

Conservation Guidelines Settings & Landscape

Foreword

This series of booklets has been produced by the Department of the Environment to increase awareness of the value of our architectural heritage and to provide information on the basic principles and methods of conservation and restoration.

The titles in the series are listed on the back of each booklet.

These texts are not intended to be comprehensive technical or legal guides. The main aim is to assist architects, builders, owners and others, in understanding the guiding principles of conservation and restoration. They will facilitate the identification of the most common problems encountered in heritage buildings, and indicate the best solutions. It should be appreciated that specialised aspects of conservation and restoration will require professional expertise and more detailed information.

The Department acknowledges, with appreciation, the efforts of the authors of the individual booklets, the Irish Georgian Society who coordinated their production, the Conservation Advisory Panel established under the Operational Programme for Local Urban and Rural Development and all others involved.

Summary of Conservation Principles

- Research prior to planning work
- Minimum intervention - repair rather than replace
- Respect the setting.

Summary of Conservation Procedure

- Research and analyse history of building
- Survey building and identify original material
- Plan work according to conservation principles
- Use experts where necessary
- Record all work
- Install maintenance procedures.

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Introduction

A building and its setting were often historically, socially and aesthetically one. To make full sense of an historic building, its setting needs to be brought back in harmony with it. It is appropriate, therefore, during the restoration of an historic building to consider restoration of its setting as well, be it garden, park, landscape or demesne. If there is no surviving evidence of the building's original setting, it may be appropriate to create a new setting consistent with the building's period and style. Sometimes a building's

setting is of historical value in its own right, in which case it merits conservation independently of the building itself.

It may be that not just one building is involved but a whole group of buildings comprising a conservation area. The open spaces within a conservation area should be conserved or restored in a manner which is appropriate to the historic buildings surrounding them. In a city, town or village, such open spaces are usually in the form of squares, parks, greens, streets or malls.



Centre garden is setting for historic square

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Research and analysis will reveal historically appropriate layouts for these, as well as details for street and garden furniture, and for the selection and maintenance of plant material.

Conservation or restoration of a building's setting should take place at the same time as that of the building itself. This enables important elements in the historic setting to be identified early and protected during the building operations. It also allows for completion of the restoration of the setting soon after the completion of the restoration of the building itself and so avoids a situation in which visitors to a newly restored building have to pass through an area which looks like a battlefield for three or four years afterwards.

While this booklet deals mainly with the conservation and restoration of the larger historic setting, the principles underlying the procedure will remain the same for smaller projects, and can be applied in a modified form.

Conservation

The conservation or restoration process can be divided into three distinct phases:

- **Research and Analysis**
- **Interpretation and Planning**
- **Implementation and Management**

Research and Analysis

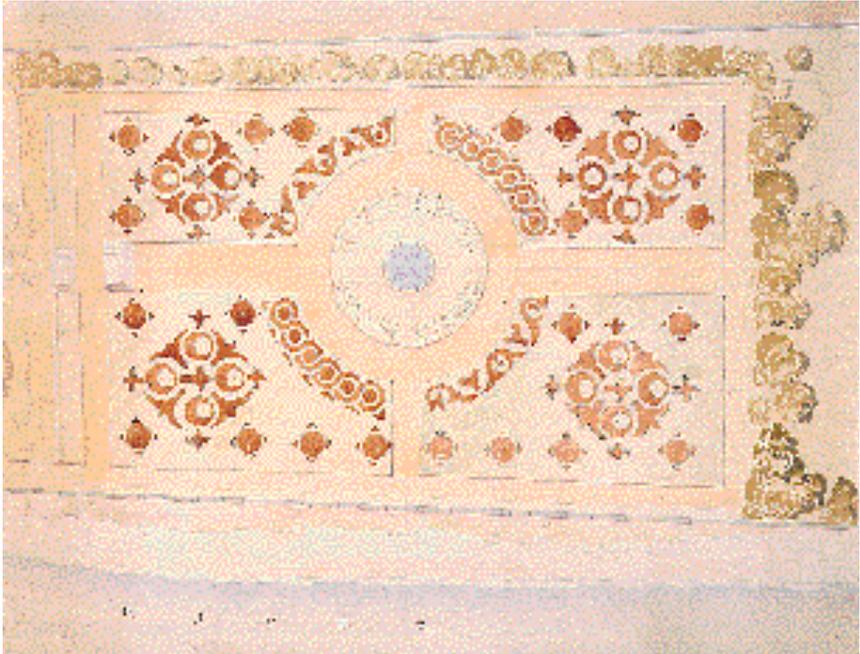
Information on historic gardens or settings can be obtained from a wide variety of sources. If the restoration is designed to be comprehensive, information gathering will also involve the employment of a variety of specialist skills. The main sources of information may be categorised as deriving from:

