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ASPECTS OF PLANTING DESIGN AND MANAGEMENT IN EDINBURGH'S NEW TOWN GARDENS

This paper takes the form of ten questions about the planting, design and management of the Edinburgh communal New Town gardens of particular relevance to owners, managers and users of the gardens, particularly gardens committees, although referring also to some key larger gardens that are council owned and managed. The paper is based on the author's experience of working on several New Town gardens and many other designed landscapes over a thirty-year period, always supported by thorough historical research. It draws, in places, on the draft handbook, commissioned from John Byrom by the Edinburgh World Heritage Trust, The Care and Conservation of Shared Georgian Gardens, soon to be published.

WHAT SHOULD BE THE PERIOD STYLE?

Most of Edinburgh's New Town gardens were developed at various times during the nineteenth century (albeit that several of the early gardens were conceived in the later eighteenth 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 for the urban environment 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 of Lancelot 'Capability' Brown with the Picturesque and its roughness and irregularity. In particular, it had to be adapted to the geometric and formal situations of the New Town spaces – rectangular squares, octagonal squares, elliptical squares, triangular squares and so on, even square squares.

These spaces, formed by the changing geometry of the three phases of the New Town, are classified by John Byrom in his draft handbook as 'Gardens within Planning Grids'.¹ Inevitably many compromises and adaptations 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 nineteenth-century landscape gardening came to be included. But where the Picturesque excels is in the second group of New Town gardens defined by Byrom as the 'Grid Edge Gardens'. These were sited 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. These include the valley of the Water of Leith (that became Moray Bank Gardens, Dean Gardens and Belgrave Crescent Gardens), the valley of the Nor' Loch (that became Princes Street Gardens, initially private) and Calton Hill (that became the first public open space to serve the New Town's residents, as well as the semi-private Regent Gardens).

WHAT PLANTING IS RIGHT?

Most of the gardens have always had a range of different types of planting, and debate on what to plant has been part and parcel of their development. Plants were often donated, so committees took what was offered. Elsewhere, a basic plan may have been drawn up by the architect for the development, but the detail of planting left to a nurseryman who specified, supplied and planted the trees and shrubs. But what is essential in all the gardens is the structure of large trees, generally native forest trees, including ash, elm and lime, and long-term 'adopted natives' such as beech, sweet chestnut, horse chestnut and sycamore.

Large trees need space in towns but the gardens are generally large enough to accommodate them, whether in groups, in boundary belts or en masse. This is not the place to discuss all the issues of tree selection and planting design but a few examples illustrate some of the issues of tree planting and use in New Town gardens (Figures 1 and 2). Structure planting is used to form spaces, frame and channel views, hide boundaries, and create garden character by using the right tree types and species for the space. Some examples show how many different approaches to tree planting can be effective, or detrimental:

- The Circus, Bath – just five plane trees, and that is all. Planes do grow in Edinburgh also, but not as well in Bath or London.
- Royal Crescent, Bath – no planting at all, it is all about the views.
- Queen Street Garden West – mixed forest and smaller trees in boundary planting and space forming.
- West Princes Street Garden – too many trees, forgetting the views and the need for sunny spaces in the northern climates.
- Calton Hill – dotty little trees (now removed), decoration and prettification in the wrong place, a natural hilltop of grassland with little soil.
- St Andrew Square – an erratically spaced mix of large and small trees of disparate species, repeated in the redesign of the square in 2008.

Hedges, an understandably appreciated barrier for privacy and screening traffic, was not really part of the Picturesque aesthetic and an impediment to views. Indeed,



Figure 1. Queen Street Gardens – showing boundary and space-forming trees and individual specimens. All photos: author, unless otherwise credited



Figure 2. Princes Street Gardens East – trees effectively block the view from the viewing terrace

it was generally not part of the original layout, but sometimes added due to wartime removal of railings. The tricky issue is to understand the vision of the each garden when first conceived, what the planting intentions were, and to what extent they could have foreseen the garden in maturity. Sometimes these can be obtained from plans or committee minutes, but more often than not one needs to derive information from less direct sources such as topographic prints, early photographs and nineteenth-century Ordnance Survey maps – including very detailed mapping in Edinburgh’s Town Plans at 1:1056 scale in the 1850s and 1:500 scale in the 1890s.

WHAT ARE YOUR VIEWS?

Managing views by defining them and agreeing measures to keep them open is possibly the most important issue for New Town garden management. Views are important in all gardens and the principal views must be maintained. Difficulties arise in agreeing these principal views, and the myriad of secondary views. Views include those external to the gardens, from streets or elevated viewpoints, broader effects of a garden in their urban setting – views to gardens, gardens featuring at the end of a street view (Figure 3); views over gardens, frequent given the hills and valleys of the city; and views into gardens – peep views, views at entrances. Internal views include planned views that can be a narrow vista; a viewpoint with a broad view or panorama; views of a space; views from a terrace walk; a deliberate opening like a *clairvoie*; views to features outside gardens, or borrowed views, and lost views (Figure 4). The semi-private nature of most of the gardens makes views in the townscape or street views particularly important, being the way a majority of townspeople, without a key to the gardens, experience them.

