of the City of Edinburgh Council. The Natural Heritage Service has responsibility for the land owned by the Council and the infrastructure, not including the bridges. Management includes visitor management and the interaction between users, providing advice and information and estate management, eg. drainage, path works, seating, rock catch fence etc. The CEC Natural Heritage Service carries out monthly inspections of the area and liaises with the relevant Council team to arrange for works to be carried out, or appoints contractors where appropriate and when funds are available.

The service works closely with the Water of Leith Conservation Trust (WoLCT) who also undertakes management of the area, which includes cleaning–up the river at least five times a year, regularly cutting back ivy and overgrown vegetation, clearing paths, garden management of the area beside the St Bernard's well and patrolling it on a fortnightly basis. Other aspects include rubbish removal, dealing with invasive species and clearing log jams, with the accessible areas at Lindsay's mill and around the well tackled several times per year. Generally along the Water of Leith corridor, the Council do not work in the river channel or on private land due to insurance restrictions, while WoLCT is able to work in these areas with permission. (There are exceptions to this is, eg. the Flood team if a fallen tree constitutes a flood risk arrangements will be made to remove it)

The Water of Leith Conservation Trust works to conserve and enhance the river, its heritage and wildlife: The Trust promotes education and recreation through the Visitor Centre at Slateford, and works with volunteers and community groups to deliver around 100 river clean-ups and habitat improvement tasks annually. Operating since 1988, it was the first river charity to be established in Scotland. The Trust's work is supported by City of Edinburgh Council's Services for Communities and Children and Families Departments and by Scottish Natural Heritage. Maintenance of the Dean valley landscape is achieved with limited funding and resources and having to balance priorities along the whole river corridor.

8.2 View management

In a picturesque designed landscape planned and incidental views are paramount. The views within and over the Dean Valley have been appreciated for centuries and continue to be a major feature of the landscape's attraction, as demonstrated in Section 3. But views can be and are being lost by growth of vegetation, both planted and natural regeneration, but particularly the latter. Defining views and arranging management to keep them open can ensure that all important views remain visible.

View management is also about incidental views, making sure glimpses of the river, views across the valley and sights of adjoining spaces are there to enhance the experience of path and garden users.

Lost view of the Dean bridge from Lindsay's mill space

A framed picturesque view of St Bernard's well from Dean Gardens, blocked by one self-seeded ash – a planned view or a view in the making?

8.3 Vegetation and garden planting management

Management to promote or maintain vegetation cover appropriate for the gardens and river valley landscape in terms of their design is a tricky balance to achieve, and as much a result of available resources as for any other reason. While in their early days the gardens were almost entirely planted, the type of planting lent itself to naturalisation and for much of their life the vegetation cover has been a combination of deliberately planted trees and shrubs, together with different types of mixed border, and semi-natural woodland. The extent to which the gardens' planners envisaged a neat and manicured as against a semi-wild effect in the long term is an academic issue today, given the practicalities of managing large gardens relying on woody vegetation cover. The fact is that a more natural approach is well suited to the picturesque aesthetic. But there are issues of over proliferation of natural regeneration, invasion of areas of garden planting, the extent of ivy, and natural growth or individual trees or shrubs blocking views.

Ivy is a significant issue. While it can be considered a natural groundcover, it covers many walls (and some railings) causing damage and making inspection impossible, it excludes more desirable flora from the ground layer and overwhelms the canopy of trees in several part of the site.

8.4 Invasive species

Two invasive non-native species occur in the Dean valley section of the Water of Leith, Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*), with Himalayan balsam being a particular problem. Management of invasive species has been summarised by the Edinburgh LBAP. In Edinburgh, control of invasive species has mainly focused on these two species above plus giant hogweed and treatment has mainly been on land owned by the Council or carried out as part of preparations for the flood prevention scheme. Millennium funding was secured for treatment of the Water of Leith corridor, which was carried out over a four year period. Regular work is carried out by WoLCT volunteers on the Water of Leith to remove Himalayan balsam by hand.

