CEPC

Tree Management Strategy

August 2019

CROWN ESTATE PAVING COMMISSION

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Aim of this garden management document

This is one of a set of garden management documents produced for the CEPC by Todd Longstaffe-Gowan Landscape Design Ltd. to inform the strategic management of its estate. These documents are designed to promote a greater understanding of what makes Regent's Park such a special place, to make clear the importance of John Nash's original, unified scheme, and aim to put forward recommendations for each garden that will ensure the park as a whole retains its unique role as part of the metropolitan landscape.

Complete set of documents:

'A Total Work of Architectural and Landscape Art' A Vision for the Regent's Park
Chester Terrace Management Vision
Cumberland Terrace Management Vision
Hanover Terrace Management Vision
Park Square and Park Crescent Garden Management Vision
Planting Principles and Design
Sussex Terrace Management Vision
Tree Management Strategy
York Terrace East and West Management Vision

Contents


Regent's Park
16
24
15
14
13
8
6
9
7
10
3
5
4
2
17
18
19
25
11
12
29
27
28
26
21
23
22
1
Park Square &
Park Crescent
20
Portland Place
Oxford Circus
Regent's Street
Waterloo Place
32
30
34
31
33

Introduction

Regent's Park is a special place, a planned urban enclave where buildings and landscape were conceived as a single entity, neither one before or without the other. The buildings were designed to benefit from their landscape setting, while the park was designed to benefit from the palace-like buildings around it. The park is, as the architectural historian Sir John Summerson remarks, 'A total work of architectural and landscape art.'

The Crown Estate Paving Commission, as provider of cleaning and maintenance functions and custodian of the circuit drive between the terraces and the parkland, has a key role in the conservation of Nash's 'total work'. Likewise, the maintenance of the communal gardens in such a manner that they provide a setting for the terraces in the long views across and from the landscape, is also fundamental to the Nash vision and hence enshrined in the remit of the CEPC. From its earliest days, the CEPC has had to balance the leaseholders' desire for privacy and the public role of those gardens in the overall design. With its secure and independent core-funding and wide remit, the CEPC has been in a position to establish and maintain consistent, high-quality design. The CEPC thus has a key role in the stewardship of Nash's legacy.

This document provides a strategic framework for the long-term management of the trees around Regent's Park, however, management of the individual trees within each terrace should be considered on a case by case basis. Specific tree strategies for each terrace are covered in greater detail in each of the gardens' respective reports.

Opposite page:
Aerial view showing location of CEPC Gardens and illustrating the route of the Prince Regent's New Road, starting in the south (bottom right) at Waterloo Place and terminating in the north at Regent's Park.

1. Albany Terrace
2. Cambridge Gate
3. Cambridge Terrace
4. 'Secret Garden' south of Cambridge Terrace
5. Cambridge Terrace Mews
6. Chester Close North 'Courtyards'
7. Chester Close South 'Courtyards'
8. Chester Place
9. Chester Terrace
10. Chester Gate
11. Clarence Terrace
12. Cornwall Terrace Mews
13. Cumberland Place
14. Cumberland Terrace Mews
15. Cumberland Terrace
16. Gloucester Gate
17. Hanover Terrace
18. Kent Terrace
19. Kent Passage
20. Park Crescent
21. Park Square
22. Peto Place
23. St Andrews Place
24. St Katherine's Precinct
25. Sussex Place
26. Ulster Place
27. York Gate
28. York Terrace East
29. York Terrace West
30. Waterloo East Gardens
31. Waterloo West Gardens
32. Podium
33. Border - Foreign Secretaries residence
34. Woolhouse Garden

Exectutive Summary

Nash's plans for Regent's Park embodied some simple design principles. His approach was pioneering in terms of early nineteenth-century town planning: when upmarket urban development generally focussed on the tested formula of squares and terraces. But it was less so when viewed from the perspective of landscape-gardening, the design of settings and approaches for country houses, the principles of which had been refined over almost a century. As applied to this new urban estate, those principles can be summarised as follows:

- like a country house and its park, the interior parkland and the residential development were fundamentally related and connected;
- far from being a dividing line, the Outer Circle - a carriage drive - served to link the interior parkland and the surrounding terraces and to articulate this relationship;
- and the planting was contrived to frame a series of deliberately composed views to and from the road, the buildings and the parkland.