A. Archival Sources

The aim of archival research is to establish how extensively the site has been recorded, if at all, in the past. Potential sources of information include :

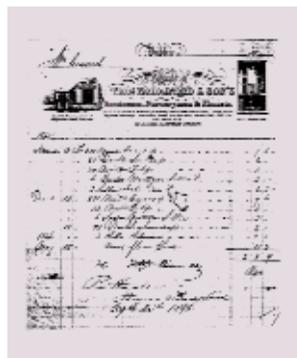
- (i) Visual evidence which has been recorded on maps, including old estate maps and early Ordnance Survey maps, old photographs, landscape and topographical paintings and drawings, and old architectural and survey drawings and plans.

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Original layout for historic site

- (ii) Written evidence which has been recorded in topographical books and manuscripts, estate papers and accounts, inventories, deeds, leases, sales particulars, building contracts and accounts, plant and planting lists, letters and diaries.



Nineteenth century invoice for historic garden

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(iii) Oral evidence which can be taken from people who remember the site in the past (as this can be unreliable it is best corroborated by visual or written evidence).

B. Fieldwork

The aim of fieldwork research is to establish how much of the original setting survives.

Useful information may derive from:

(i) On-site observation where an accurate survey should be made of all the existing on-site features including levels, built-features and planting (an assessment of the approximate age of plantings should also be included). If an accurate assessment of, for example, important trees is required then the services of an expert dendrochronologist, i.e. tree dater, should be employed. A dendrochronology (age of trees) service is available from Queen's University, Belfast. A note should be made of any sculptural, ironwork or architectural features on site about which specialist advice may be needed. For example, the identification of original paint colours on ironwork seats or railings may require the employment of specialist paint research techniques.

(ii) Aerial surveys from which much information can be gleaned, particularly if they have been taken during a dry season, as they will show up subtle ground formations which are not apparent from a ground survey.

(iii) Archaeological investigation can uncover the location of buried walls, paths, beds, statue bases and tree pits, often as little as 45 cms. under the existing ground surface. Such an investigation will also uncover seeds and other plant remains which can act as a useful guide in determining the original plants used in the garden. Before embarking on a full-scale archaeological investigation, establish if it is likely to bring worthwhile results by excavating a trial area first and also by using the modern technique of resistivity surveying. (Archaeological investigation sometimes reveals an original drainage system which can be recommissioned).



Trees, and other plants, can be an integral part of a streetscape.

Interpretation and Planning

A general knowledge of landscape and garden history is helpful in interpreting the evidence gathered during Phase 1 and in the subsequent planning phase.

A. Interpretation

Particular attention should be paid to primary records, i.e., records dating from the time of the construction of the building or laying out of the garden or from soon

afterwards. Sometimes problems and inconsistencies in the overall evidence arise and have to be resolved. For example, undated documents can sometimes be dated approximately by cross-reference to other documents. Sometimes views and maps can be contradictory in detail. (The contradictions have usually arisen as a result of the original surveyor's inaccuracy in the case of maps or a painter's artistic licence in the case of painted or drawn views.) An

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assessment has to be made as to which view or which map is the more accurate. Sometimes the conflict can be resolved by carrying out detailed site investigations in the area where the conflict has occurred. On occasion, a site investigation is neither positive nor conclusive. This often happens with respect to detailing of particular areas of the restoration. In this case, a general knowledge of the landscaping style of the period in question will be invaluable in filling in these details.