Monitoring work conducted in 2008, as part of the flood prevention works, identified Himalayan balsam as the main invasive species along the river. The prevalence of Himalayan balsam is confirmed by surveys of invasive species co-ordinated on behalf of the WoLCT. Eradication is difficult due to the species' profuse production of viable seed that is scattered by its bursting seed pods and and spread by flowing water, so it is likely to remain a problem needing attention.

In addition to non-native species, ivy (*Hedera helix*) is a major problem, spreading over the ground, up walls and into tree canopies, as has been noted in parts of section 4.

8.5 Tree management

Trees in the City (CEC 2014, see 6.2 above) includes many policies stating where the Council will not as a matter of course undertake tree work or fell trees. This position may be seen as symptomatic of an over-protective attitude to trees that has been encountered, according to some consultees to this statement. In fact, the same document is supportive of 'forest restructuring to improve the setting of historic sites and landscapes' and has other policies or action that would benefit the management of designed landscapes. These policies are derived principally from the *Edinburgh & Lothians Forest and Woodland Strategy*. Another key document, *Water of Leith Management Plan*, also has objectives covering the specific needs of landscapes in the valley, including designed landscapes, ie. 'To progress surveys of gardens and designed landscapes along the Water of Leith which make an important contribution to the local historic environment and landscape character' that gives backing to the present statement.

We are of the opinion that, as would be the case with the Forestry Commission Scotland and a Forest Plan, woodland management within a well justified and balanced management plan should meet the approval of stakeholders after thorough consultation.

8.6 Balancing nature conservation and designed landscape management

The Water of Leith valley is valued mainly as a woodland habitat. The Edinburgh Local Biodiversity Action Plan lists features or indicators which can demonstrate how good the area is for species, and hence biodiversity. These are:

- A good diversity of tree species, both broadleaved and conifer, particularly native species
- A diversity of age and size of trees, from young regeneration to standing damaged or dead trees
- Presence of undergrowth and diversity of undergrowth structure and composition
- Presence of fallen dead wood and deep leaf litter
- Gap sites, glades and rides which allow light to filter to ground level
- Areas of bare or disturbed soil
- A range of dry and damp or wet areas
- Presence of transitional woodland edge habitats or riparian corridors.

If these features are present in woodland, this is an indication that suitable habitats are available for a range of species and therefore increases biodiversity. This is especially true for ancient or long-established semi-natural woodlands.

Dense woody summer vegetation, dominated by sycamore, blocking the view of the river from the Dean Gardens, but the view opens to reveal St Bernard's well a short distance on. How to balance management?

Heron visiting St Bernard's well

Woodland management should identify and protect these features where they already exist.

While woodlands of the study area site, particularly areas outwith the managed gardens, have these indicators, the list also shows how the woods can be managed to increase biodiversity, for example in the range of species, age structure, undergrowth and glades.

The connectivity of woodland habitats is also an important factor – sites which are linked to other open habitats or woodlands, creating green networks, have an increased value for biodiversity by allowing species to move through the landscape, and may give additional benefits such as recreation and access.

The Phase 1 Habitat Survey for Edinburgh 2001-02 found that base-rich mixed elm and ash woodland tended to be the most diverse and species rich. Good examples of this woodland habitat in Edinburgh can be found at a range of sites including the riparian corridor of the Water of Leith. The Native Woodland Survey for Scotland identifies only part of the site area upstream from the Dean Bridge (ie. part in Dean, part in Belgrave Terrace) as 'nearly native woodland'.

Active management of riverside woodland aimed at creating more open woodland with glades and greater tree species and general biodiversity has the potential for coordination with management for designed landscape aims such as reopening lost views and protection of built structures. The freshwater habitat of the river may also benefit from more openness and sunlight on the water. While we cannot be specific about particular actions at this point, suffice to say that there is potential for both aspects of the site to benefit from coordinated management for nature conservation and designed landscape objectives.