Over the years, the management of the park as a whole - as a composition of interdependent parts - has been pragmatic, shared by different agencies with different agendas and different resources. While in many ways successful, this has failed to reflect the comprehensiveness of the original design.

Regent's Park today shows the evidence of that pragmatism and that lack of coordination. Its buildings and landscape (which includes roads, paving and lighting) are generally in good condition but it is clear that the unique relationship between them in too many places is broken.

For example, the Outer Circle no longer functions as a circuit with views across the park. This is the result of changes in traffic and traffic management, which involve strategic planning beyond the perimeters of the park. It is also the result of an absence of strategic planning which has allowed the road to become a busy through-route de facto. And it is also the result of local decision-making about the planting of the hawthorn hedge along the inside edge of the road.

Similarly, the extent to which terraces have been allowed to withdraw visually from the communal landscape is a result of either, allowing trees to grow up by

accident, or by deliberate decisions on planting new trees.

Nash's total work of landscape and architectural art has become fragmented, but the problems are in physical terms relatively minor; re-making those connections would not be difficult. The spatial flow and the dramatic web of views and vistas can be evoked. This will enable the visitor to make sense of Nash's original landscape vision and will safeguard it for the enjoyment of future generations.

However, the need to plan across administrative boundaries means that the many different agencies and stakeholders involved in Regent's Park need to collaborate. What is required is coordinated strategic thinking, and agreed management policies based on the over-arching aim of reflecting the unity of the landscape as described in this document.


Canal
The Park Road
Cumberland Terrace
Cumberland Market
York Terrace
The New Road
Park Square

Background

Regent's Park Vision

Nash's Design Principles for Regent's Park:

Left: Charles Mayhew's Plan for Regent Park, 1835.

1. Regent's Park is a designed landscape where all its aspects must be treated as a whole

What is important to Nash's master plan at Regent's Park is the visual relationship between the architecture and the landscape. All the elements within the park are equally significant: the central open space, the Outer Circle, and the terraces. Nash never referred to them as anything other than a single entity. The road and the terraces are part of the park, and the combined whole is a designed urban landscape on an unprecedented scale. His achievement remains unique in London.

2. Each terrace is an individual architectural composition

Nash insisted that the land between the terraces and the Outer Circle should be earmarked for planting. The planting in these communal gardens was intended to supply privacy to the residents and to give the impression that the terraces are single buildings. His aim was that they should resemble spacious palaces set within gardens and parkland, rather than conventional rows of London houses sitting next to the street.

3. The landscape should create framed views of the terraces from the park

Nash wanted the park's plantings to provide views of the terraces in such a way that no two masses of building can be seen from any one point at the same time. From within the park the visitor should see a succession of views that are distinct from one another, accentuating the illusion of a sequence of individual palaces, each within its own landscape setting.

4. The Outer Circle as a promenade

Although the Outer Circle may now appear to be a perimeter drive around the park, Nash designed it as a viewing circuit within the park providing the viewer with an unfolding sequence of framed views and vistas – that is it was seen as a mediating physical link between the central open space of the park and the encompassing terraces and their ornamental gardens. Trees in the park were planted to frame views to and from the road. The communal gardens were created to form a setting for each palatial terrace when viewed from the Outer Circle. As a circuit, the Outer Circle should take the visitor around a sequence of carefully constructed landscape pictures on both sides of its promenade.

Background

Nash and Trees

Top: After Thomas Shepherd, Looking across the park to the Coliseum (1828)

Bottom: View of Regent's Park (1827)

Trees were an important element in the design of Regent's Park: the initial and sustained success of the landscape is a credit to the original and delicate balance of John Nash's picturesque vision. The architect had a remarkable ability to compose and group trees and buildings for scenic effect, and his guidelines informed every aspect of the park's extensive landscape.

Nash was neither a garden-designer nor a plantsman; he was however, like a stage-designer, interested in exploiting the dramatic potential of plants to improve civic architecture and planning. Although familiar with what was then known as the 'Principles of modern Decorative Landscape Gardening' through his close professional acquaintance with the landscape improver Humphry Repton, Nash appears to have left the choice of plants largely to others.

For Nash the communal gardens of the surrounding terraces were fundamental to their integration with the central parkland. His insistence on communal gardens, rather than individual plots, was aimed at securing the illusion of a single palatial building and ensuring a coherent landscape frame in which to view it.