A frequent problem in interpretation is that accurate records of the built-elements of the garden exist but evidence of planting is more problematic. Very often the most difficult part of a garden restoration is therefore the production of a planting plan. Frequently, information from garden manuals and other publications dating from the period of the garden have to be relied upon to give direction. Fortunately, many of these survive in rare book libraries and can be consulted. Planting lists which may be available for other gardens of the same period can also act as guides.

Once a basic list of appropriate plants has been established the question arises as to how they should be arranged in the garden.

The key determinants here are the size and shape of the planting beds which will, hopefully, have been determined already from plans or from on-site or archaeological investigation. (Very often formal gardens were laid out using a basic module. Its discovery during the course of research can be like cracking a code in that the determination of many detailed dimensions can flow from its discovery). In any case, the decision on the detailed planting plan frequently has to be made not on the basis of any evidence but according to what is known of the practice of the time. (The effect produced by using historic plant varieties may be disappointing, e.g. early varieties of roses only produce small, short-lived flowers and not the flamboyant, long-lived blooms of modern varieties. If the garden setting is to be opened to the public then this fact should be explained to the visitors to avoid disappointment occurring).

B Planning

All the information gathered during research, analysis and interpretation has to be welded together into a design which fits all the separate strands of evidence. A detailed plan of restoration and reconstruction must be prepared. The condition in which the landscape or garden survives obviously must

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be considered carefully. Not all of the original design may have survived. It may have been so altered in the intervening years that little of the original survives - layers of modernisation at different periods (often carried out to economise on running costs) may have obscured the original intended relationship between the building and its setting. In this case a decision has to be made as to whether it is feasible or even desirable to return the setting to its original design. Instead, a decision might be made to return it to some later significant period in its history.

Despite modern archival and scientific techniques, all restorations have their limitations. Consider therefore what degree of accuracy and authenticity can be achieved within the resources available.

A strategy has to be evolved which will balance the historical significance of the garden or setting with modern functional and visitor requirements. This is one of the most difficult areas of planning since elements of the historic garden will have to be changed or modified to comply, for example, with public health and safety requirements, with maintenance factors and control of running costs. Historical specifications may not meet

modern needs. For example, the gravel used to cover the paths in the original design may not be capable of withstanding wear from large numbers of visitors or may lead to a serious maintenance liability. So, a substitute may have to be found. New irrigation and drainage systems, as well as ducts for electrical and security systems, may have to be provided. However, an attempt should be made to minimise the impact of these on the overall result.

Before completion of the reconstruction plans, it may be advisable to put in place a trial section of the proposed layout in order to assess its performance over a period of time, say, a three-month winter period.

Finally, the preparation of the final reconstruction plans should embrace a study of recent similar restoration projects in Ireland and abroad as valuable lessons may be learned from others' experience.

Common Problems and Solutions

1. *Disturbance of existing elements*

A problem can arise if the proposal involves what may be a controversial felling of trees or clearing of other elements and planting.

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In such a case, it is advisable to undertake, at an early stage, a preliminary public consultation with representatives of local interest groups and the local authority who can be made aware of the intentions behind the proposal. Although it is desirable to re-use as many of the surviving elements of the garden as possible, this is not always feasible, particularly with regard to overgrown, perhaps over-mature trees - an early decision has to be made as to their fate. The options to be considered can be summarised as follows:

- (i) leave them as they are - however, the existence of occasional mature trees in a newly-restored garden may distort the overall effect of the new scheme. Their huge underground root plate may prevent successful planting and gardening in close proximity to them. If they are over-mature, they may have to be taken down soon in any case with consequent damage to the newly-restored garden and planting. This is obviously a matter for careful and balanced judgment.
- (ii) cut the trees hard back in the hope that they will not only survive but take on a shape and size appropriate to the new garden layout.
- (iii) transplant them to another location on

site. However, the trees or shrubs may be too mature or large for this to succeed - the operation may also be too costly.