8.7 Maintaining structural fabric and enclosures

Cracked walls, ivy, rotten handrails and rusty railings at Lindsay's mill space

There is a considerable backlog of replacement and repair of the built components of the valley landscape. While no systematic survey has been done under this study, it is evident that riverside or pathside retaining walls and railings are either clearly in a poor state or are so hidden by ivy growth or other vegetation as to make inspection impossible. A detailed survey of walls and railings, including removal of vegetation in sample sections, is needed to properly assess the condition of these elements and quantify the extent of repair and replacement that is necessary.

This affects all parts of the site, including the sides of the walkway, the area at Miller Row and the riverside walls of the two north bank gardens. In the case of the sections at Dean Terrace and Upper Dean Terrace, the problem of ivy covered retaining walls and railings in a very poor condition is exacerbated by the uncertain ownership, with the Council unwilling to accept responsibility with the railings, walls and riverbanks in the present state.

Railings and copes in very poor condition, Dean Terrace

Consistency in the use of materials is also an issue, in the gardens and in the public areas, with an inconsistent variety of fence types, some of poor quality, is used in some areas. The use of weld-mesh fence along the Moray Bank Gardens walkway boundary (and Doune Terrace Garden street boundary) is regrettable. While it could be argued that, had it been available in the 1820s, the feuars would have used it, and it is not too intrusive seen behind shrubbery and trees from the gardens side, it is a disfigurement of a long section of the walkway.

8.8 Path surfaces

While all the paths on the walkway and in the gardens are servicable and many parts are in excellent condition, two main problems are present. Tree roots are causing break-up of the path surface on the walkway, often caused by trees growing in the pathside wall. In the gardens erosion of the surface of smaller paths on steep slopes is a constant problem, with drybound material and loose gravel washed off the steep gradients. There is no easy or cheap solution, apart from ensuring adequate cross-falls and pathside channels where practicable.

Consistency in the use of materials is again an issue, with a number of paving materials used in the St Bernard's area and a variety of different gravel sizes and colours in the gardens.

Walkway surface and retaining wall damaged by tree roots

8.9 Slopes and stability

In the early days of Moray Bank Gardens slope stability was a major issue and interventions to control landslips in the 1820s have shaped the gardens of today. Despite steep slopes in parts of all the gardens, stability does not appear to be a problem today, although measures to protect against rockfall have to be maintained at Randolph cliff by the Council.

8.10 Climate change

Selection of trees in 19th century Edinburgh was limited by atmospheric pollution. Some sensitive tree species, including oak and beech, were excluded from the palette of trees used at that time, as is still evident in the surviving planting of the gardens. Since the Clean Air Acts and resultant improvements in air quality, planting of a greater range of tree species has become possible, eg. it is now practical to plant oak in the city.

Global climate change is already affecting Scotland and the rest of the UK and its effects will continue to increase. This has to be reflected in species selection for gardens now and in the future. Species that are suited to warmer temperatures or adaptable to the warming climate and to more climatic extremes need to be

selected for restocking of gardens. Bodies like the Forestry Commission and Royal Horticultural Society undertake research on the effects of climate change on plants and provide advice on alternative species. A good basic principle is to diversify the range of different species used in planting, so as to hedge our bets and ensure that there are always some species that will be successful. Also, the gardens can contribute in a small way to mitigating some local climatic effects.

8.11 Pest and diseases

Britain's trees, and the people who care for them, are facing a challenging struggle to manage a range of potentially very damaging plant pests and diseases which have, in most cases, entered the country from abroad.

Currently active diseases attacking trees and shrubs include:

Acute oak decline

Ash dieback (Chalara dieback of ash)

Chestnut blight

Dothistroma needle blight affecting pine and other conifers

Dutch elm disease

Four or five forms of Phytophthora – various types affecting alder, beech, rhododendrons, Lawson cypress, larch, other conifers, possibly oak and a numbers of shrubs

The reasons for the increase in pathogens affecting our woody plants is generally attributed to climate changes, exacerbated in some cases by freer movement of host plants in international plant trade. The implications of the spread of these diseases are many and include the need for felling and sterilisation of soil, loss of specimen, veteran and other significant trees, restrictions on plant species palette, and high costs of treatment or control. The best advice in terms of planting design and restocking gardens is to diversify the range of trees, in particular, as well as shrubs, in order to have a variety of species and cultivars, some of which will be resistant to the diseases that are already active as well as diseases that may affect gardens in the future.