Nash furthermore suggested that the planting of the periphery of the park, and along the outside of the Outer Circle in particular, was designed with a view to increasing the effect of architectural sublimity of the terraces by supplying what Uvedale Price termed the 'grandeur of intricacy'.[2] There was, moreover, in Nash's view, to be 'no divisions in the gardens of the houses which to denote individuality but the whole should appear as one entire building'. The communal gardens of the terraces were therefore generally laid out with informally clipped, mixed-species hedges abutting the Outer Circle, concealing the private gardens from the road and providing privacy for the residents of the terraces.

Background

Nash and Trees

Detail from 1870 Ordnance Survey of Regent's Park. Trees were planted in groups in the picturesque style, framing broad views to the terraces from within the park.

To this end Nash endorsed William Mason's principle that the 'Picturesque Point [of view] is always…low in all prospects'; the spectator was intended to feel a sense of being enveloped, or absorbed by the landscape, and the gardens were perceived as extensions of the park scenery into which the palace facades were also submerged and absorbed.[3] This landscape treatment indulged the contemporary fashion for the prominence of a 'natural foreground in preference to distant scenery': the foreground being, as William Gilpin put it, the 'basis and foundation of the whole picture'.[4]

Although we might imagine that much of the landscape at Regent's Park remains unchanged since it was first planted, in fact, very few of Nash's original trees survive; only some 2% of the Park's trees, and even fewer in the CEPC estate, appear to date from the early nineteenth century. Most of the existing trees on the CEPC's estate were planted in the twentieth century, and largely with little understanding of Nash's original intended effects.

Current Conditions

Tree Placement and Views

Above: The trees in Chester Terrace (for example) are mature enough that they now obscure most of the building when viewed from the Outer Circle.

Below: Chester Terrace, Regent's Park. Drawn by Thomas Hosmer Shepherd. Engraved by H. Melvelle, 1828.

Right: A photo of Cumberland Terrace taken in 2013, when a mature red horse chestnut (*Aesculus x carnea*) obstructed a large area of the central block.

Far right: Cumberland Terrace in 2018, following removal of the same tree. Views are opened up to and from Regent's Park.

The character and distribution of the tree canopy within the CEPC's administrative boundary has changed significantly over the past century: whereas when the park was first laid out trees were planted to an agreed plan with a view to achieving a particular aesthetic, since the mid-twentieth century, in particular, trees have been planted incrementally in an unplanned manner which has changed the nature of the park and the relationship of the elements within it (including the terrace, the carriageways, the park and gardens), and which has in turn also altered our perception of the landscape as a whole. This erosion of the fabric has to some extent also been exacerbated by the fragmentation of the management of Regent's Park as a whole.

One of the most significant changes has been the relationship of the terraces to the Outer Circle and the central area of the park: the views from the terraces to the park were originally conceived to be reasonably open or filtered through low to medium canopy trees. This dynamic has now changed – large and medium sized trees have now in many places occluded these views: many of the terraces that once formed the richly ornamented architectural backdrop to the park are almost invisible from the both the road and the interior.

Also noteworthy is the loss of the rhythm of trees which were placed singly or in clumps or groups which complemented and distinguished the palatial terraces and framed views to and from the interior of the park, and the overgrowth of the shrub layers across the gardens - where some typically small and medium-sized shrubs (such as Buxus and Viburnum) have developed to the size of small trees impacting heavily on views to and from the Outer Circle.

The effect of this incremental transformation has been that most lease-holders are accustomed to the twentieth-century planting and many value the privacy afforded by the existing tree and shrub canopies. This change in perception must be taken into consideration when determining a future management strategy for the CEPC's trees. Any approach should be sensitive to the expectations of the residents and implemented over a timescale that reflects the natural lifespan of mature trees.

Current Conditions

Tree Size and Type

A mature *Ligustrum lucidum* (Chinese privet) in Chester Terrace, likely several decades old, and at maximum height for this species.

An aversion to thinning trees has lead to dense tree coverage. In this case, a sycamore (*Acer pseudoplatanus*) growing in close proximity to a hornbeam (*Carpinus betulus*), has begun to suppress the adjacent tree canopy.

Recent full tree inventory surveys prepared by arboricultural consultants The Mayhew Consultancy Ltd. have supplied the CEPC with an accurate, comprehensive and up-to-date assessment of the varieties, health, sizes and quality of trees growing on the CEPC's estate (the assessment follows the British Standard BS 5837:2005, 'Trees in relation to construction—Recommendations').