Many gardens suffer from a surfeit of trees, or of undergrowth, whether planted or naturally regenerated, that impede important views. Often, much can be achieved to restore the visual structure and views of a garden by removing trees and undergrowth, or by pruning.



Figure 3. Ainslie Place, Moray Estate, Edinburgh – view to the garden in its planned architectural setting



Figure 4. View from Dean Gardens to St Bernard's Well (designed by Alexander Nasmyth, 1789) outside the garden

HOW HAS THE CLIMATE CHANGED AND HOW TO ADAPT TO FUTURE CHANGE?

The selection of trees in nineteenth-century Edinburgh was limited by atmospheric pollution, as demonstrated by a view of Charlotte Square of uncertain date (Figure 5). 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 many gardens. Since the Clean Air Acts of 1956 and 1968, and resultant improvements in air quality, planting



Figure 5. Charlotte Square Gardens in smog, date unknown. Photo: Nick Haynes

of a greater range of tree species has become possible. For example, 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 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.

HOW TO BALANCE GARDEN CONSERVATION WITH NATURE CONSERVATION?

Management of gardens and designed landscapes for nature conservation – for enhancement of wildlife habitats and greater species diversity – is now a priority in many New Town gardens, rather than managing for cultural landscape values such as garden planting design and historic layout. These are sometimes seen as conflicting objectives, but need not be so. Principles of nature conservation should be part of all landscape planting design and maintenance. By determining the relative importance of each in an objective way, preferably in the context of a conservation management plan, then determining community objectives and managing accordingly, a balanced and coordinated approach can be achieved. It has to be said that the New Town gardens are among the most designed or artificial of landscapes, and this needs to be recognized in management. But at the same time their city location makes them valuable as oases for local wildlife.

Additionally, the fact that the gardens are a network through the New Town gives them additional value as a group, acting as corridors or closely related spaces.

The legislation protecting natural species and habitats is strong compared to that protecting gardens and designed landscapes, so an appropriate level of priority for the design and planting of the gardens should be established. In nearly every case, through careful planning, a balance can be struck between cultural or designed landscape issues and nature conservation issues.

ARE THE EFFECTS OF DUTCH ELM DISEASE SO BAD?

The loss of trees resulting from Dutch elm disease had a devastating effect on the English countryside, but the effect in Scotland has been quite different. In Edinburgh the success of the City of Edinburgh Council's policy of sanitary felling has been a primary reason for the city retaining so many elms in good health. Trees in public parks, streets and other council property, and on private property, are surveyed each year and diseased trees are identified. Diseased trees on council property are felled, and those in private grounds, including communal gardens, are required to be felled at the owners' cost. The result is that elms are still a significant part of the tree mix in many New Town gardens and places like Leith Links, and semi-natural elm/ash woodland is still an important habitat in the Water of Leith valley.

However, Dutch elm disease has resulted in the loss of many large stately elms leaving big gaps in tree cover in the New Town gardens, but this can have a positive aspect. The age structure of tree populations in many of the gardens is limited, being mostly planted at one time, certainly in the case of the larger tree species, and it is difficult to diversify the age range with new trees without overplanting the garden or removing old but healthy trees. Mature trees like elms occupy large spaces and when felled provide the opportunity to plant young trees and diversify age and species structure. A good example is in Queen Street Gardens West, where every few years the council's Trees & Woodlands Office was notified of any diseased elm to be felled, allowing replacements using alternative species such as lime.

WHAT TO DO ABOUT TREE DISEASES?

Britain's trees, and the people who care for them, are facing a challenging struggle to manage a range of potentially damaging plant pests and diseases which have, in most cases, entered the country from abroad. An onslaught of diseases is attacking our trees and shrubs. Currently active tree diseases include acute oak decline; ash dieback (*chalara dieback of ash*); chestnut blight; *dothistroma* needle blight affecting pine and other conifers; four or five forms of *phytophthora* – various types affecting alder, beech, rhododendrons, Lawson cypress, larch, other conifers, possibly oak and a numbers of shrubs; and Dutch elm disease.

The reasons for the increase in pathogens affecting our woody plants are 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 sterilization 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, herbaceous and other plant types, 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.

DO WE NEED A PLAN?

Garden management plans or conservation management plans are essential for long-term and well-coordinated management. A management plan provides a database of factual information that achieves good understanding of the garden, evaluates its significance and that of its features in terms of relative value, establishes agreed management objectives, and set out policies for the future. Ideally it also sets out an action plan for the next five-year period or so. Through such a plan the historic design and character of the garden are conserved, actions for the forthcoming period are identified, and it forms the basis for coordinated work programmes and regular maintenance.