8.12 Neglected ground

The valley includes some areas of neglect that have potential for improvement or increased use. The Dean Terrace / Upper Dean Terrace riverbank is in a very poor state. India Place bank tree growth, predominantly sycamore, shades the allotments and block views from Doune Terrace Garden. The Miller Row riverside is in a poor state, little used and with good potential for improvement and to provide fine view of the Dean bridge. Other areas like the land below Randolph Cliff also need to be brought into active management and have potential for improvement. Ownership is an issue in some cases as not all are in public ownership.

8.13 Access and interpretation

Interpretation board at Lindsay's mill space

It is hoped that this Conservation Statement conveys the wealth of interest in the Dean valley landscape, both cultural and natural, but the only on-site interpretation to convey any of this information, at Miller Row, is very old. However, WoLCT have an audio trail along the Water of Leith with four out of the twenty stations in the Dean Valley area. All are marked with a plaque and QR code.

This effective and low impact form of interpretation could be extended. The most suitable means of providing interpretation in the valley is open to discussion. Boards on-site are probably not the most appropriate medium, but there could be a case for visitor centre or outdoor display area.

Allied to this is availability of information about the attractions and facilities of the river valley and walkway. It would seem that most users are local people, but the place is also a great tourist asset and advertising the valley's attractions needs to be addressed.

The major part of the interest and beauty of the valley is in the communal gardens, but they are open to the public on only a few Scottish Gardens Scheme or Doors Open Days each year. It seems unfortunate, to say the least, that these superb and extensive gardens are so little known and visited. It would be a wonderful asset if a means of allowing more frequent access could be arranged, while preserving their essential private status and character.

Connection of the three gardens has also been considered in the past. Ideas for a bridge link between Moray Bank and Dean gardens and a gate in the wall between Dean and Belgrave Terrace gardens, at different times, were turned down by individual gardens committees.

8.14 Access for all

Review of accessibility for all sectors of the community will need to be part of any future improvement or development initiative. The walkway is accessible for wheelchair users from Saunders Street, under St Bernard's Bridge, but accessibility is poor at Dean village where provision of car parking for disabled users would improve matters. Parts of each garden are accessible, although limited to certain gates and upper paths, with Belgrave Crescent Gardens having the greatest extent of level paths accessible from each gate on the crescent.

Accessible entry to Walkway at St Bernard's bridge from Saunders Street

8.15 Opportunities for projects: micro-hydro project

This study has considered the Dean valley from a garden and landscape perspective, and will conclude with recommendations for broad policies for conservation and management and potential actions for enhancement, that may take the form of a publicly-funded project. Other initiatives may be relevant to this, particularly the studies of the feasibility of micro-hydro projects for the Water of Leith that have been completed over recent years.

The Water of Leith has a long history of producing power from its flow and had up to 76 mills in operation during the 18th century. The river still presents an opportunity to generate electricity today using micro hydro turbines. Much mill infrastructure such as weirs and lades is still in existence and can be reused. A report was commission by CEC to assess the technical feasibility of implementing micro hydro schemes along the length of the river (RD Energy Solutions Ltd 2006). Thirty-three possible sites were identified of which fifteen sites had technical potential for hydro schemes. On evaluation of these fifteen sites it was found that five had potential to be developed in the short or medium term, and two were most suitable for development in the short term, including Dean weir 2.

A *Detailed technical hydro feasibility study for Dean weir 2* (RD Energy Solutions Ltd 2010), an environmental overview and a business plan have since been completed for Community Energy Scotland (CES) and Dean Village Association.