We now know that there are approximately 70 to 80 different species of trees presently growing within the CEPC gardens. The most common varieties are cherry plum (13%) and holly (9%), which are medium-sized trees capable of growing to 12m or higher. The next most frequent trees are London plane (6%) and lime (5%), which are large trees, able to grow beyond 20m in height. Only 20% of existing trees would be considered small trees, with an ultimate height of less than 12m.

Of the recorded trees, 55% are mature (having reached their ultimate canopy size), 32% are semi-mature (established and growing rapidly) and 13% are young (or newly established).

These figures suggest that mature trees have become dominant across the CEPC estate. This issue has been exacerbated by the ad hoc manner in which new and replacement trees have been planted since the end of the Second World War, when they were commonly planted (London planes in particular) along the verges of the Outer Circle with a view to creating a tree-lined vehicular route around the park thereby severing the original and important visual connection between the terraces and the park landscape. There has, moreover, since this time, also been a great deal of new and replacement understorey planting which is now reaching maturity, the canopy layers of which have begun to interrupt vistas and suppress the establishment of new planting at ground level.

Due to changes in building use and surrounding context, there is a general reluctance to remove trees, even if for the benefit of the gardens as a whole. Mature trees are understandably valued for their aesthetic qualities, and are an important and valuable feature within the city. Existing small trees, however, generally contribute less to the character of the gardens, yet offer important screening for residents.

Current Conditions

Tree Quality and Health

Right: A mature *Cedrus atlantica Glauca* (blue Atlas cedar) in Hanover Terrace is an unsual specimen with the terrace planting. Due to its rarity and health, it is considered a high value B grade tree.

Far right: A standout *Fagus sylvatica 'Purpurea'* (copper beech) in York Terrace east is in fine health, and in more favourable growing conditions, may have been considered A grade. Exisitng railings and hard surfacing, alongside crowded canopy conditions prevent this tree from reaching its ideal size and shape.

Right: Densely planted trees in Cumberland Terrace result in poor mature forms, such as that seen in this cherry plum (*Prunus cerasifera 'Pissardii'*). Small trees, especially those with a poor structure will have a limited life span and therefore a low grade.

Far right: In Chester Terrace, tree planting adjacent to the boundary wall has promoted abnormal crown grown (in this case deflected to the east). The roots of the tree are unable to anchor appropriately due to the footing of the boundary wall, which is also causing the tree to lean heavily. The multiple defects result in a low value, C grade tree.

All the CEPC trees are graded for quality as part of the arboricultural survey. High quality (Category A) trees are deemed to be rare or unusual, or especially good examples of their species. Category B trees are those that suffer some minor impairments that prevent them from being considered the highest quality, and as such are unlikely to have a remaining lifespan of more than 40 years.

Approximately one third of the trees across the CEPC gardens are considered to fall into Categories A or B, and therefore have high value. The majority of the finest specimens are now at full maturity and growing with little interference from adjacent trees.

Category C trees are broadly represented by younger and smaller specimens, or those that have significant physiological defects. This lower grade characterises about 70% of the trees within the gardens. The prevalence of lower quality trees may be attributed to the more competitive and cramped conditions in and around the understorey and shrub layers, where many of the smaller trees are competing with large shrubs in the shade of more established specimens. Further evidence for crowding at these levels is seen in the structural and physiological records, as approximately three quarters of the trees are in good physiological order, yet only half are in good structural condition - pointing to prohibitive spatial conditions effecting their growth.