- (iv) fell them before work on installing the newly-restored scheme begins.

However, if the trees are known to be of an unusual variety or to have some historical provenance it is important to preserve the genetic material by taking cuttings which can be grown on for planting later in the garden or, if this is not appropriate, in a different location.

2. *Diseased Species*

A problem can arise in the specification of historic plant material as some of it, at the time of the restoration, may be of a variety which is subject to disease. For example, research may have called for the use of elm trees in a particular location in the garden. As elm trees are now subject to fatal Dutch Elm Disease, an appropriate substitute, such as hornbeam, must be found.

Implementation and Maintenance

The effective implementation, management and maintenance of an historic setting or garden requires skill, informed judgment and adequate funding.

A. Implementation consists of:

(i) Contractors and personnel

Once the reconstruction plans have been finalised, prices can be sought for its implementation. Suitable landscape contractors, together with specialist restorers of items like ironwork, stonework and statuary need to be located as well as specialist suppliers of plants and turf. While the main elements of the restoration may be let out to contractors, it can be a good idea to leave the detailed planting to the gardening staff who will have responsibility for maintaining it in the future, when a thorough understanding of the plants and plantings would be important.

(ii) Plants, trees and shrubs

Plants to be used in the replanting should be ordered early as many of them may be varieties not immediately obtainable. Mature trees to be transplanted, if any, should be the responsibility of experts who would also

advise on any preparation that needs to be carried out beforehand.

(iii) Setting out

The on-site implementation of a garden restoration begins with the setting out which can be done in two ways:

- (a) it can be traced out with bamboo stakes and string, paper templates being used for the smaller details or
- (b) it can be set out using a laser theodolite (EDM); the main points having been set out electronically, the details can be laid out with pegs and string.

The pattern can then be painted on the ground using white limewash, and, using it as a guide the paths, planting beds, etc. can be cut out. The built-elements are constructed first. After that the soils are prepared and raised to the levels specified before planting or turfing takes place.

Practical constructional difficulties inevitably arise during the implementation, often as a result of slight variations and irregularities in the site. These have to be resolved on an on-going basis. Sometimes it is discovered that the original layout had inconsistencies and errors. These have to be accepted.

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To restore or recreate an historic garden or setting is, perhaps, the only way to fully understand it. The process of restoration involves asking questions which in the normal course of research are frequently neglected. The restorer is forced to address constructional details and the precise relationship between different elements of the whole which might, as individual items, be well understood. The process often also involves re-living the actions of the original builders and coming to terms with the same problems they faced perhaps hundreds of years before.

B. Management

The preparation of a maintenance manual will greatly assist the gardening staff in maintaining the newly-created setting or garden. (Archival accounts may include items of payment for specific maintenance tasks carried out during the garden's history. These may provide useful information in drawing up the maintenance manual). If the garden is open to the public, problems in terms of handling visitors as well as in maintenance and improving on what has already been established may emerge and have to be solved. For this reason a post-restoration maintenance review procedure should be put in place.



Historic view of St. Stephen's Green, Dublin

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Sources of Information

The Irish Architectural Archive, 73 Merrion Square, Dublin 2.
Tel.01 676 3430
(for architectural drawings and photographs).

The National Botanic Gardens Library,
Glasnevin, Dublin 9.
Tel.01 837 4388
(for both antique and current gardening books, manuals and periodicals).

The National Gallery of Ireland, Merrion Square, Dublin 2.
Tel.01 661 5133
(for topographical and landscape drawings and paintings).

The National Library of Ireland, Kildare Street, Dublin 2.
Tel.01 661 8811
(for maps, engravings, manuscripts, estate papers, books and periodicals).

Trinity College Library, Dublin 1.
Tel.01 608 1127
(for antique gardening books and manuals).

The Centre for the Conservation of Historic Gardens and Parks, IoAAS, University of York, The King's Manor, York, YO1 2EG
(for both long and short term courses on garden conservation).

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