The feasibility study was produced in order to design and cost the project and ascertain the feasibility of moving the project to the next stage of obtaining the relevant permissions.

A topographical survey determined that the gross head at the site is 4.2m. A detailed design for the scheme includes the following key features:

- Intake – situated above the weir, on the south-east bank of the river.
- Fish Pass – comprising a series of interlinked concrete tanks, which gradually step up the water level from downstream to upstream of the weir.
- Penstock – (supply pipe for the turbine) running from the intake to the powerhouse, located just downstream of the weir.

Dean weir 2 from Belgrave Crescent Gardens

- Powerhouse – which will house the turbine, generator and control unit and would be constructed of stone with a slate tile roof in keeping with the locality. The initial powerhouse design allowed for a public viewing and interpretation area. This has potential for being expanded to house wider interpretation of the valley and even a café and public toilets, at increased cost. Improvement of the Miller Row riverside space would further enhance the setting.

Capital expenditure for the whole installation was costed at £909,771 including the fish pass, but if funding is obtained for the fish pass the capital expenditure becomes £784,784 (at 2010 costs).

Operational expenditure and revenues were also calculated. The total annual operational expenditure is expected to be approximately £4,754, with the key expenditures being maintenance and insurance.

The annual revenue will be dependent on the Feed-in Tariff and set at 17.8p/kWh. Based on the stated assumptions, the gross annual revenue will be £46,213.

A financial analysis based on these costings showed that the payback period is 17.4 years or 15.5 years without the fish pass costs. The Internal Rate of Return is expected to be 2% - 3% respectively.

The 600mm diameter sewer that runs through the site of the proposed fish pass and powerhouse would need to be re-routed. Costs for this diversion are included in the above figures.

A landscape and visual impact assessment will be required as requested by CEC and SNH. A fish pass has been designed to allow for fish passage as requested by Water of Leith honorary board, the Forth district salmon fisheries board and SEPA.

The high overall cost of the project and the added cost and impacts of the fish ladder and sewer diversion cast doubts on the viability of the micro-hydro scheme at Dean Weir 2.

8.16 Other issues

The Water of Leith Management Plan raises a number of other issues that have not arisen directly from the discussion in this statement. These cover the river itself and include: flood management; litter and debris; micro hydro generation; and furniture and signs.

9 Conservation policies and proposals

9.1 Vision

The following are proposed as the *visions* for the whole valley, including communal gardens, and for the public partsof the valley.

To promote the conservation and management of the whole Dean Valley designed landscape in a coordinated manner to maintain and enhance all aspects of its cultural and natural significance and its functions as communal gardens, river corridor and a public accessible landscape.

To manage the river valley landscape and related areas (as shown on Figure 6) to conserve their cultural and natural significance in a balanced way and to develop it as an accessible recreation resource.

9.2 Conservation and management objectives

The following objectives are intended to apply to the river valley landscape but may have relevance to the three gardens in some cases (marked by an asterisk *). The aim should be to balance objectives where there may be a degree of conflict; no priority is intended by the order they appear.

- To encourage integrated management of the whole of the Dean Valley designed landscape. *
- To conserve the designed landscape in its picturesque character, allowing for processes of change in planting, natural regeneration and design improvements.
- To maintain the special qualities of seclusion and untamedness that are essential adjuncts to the picturesque quality of the Dean Valley.
- To improve neglected parts of the Dean Valley to conserve their designed landscape values and fabric, and upgrade access where practical.
- To maintain and restore where necessary the built fabric walls, railings and other enclosures of the valley landscape. *
- To maintain the views and visual structure of the valley landscape and restore significant lost views. *
- To maintain the woodland and freshwater habitats of the site to enhance their biodiversity, and in keeping with the ELBAP.
- To optimise access for all within the limitations of the site topography and the special nature of the visitor experience.
- To develop and share knowledge and understanding of the Dean Valley, provide interpretation for users and make good use of its educational opportunities.
- To protect the archaeology of the site from all periods.
- To manage using environmentally sustainable methods, minimising environmental impacts.
- To develop proposals that make full use of funding opportunities and income generation from the resources of the site and are financially sustainable in the long term.
- To integrate the objectives, policies and actions of city-wide and regional strategies and plans that pertain to the Dean Valley.