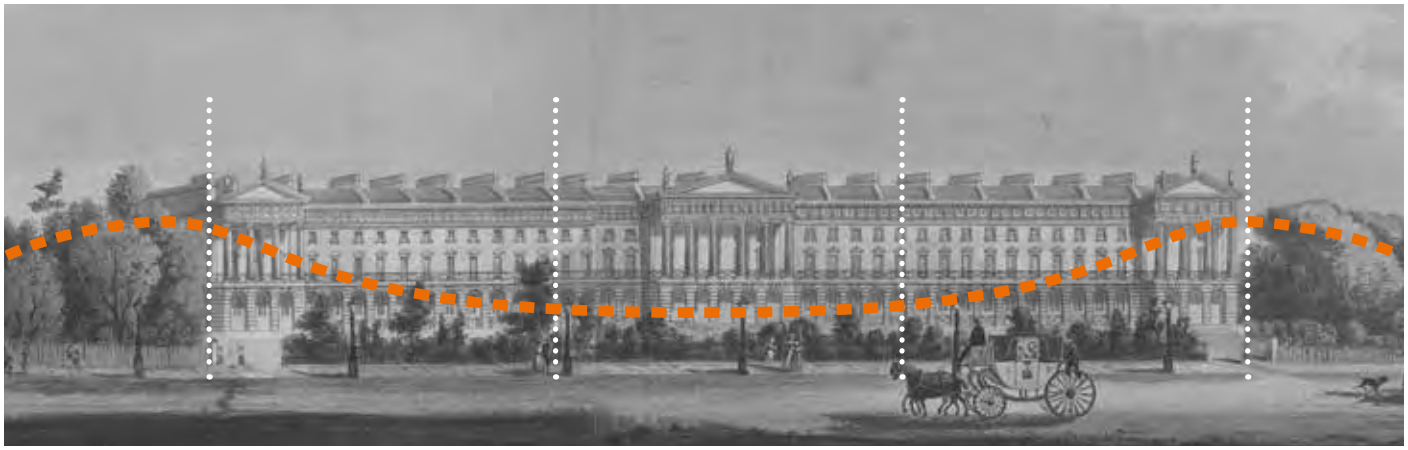
In terms of natural longevity, the best of the existing trees will remain a feature of the landscape for a significant time, with most likely to survive for 20-40 years. Generally speaking, the smaller specimen trees have shorter lifespans and, particularly those in less favourable conditions can only be expected to survive for 10-20 years.

Tree Planting Principles

Canopy Profile

The long-term aim for the terrace gardens should be to evoke the original Nash vision, with planting framing the buildings so that their palatial facades are more legible and can be better appreciated from both Regent's Park and the Outer Circle.

An approximate profile for the tree and shrub canopy should reflect the Canopy Profile Diagrams opposite. These suggest that the planting profiles resemble valleys that rise gradually toward the edges of the buildings, the centres of which are roughly on axis with the central axes of the terraces so as to ensure that the finest aspects of the architecture are visible. At their lowest points the foliage should remain level with the boundary railings which will ensure that privacy is maintained between residents and pedestrians on the adjacent pavement.



Top: Canopy Profile Diagram - Hanover Terrace

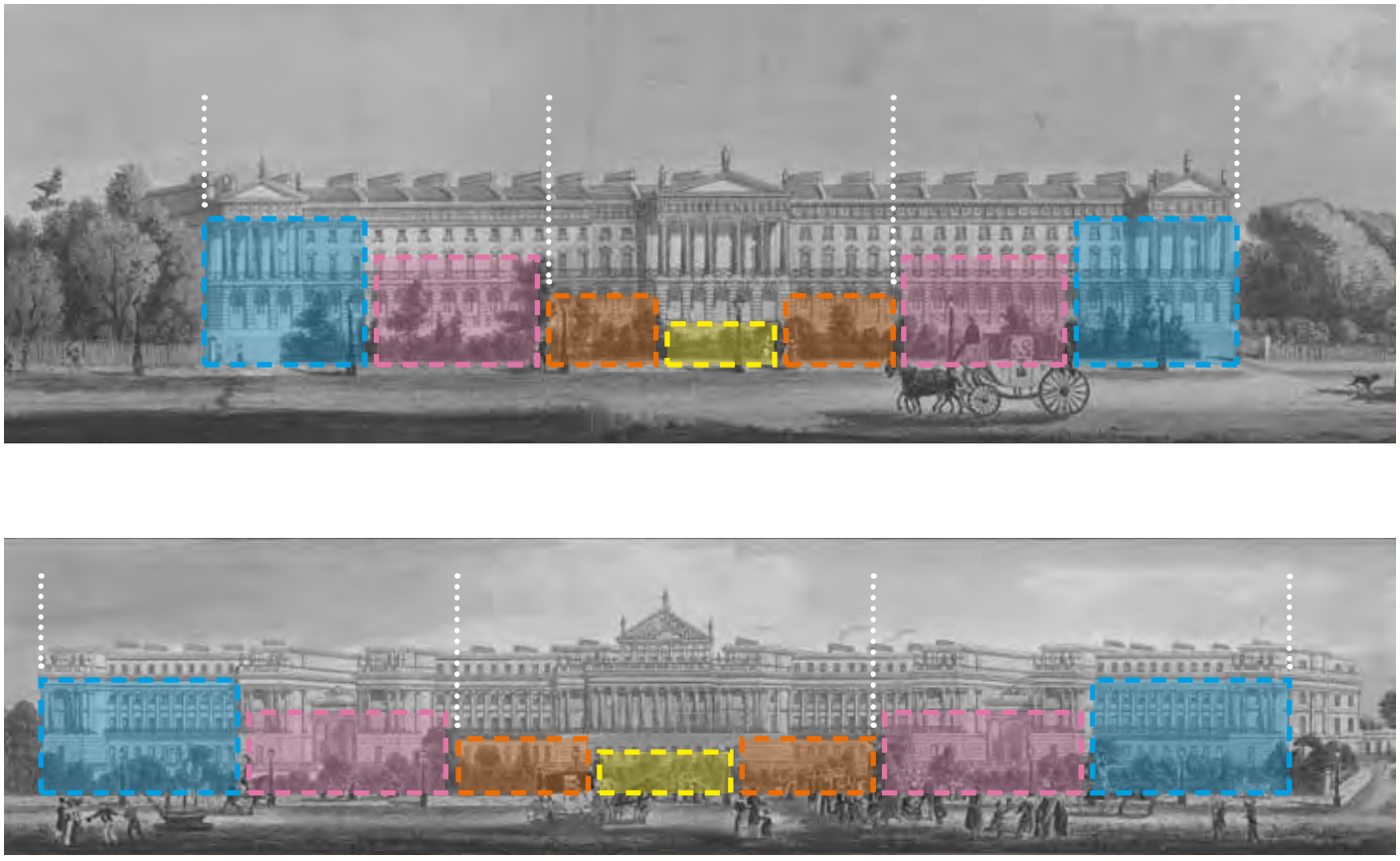
Bottom: Canopy Profile Diagram - Cumberland Terrace