A typical conservation management plan has the following components:

- Understanding the garden – based on research, site surveys and consultation.
- Statement of significance – assessing the significance of the garden and its features.
- Conservation and management issues – including threats to significance.
- Communal objectives for the garden.
- Overall strategy and management policies.
- Action proposals – for the conservation, restoration and management, including capital works and annual maintenance.

Perhaps most importantly, the plan will balance all the various and sometimes apparently conflicting objectives of garden management, based on the relative value of the garden's assets and features. What is essential is that it is an approved plan, based on understanding and consultation, that works towards a long-term vision for the garden, so avoiding ad-hoc, disjointed and short-term 'wouldn't it be a good idea if' type of decisions, or the vociferous new chair-person who pushes through 'more colour', more birch trees or more screening or memorial trees, or the new committee who decides that it can all be left to nature. Any or all of these may have a place in the garden, but they must be considered in terms of and be subservient to the long-term management of the essence of the garden.

QUIET GREEN SPACES OR PUBLIC SQUARES? CHANGING PRESSURES AND PUBLIC ACCESS

In many respects the communally owned gardens of the New Town have changed little in the one hundred and forty to two hundred years since their creation ... management committees have come and gone, the trees have grown to maturity, some have undergone periods of neglect and revitalization with the upheavals of the twentieth century, but the gardens fulfil essentially the same functions that they did originally ... and are likely to continue to do so when lying in residential areas under the direction of gardens committees. Not so those that have become public and transferred to council ownership and management whether East Princes Street Gardens in the 1840s or St Andrew Square in the 2000s. In this context, we have to recognize that due to the prevalence of communally owned gardens in the New Town, there is a lack of public open space. This is fine for residents with keys but not good for non-keyholders and visitors to the city.

The huge numbers of people that use these two city centre spaces and the massive pressure on the fabric that this brings requires different management to the semi-private communal gardens. These public spaces now face even greater pressure from commercialization and the unsustainable impacts of seasonal events, such as book fairs, festivals, fun fairs and Christmas markets. The number and scale of these events now erodes the qualities that make Edinburgh a special city to visit and threatens the values of the World Heritage Site. Comprehensive redesign to a high standard, treating them



Figure 6. Russell Square, London, after the restoration project in 2001 by Land Use Consultants landscape architects



Figure 7. Leicester Square, London, after comprehensive redesign in 2013 by Burns & Nice landscape architects

like city squares rather than gardens, can adapt them to the pressures they now face and ensure they continue to enhance their immediate setting and the city.

Two London squares in Bloomsbury (Russell Square) and the West End (Leicester Square) show that investment in restoration not only can retain essential character but also adapt a space to twenty-first-century needs. Completed for Camden Council by Land Use Consultants in 2001, the design brief for Russell Square was challenging – to



Figure 8. Tree pruning in Regent Square; drawing by John Byrom from his draft handbook *The Care and Conservation of Shared Georgian Gardens* (Edinburgh: Edinburgh World Heritage Trust, in preparation)

achieve the right balance between conserving an important London square and ensuring the open space was relevant to the modern needs of the local community (Figure 6). In Leicester Square, the new design for Camden Council completed by Burns & Nice landscape architects in 2013, is inspired by the late nineteenth-century form of the central garden but rethinks the urban square. It is practical and robust in its concept and elegant in its detailing, and the surrounding streets can expect more than five hundred thousand visitors daily (Figure 7).

HOW DO WE MANAGE THE TREES?

Care of trees is an aspect of garden management that is essential for tree health, garden quality and character, view management and public safety. Tree growth must be considered in the long term and requires regular inspections of trees by specialist arboricultural consultants, although it should be guided by the policies contained in the conservation management plan. Byrom's handbook gives an example of the management requirements for part of a fictional square, Regent Square, north-east quadrant, considering the stages in its growth from early establishment to maturity, covering general maintenance, woodland, hedging and shrubbery, lawns and borders. In particular a group of trees on the east of the square is considered in detail, emphasizing that trees need to be looked after, particularly in an urban garden environment with people, cars and views to consider. Byrom's delicate drawings of the stages of garden development conclude with a diagram of tree pruning showing crown lifting by removal of selected lower branches and thinning of the upper crown by selective removal of branches, so lightening the crown and allowing more light to the understorey and ground (Figure 8). We look forward to the publication of this guidance and perhaps to a management plan for the whole network of gardens that are such a defining feature of Edinburgh's New Town.

REFERENCE

¹ John Byrom, *The Care and Conservation of Shared Georgian Gardens* (Edinburgh: Edinburgh World Heritage Trust, in preparation).