9.3 Conservation policies and actions

These proposed policies relate to the river valley landscape area shown on Figure 6 and other publicly accessible parts of the site. Actions derived from each policy are given where they can be defined at this stage, noting that more detailed survey and investigation of aspects of the site are needed to develop a full project. A list of further investigations is given with the actions.

To develop an integrated project involving the local community to tackle the identified conservation issues and potential for improvement in the Dean Valley and to investigate funding sources and delivery organisation.

This is the overall proposal and outcome of the Conservation Statement and is intended to be taken forward with the stakeholder bodies (in particular CEC, WoLCT, EWH and Historic Scotland) and any other landowners. A full feasibility study is proposed identifying precise short and long term works to be included in a project, with costs, based on community consultation and support and incorporating educational, interpretation and activity programmes.

To restore the designed parts of the Dean river valley landscape to their state when laid out in their present form, allowing for any subsequent works that have improved access or added to the setting of the buildings.

- St Bernard's well area, from steps upstream of the well to St Bernard's bridge – restore the layout as gifted to the city in 1888 as the setting for St Bernard's well, including paths, walls, ironwork, railings and planting; works concentrated on spaces closest to the well.
- Undertake detailed research to discover plans or other records of the 1880s work and any subsequent alterations.

To upgrade neglected areas to enhance the valley landscape and so they can be managed for the project objectives, including public access where feasible.

- Investigate and confirm ownership where this may be impediment to action.
- Develop improvement strategies for spaces in consultation with stakeholders and owners for the following areas.
- Water of Leith bridge to Lindsay's mill – investigate condition of rockwork and retaining structures below the roadway; develop structural and environmental upgrade proposals based on findings.
- Lindsay's Mill public space / viewpoint – improvement and interpretation proposals to repair and upgrade existing provision and reopen views, including tree work and wall repairs. The site also has potential for the Dean weir 2 micro hydro scheme.
- Miller Row riverside (downstream of Lindsay's mill) – create publicly accessible riverside space with views of Dean bridge, with tree management, ivy control, river edge reinforcement, edge safety protection, work to retaining and parapet walls, paved surfaces and new planting.
- Randolph cliff – manage to improve species diversity and views of Dean bridge while maintaining rockfall protection (no public access); manage ivy covering geological exposure.
- St Bernard's well area – restore the layout as gifted to the city in 1888 as the setting for St Bernard's well, including paths, walls, railings and planting with priority to the upstream portion, integrating later improvements including 2003 access works.

- Upper Dean Terrace riverside – improve appearance and biodiversity by reduction of elm and restocking with native species; tackle problem of ivy on structures; retaining walls repairs as necessary based on condition survey; cast-iron railings repairs or replacement.
- Dean Terrace riverside – improve appearance and biodiversity by reduction of undesirable species (privet, sycamore), reduce percentage of elm, and restocking with native species; tackle problem of ivy on structures; retaining walls repairs as necessary based on condition survey; cast-iron railings repairs or replacement.
- India Place bank – reduce shading of allotments, open view from Doune Terrace, and improve the bank's appearance and biodiversity by reduction of undesirable species (sycamore) and a programme of thinning, coppicing and restocking with native small trees and shrubs.

To encourage the improvement of communal gardens where seen from public streets or paths and not achieving the generally high standards of layout and upkeep.

- Doune Terrace Gardens – consider an improvement programme to reopen the *clairvoie* view, restructure tree cover to open up canopy, remove sycamores, and diversify species, improve paths, remove inappropriate hawthorn hedge and restore iron railings.

To plan the visual structure of the valley, including managing existing views and reopening lost views, in coordination with tree and vegetation management for habitat enhancement.