Tree Planting Principles

Tree Planting Zones

Future replacement tree planting should be in accordance with the Tree Planting Zones outlined opposite. Each terrace facade (York Terrace East and West should be viewed as a single facade) can be divided into visual thirds, and those thirds further subdivided into halves and thirds respectively. The central section is limited to shrubs and small trees (on the outer segments), to carefully frame the central block without obscuring it. The outer thirds can be planted with medium and large specimen trees, roughly graduating in height to replicate the original planted buffers that framed the views to the terraces.

It should be noted that these guidelines are approximate, and an even, sloping canopy (from small to large) should not be expected. There should be some natural variation in tree heights, with the overall impression reflective of the guideline diagrams.



Top: Tree Planting Zones - Hanover Terrace

Bottom: Tree Planting Zones - Cumberland Terrace

Legend

- Shrubs only
- Small specimen trees (max. 4m mature height)
- Small to medium specimen trees (max. 8m mature height)
- Medium to large trees

Recommendations

Removals

All trees on the estate have statutory protection due to the area's conservation status and any significant tree work or removal is subject to formal notification to either Westminster or Camden city councils. Any tree removals should be handled on a case by case basis and informed by the individual terrace management plans and routine annual tree health surveys.

As a guideline, Category A and B trees should not be removed. Where necessary, Category C trees should be considered for removal if they fulfill the following criteria: they are growing in a particularly conspicuous location within the central block of the building; their positioning conflicts significantly with proposed layouts in the terrace management plans; their position is significantly detrimental to growing conditions around them. For instance, it may be beneficial to the garden as a whole if a Category C tree were removed in order to increase light levels for smaller shrub and herbaceous planting beneath it.

All Category U trees should be removed as a matter of course, as they are invariably in poor health and pose a potential risk to garden users and assets within the site.

Many large shrub species have over-matured and might now be considered small trees. In instances where the shrubs are of poor quality, we would recommend that significant rejuvenatory pruning is undertaken, or removal and replacement with younger stock, which will be more vigorous and ultimately more attractive.

This *Castanea sativa* (sweet chestnut) in Chester Terrace shows significant signs of decay, and also lies outside of the proposed bed layout recommended in the terrace management plan. For these reasons, the tree offers little benefit to the long-term success of the garden and should be considered for removal.

Dense planting at the northern end of Hanover Terrace garden is creating poor ground conditions for smaller shrub and herbaceous planting. The tree canopies above are creating heavy shade and therefore would benefit from systematic thinning. In this case, the *Prunus cerasifera 'Pissardii'* (cherry plum) to the left of the image is a U grade tree and should be removed, however, if both trees were C grade, the choice of which to fell should be based on the greatest benefit to the garden.

Strategy

Recommendations

Replacement

It is more important to evoke the planting effect that Nash desired rather than to replant precisely the tree varieties and cultivars he would have known. There are also sound reasons for doing so: there is insufficient evidence to supply a full picture of the original planting, and modern varieties and cultivars in many cases provide the same visual effect but display greater resistance to drought, pests and disease, and frequently have longer flowering seasons.

The following lists supply the names of modern cultivars which would be suitable replacements for early nineteenth-century trees and should guide the selection of trees for future tree replacement:

Small Trees

Aesculus parviflora (dwarf buckeye)
Amelanchier canadensis (serviceberry)
Amelanchier lamarckii (snowy mespilus)
Arbutus unedo (strawberry tree)
Arbutus unedo f. rubra (pink strawberry tree)
Arbutus unedo 'Atlantic' (strawberry tree 'Atlantic')
Ceanothus 'Concha' (Californian lilac 'Concha')
Crataegus prunifolia (broad-leaved cockspur thorn)
Crataegus persimilis 'Prunifolia' (broad-leaved cockspur thorn 'Prunifolia')
Malus cv. (ornamental crab)
Osmanthus x burkwoodii (Burkwood osmanthus)
Prunus avium 'Stella' (sweet cherry 'Stella')
Prunus avium 'Lapins' (sweet cherry 'Lapins')
Rhus typhina (stag's horn sumach)
Rhus typhina 'Dissecta' (cut-leaved stag's horn sumach)
Rhus typhina 'Bailtiger' (stag's horn sumach 'Tiger Eyes')
Syringa vulgaris (lilac)
Syringa vulgaris 'Katherine Havemeyer' (lilac 'Katherine Havemeyer')
Syringa vulgaris 'Madame Lemoine' (lilac 'Madame Lemoine')

Far left: *Aesculus parviflora* (dwarf buckeye)

Left: *Crataegus persimilis* 'Prunifolia' (broad-leaved cockspur thorn 'Prunifolia')

Far left: *Osmanthus x burkwoodii* (Burkwod osmanthus)

Left: *Prunus avium* 'Stella' (sweet cherry 'Stella')

Far left: *Rhus typhina* 'Bailtiger' (stag's horn sumach 'Tiger Eyes')

Left: *Syringa vulgaris* 'Madame Lemoine' (lilac 'Madame Lemoine')

Recommendations

Medium Trees

Catalpa bignonioides (Indian bean tree)
Catalpa bignonioides 'Aurea' (golden Indian bean tree)
Cercis siliquastrum (Judas tree)
Cercis siliquastrum 'Bodnant' (Judas tree 'Bodnant')
Crataegus monogyna (common hawthorn)
Ilex aquifolium (common holly)
Laurus nobilis (bay tree)
Ligustrum lucidum (Chinese privet)
Magnolia grandiflora (evergeen magnolia)
Prunus avium (wild cherry)
Prunus avium 'Plena' (double gean)
Sorbus aucuparia 'Sheerwater Seedling' (rowan 'Sheerwater Seedling')
Taxus baccata (English yew)

Large Trees

Aesculus flava (sweet buckeye)
Aesculus indica 'Sydney Pearce' (Indian horse chestnut 'Sydney Pearce')
Betula pendula 'Laciniata' (Swedish birch)
Betula utilis 'Forest Blush' (Himalayan birch 'Forest Blush')
Betula utilis var. jacquemontii (west Himalayan birch)
Carpinus betulus (common hornbeam)
Fagus sylvatica (common beech)
Fagus sylvatica 'Riversii' (purple beech)
Liriodendron tulipifera (tulip tree)
Platanus × *hispanica* (London plane)
Quercus cerris (Turkey oak)
Quercus ilex (holm oak)
Quercus palustris (pin oak)
Quercus rubra (red oak)
Robinia pseudoacacia (false acacia)
Tilia cordata (small-leaved lime)
Tilia × *europaea* 'Wratislaviensis' (lime 'Wratislaviensis')

Far left: *Catalpa bignonioides* 'Aurea' (golden Indian bean tree)

Left: *Cercis siliquastrum* (Judas tree)

Far left: *Crataegus monogyna* (common hawthorn)

Left: *Ligustrum lucidum* (Chinese privet)

Far left: *Liriodendron tulipifera* (tulip tree)

Left: *Tilia cordata* (small-leaved lime)