- Produce a detailed view management plan, covering the potential project area, adjoining streets and, where relevant, the three gardens, to take forward the analysis in the CS. To be coordinated with the tree and woodland management plan.

To manage the tree and woody vegetation cover in the valley in coordination with the preceding policy and on the basis of a tree and woodland management plan that incorporates the CS objectives and CEC policies.

- Commission a tree and woodland survey and management plan within the potential project area, updating any existing survey data, and considering trees and woodland habitat management from the broader perspective of the project objectives.

To restore and maintain the retaining walls, freestanding walls, railings and fences of the valley based on a comprehensive survey of their extent, condition and historic pattern.

- Commission a structural and condition survey of all the walls and retaining walls within the potential project area. Ivy to be removed from sample areas in advance of survey.
- Commission a condition survey of all railings and fences within the potential project area.
- Investigate methods to organise the removal ivy from stonework structures, whether by contract, direct labour or volunteers, to continue and extend work by WoLCT volunteers and volunteers at Upper Dean Terrace.

To plan for improved accessibility in the valley on the basis of an access audit and plan.

- Commission an access audit and investigate opportunities to improve access for all sectors of the community and visitors.

To maintain and upgrade path surfaces and deal with tree roots and drainage problems that cause deterioration.

To produce design guidance of appropriate materials and details for use in the Dean Valley.

- Commission a design guide of approved materials and details for use in new works, repairs and replacement.

To provide interpretation of the valley's history, wildlife and features, by appropriate means, on the basis of an interpretation plan.

- Commission an interpretation plan to consider the aspects of the valley's heritage that merit conveying to visitors and the methods to be used, whether through a visitor centre, on-site information, printed matter or web and digital devices.

To investigate further and update the feasibility study for a micro hydro scheme at Dean weir 2, including interpretation and visitor facilities related to the project and whole valley.

- Update of the costing and business plan for the micro hydro scheme at Dean weir 2, in particular to assess any changes since 2010 that may affect capital, and revenue costs, income and payback period.
- Investigate funding options including community hydro share offer.

Appendix 1, References

General and history

Andrew, Patricia R. 2012 *St Bernard's Well and the Water of Leith from the Stock Bridge to the Dean Bridge*, The Old Edinburgh Club Volume 9: 2012

Bruce, Alexander 1930s (nd) *Edinburgh's Open Spaces*

Byrom, (Dr) Connie 2005 *The Edinburgh New Town Gardens, 'Blesssings and well as beauties'*

Byrom, (Dr) John, c2008 *The Care and Conservation of Shared Georgian Gardens*, unpublished draft report for Edinburgh World Heritage

Geddie, John 1896 *The Water of Leith, Source to Sea*, with illustrations by Joseph Brown (Edinburgh, W H White & Co Ltd)

Gifford, McWilliam & Walker 1984*The Buildings of Scotland, Edinburgh*, Penguin Books

Grant, James c1880 Cassell's *Old and New Edinburgh, its history, its people and its places*, v3

Harris, Stuart 1996 *The Place Names of Edinburgh*

Hill, C 1887 *Historic memorials and reminiscences of Stockbridge, the Dean and Water of Leith with notices anecdotal, descriptive and biographical*, enlarged, Edinburgh, pp41-44, held at RCAHMS D.8.41.STO

Hill, Ron 2013 *Notes for the Great Lade Walk*

Kerr, Andrew 1982 *A history of Ann Street*

Lothian and Borders GeoConservation 2011 *Water of Leith, Stockbridge Geological Walk*, leaflet; (LBGC is a sub-committee of the Edinburgh Geological Society)

Lothian and Borders GeoConservation 2008 *The Geology of the Water of Leith*, leaflet; (LBGC is a sub-committee of the Edinburgh Geological Society)

M'Hattie, John W 1908 *Report on Public Parks, Gardens and Open Spaces 1907-08* (by Superintendent of Parks and Gardens), City of Edinburgh