Recommendations

Management

In certain cases where an existing tree is being retained, it may be beneficial or necessary to undertake some form of restorative pruning to increase its lifespan, or aid conditions around it. For instance, where a mature tree is growing in front of the central block of the building, crown thinning may introduce some permeability to the facade, whilst also reducing shade at ground level. The various techniques for restorative pruning are outlined below:

Crown Thinning

Crown thinning is the removal of a portion of smaller/tertiary branches, usually at the outer crown, to produce a uniform density of foliage around an evenly spaced branch structure. It is usually confined to broad-leaved species. Crown thinning does not alter the overall size or shape of the tree. Removal should be systematic and not exceed 30% of the overall canopy. Common reasons for crown thinning are to allow more light to pass through the tree, reduce wind resistance, reduce weight (but this does not necessarily reduce leverage on the structure) and is rarely a once-only operation particularly on species that are known to produce large amounts of epicormic growth (shoots that regrow from the trunk or branches of a tree after coppicing or pollarding on a regular cycle).

Crown Raising

Crown raising is the removal of the lowest branches and/or preparing of lower branches for future removal. Removal of large branches growing directly from the trunk should be avoided as this can cause large wounds which can become extensively decayed leading to further long-term problems or more short-term biomechanical instability. Crown lifting on older, mature trees should be avoided or restricted to secondary branches or shortening of primary branches rather than wholesale removal wherever possible. Crown lifting is an effective method of increasing light transmission to areas closer to the tree or enabling access under the crown, however, it should be restricted to less than 15% of the live crown height and leave the crown at least two thirds of the total height of the tree.

Before

After

Before

After

Recommendations

Crown Reduction

The reduction in height and/or spread of the crown (the foliage bearing portions) of a tree. Crown reduction may be used to reduce mechanical stress on individual branches or the whole tree, make the tree more suited to its immediate environment or to reduce the effects of shading and light loss, etc. The final result should retain the main framework of the crown, and so a significant proportion of the leaf bearing structure, and leave a similar, although smaller outline, and not necessarily achieve symmetry for its own sake. Crown reduction cuts should be as small as possible and in general not exceed 100mm diameter unless there is an overriding need to do so. Not all species are suitable for this treatment and crown reduction should not be confused with 'topping', an indiscriminate and harmful treatment.

Coppicing

Traditionally, coppicing is an ancient system of woodland management which involves cutting trees close to the ground on a regular cycle. The cut trees regrow from dormant buds at the base of the stump (known as the stool) to create dense stands of multi stemmed trees. Oak, sweet chestnut, willow, lime, hornbeam, field maple, rowan, alder and hazel are commonly coppiced, but most native trees can be managed in this way. Within the terrace gardens, coppicing can be used to restore damaged trees to a better shape, as has been done in York Terrace West, where damaged holly has been cut to the ground and regrown from a stool.

Pollarding

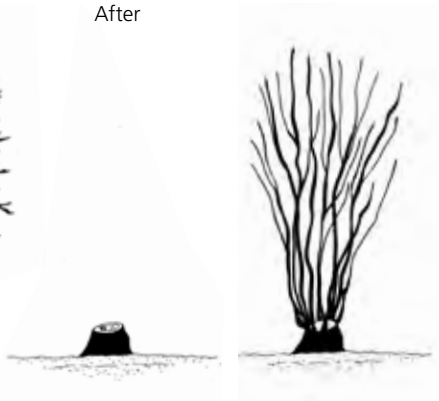
Pollarding is a method of pruning that restricts trees and shrubs below their natural growing height. The technique is traditionally used to prune London planes and lime trees, giving them their distinctively characterful shape. Once a tree has produced three to five branches from the main trunk, these can be cut back annually to a desired length. Twiggy emergent growth will spring from these cuts, which, after years of regular pruning, form the distinctive swollen pollard heads that typify a well pollarded tree.

Before

After

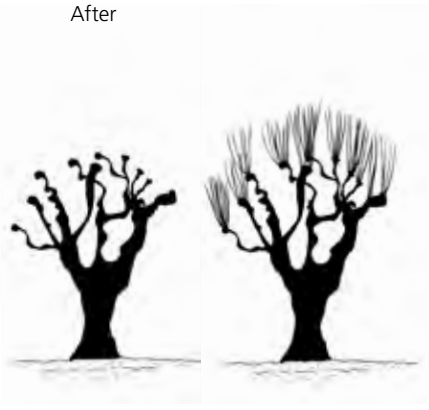
Before

After



Before

After



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