Mitchell, Ann 1998 *No More Corncraiks, Lord Moray's Feuars in Edinburgh's New Town*, Scottish Cultural Press

Nimmo, Ian 1996 *Edinburgh's Green Heritage, discovering the capital's parks, woodlands and wildlife*, City of Edinburgh Council Recreation Department

Sanderson, Kenneth W 1977 *Belgrave Crescent Gardens*, reprinted by Tragara Press with illustrations by Lilias Finlay, January 1983

Shepherd, Thomas 1831 *Modern Athens, displayed in a series of views of Edinburgh in the nineteenth century*

Youngson, A J 1966 *The Making of Classical Edinburgh 1750-1840*, Edinburgh University Press

Government policy & planning documents and feasibility studies

Central Scotland Green Network Trust July 2014 *Central Scotland Green Network Trust Business plan, April 2014 – March 2017*

City of Edinburgh Council 2008 *Water of Leith Walkway Maintenance Plan* (not seen)

City of Edinburgh Council 1991, *Urban Forestry Strategy*

City of Edinburgh Council 2008 *Edinburgh Core Paths Plan*

City of Edinburgh Council 2010 *Edinburgh Local Biodiversity Action Plan, Phase 3, 2010 – 2015*

City of Edinburgh Council 2010 *Woodland Habitat Action Plan*, published as a separate document but part of ELBAP

City of Edinburgh Council Feb 2004 *Dean Conservation Area Character Appraisal*

City of Edinburgh Council Jan 2014 *Trees in the City, Trees and Woodlands Action Plan*

City of Edinburgh Council Jun 2005 *New Town Conservation Area Character Appraisal*

City of Edinburgh Council Transport and Environment Committee Jun 2014 *The Edinburgh Living Landscape Programme*, committee report

Edinburgh World Heritage 2011 *The Old and New Towns of Edinburgh World Heritage Site, Management Plan 2011-2016*

Forestry Commission Scotland 2102, *Edinburgh & Lothians Forestry and Woodland Strategy 2012-17* (ELFWS), approved by CEC Planning Committee on 4 October 2012

Forestry Commission Scotland Feb 2009 *The Scottish Government's Policy on Control of Woodland Removal*

Forestry Commission Scotland nd, *A Forest Habitat Network for Edinburgh and the Lothians*, leaflet

Historic Scotland Dec 2011 *Scottish Historic Environment Policy*

Historic Scotland, website viewed 2014, *Inventory of Gardens and Designed Landscapes in Scotland*, The New Town Gardens entry

National Tree Safety Group Dec 2011 *Common sense risk management of trees*, published by the Forestry Commission

Ray and Moseley Jan 2007, *A Forest Habitat Network for Edinburgh and the Lothians: the contribution of woodlands to promote sustainable development within the regional Structure Plan*, Ecology Division, Forest Research, Northern Research Station. Also a summary leaflet by Forest Research of the same tile by same authors.

RD Energy Solutions Aug 2006 *Water of Leith Micro Hydro Technical Feasibility Study*, for City of Edinburgh Council Sustainable Development Unit

RD Energy Solutions Dec 2010 *Detailed environmental overview for Dean weir 2 hydro-electric scheme*, for Dean Village Association

RD Energy Solutions July 2010 *Detailed technical hydro feasibility study for Dean weir 2*

RD Energy Solutions May 2010 *Dean Weir 2 Hydro-Electric Scheme Business Plan*, for Dean Village Association

Sue Bell Ecology Jul 2010 *Topic Papers to support the Water of Leith Management Plan*, prepared for Water of Leith Action Group

Sue Bell Ecology Jul 2010 *Water of Leith Management Plan*, prepared for Water of Leith Action Group

Maps and plans

Historic maps

Figures

Peter McGowan Associates
Landscape Architects and Heritage Management Consultants
6 Duncan Street Edinburgh EH9 1SZ
0131 662 1313 • pma@ednet.co.uk

July 2015

Dean Valley designed landscape

Conservation Statement