Historic Monuments Advisory Committee

The HMAC is a Cork County Council committee consisting of a range of external members, elected representatives and the relevant in-house staff. The HMAC is keen to promote an appreciation of the historic attributes of Cork County and this leaflet is one of a series that gives practical advice and information regarding the county's architectural and archaeological heritage.

There may be potential source of funding from time-to-time. Please contact the Heritage Unit for advice in this regard.

Useful Contacts

Heritage Unit 021 427 6891	Cork County, Council, Floor 3, County Hall, Cork. T12 R2NC. https://www.corkcoco.ie/arts-heritage
National Monuments Service 01 888 2169	Department of Culture, Heritage and the Gaeltacht, Customs House, Dublin 1. D01 W6X0. www.archaeology.ie
Department of Culture, Heritage and the Gaeltacht	Customs House, Dublin 1. www.chg.gov.ie/heritage
The Heritage Council 056 777 0777	Church Lane, Kilkenny. R95 X264. www.heritagecouncil.ie

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Repair work: Before starting on repair work determine the degree of intervention required and whether or not the service of a professional is needed. In general, minimum intervention is preferable. Where repairs are necessary, as much of the original fabric as possible should be retained. The replacement of damaged or missing sections should be done on a like-for-like basis using traditional techniques. Cast aluminium, fiberglass, plastic and steel are NOT appropriate substitutes. Galvanised fixings can rapidly corrode and should not be used. Remember that wrought iron is no longer manufactured and recycled material is all that is available and this can be expensive. Architectural salvage yards may be useful source for missing sections. The use of mild steel should be kept to a minimum. Cast iron can be troublesome to repair as it is difficult to weld. Fractures can be repaired by using screws and dowels; however specialist advice should be sought.

Decorative cast iron finials.

Recording work: Prior to dismantling any ironwork it is advised that a record is made of the item first. This should include a photographic record, written description and scaled sketch drawings, noting construction techniques, types of materials and style. All loose elements should be individually tagged. It is also advised that a photographic record is made during the course of the work and a final report on completion of the conservation work.

Professional Advice: Where repair work is required or significant paint removal needed the services of a suitably qualified expert should be sought. This is a person that can demonstrate suitable experience in the understanding and repair of historic ironwork. There are a number of skilled crafts blacksmiths that can advise and carryout suitable repairs on historic iron work (www.irishblacksmiths.com). A method statement and material specifications should be sought and these should be compatible with best conservation practice as briefly outlined in this leaflet and the other documents listed below.

Other sources

Cork City Council, *A Guide to Historic Ironwork in Cork City.* (www.corkcity.ie/media/IRONWORK_BROCHURE)

Department of Environment, Heritage and Local Government, *Iron: The Repair of Wrought and Cast Ironwork*, Dublin, Stationary Office, 2009. (www.buildingsofireland.ie/FindOutMore/Iron)

Historic Scotland, *The Maintenance of Iron Gates and Railings*, 2007. (www.historicenvironment.scot/archives-and-research)

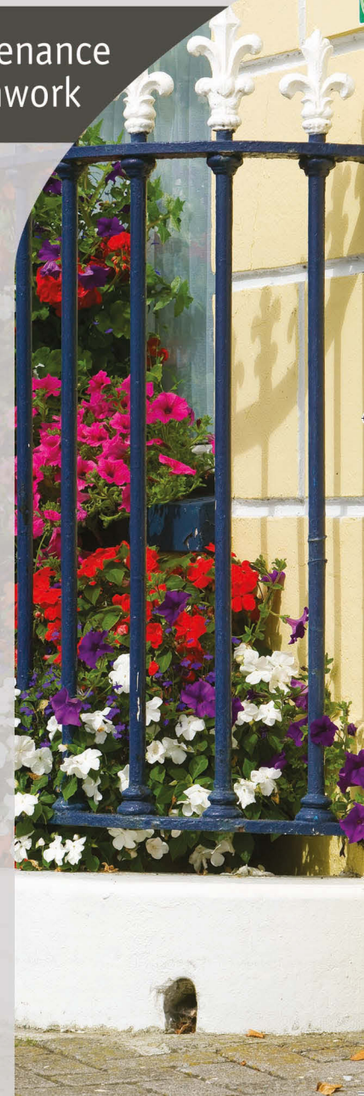
Irish Artist Blacksmiths Association, *Guide to the Best Practices for the Restoration of Irish Historic Ironwork*, 2013.

Keohane, F (Ed), *Period Houses A Conservation Guidance Manual*. Dublin, Dublin Civic Trust, 2001.

CORK COUNTY COUNCIL
Heritage Guide

Historic Monuments Advisory Committee

Care and Maintenance of Historic Ironwork



Cork County Council
Comhairle Contae Chorcaí

CORK COUNTY COUNCIL
Heritage Guide

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Introduction

Decorative ironwork contributes to the character and enhances the appearance of our historic buildings, streetscapes and countryside. This leaflet is intended to provide information on the care and maintenance of heritage ironwork and is part of a series of Heritage Guides produced by the Historic Monuments Advisory Committee of Cork County Council.

Historically iron was used for a broad range of architectural purposes from structural components such as columns and beams to decorative features such as railings, gates, balconies, finials and foot scrapers. Historic ironwork is also a common feature in many of our old graveyards where it is used as entrance gates and decorative railings around burials.
In addition much of our heritage street furniture that enhance our streetscapes are made of historic iron such as street names, post boxes and lamp stands. In the 18th and 19th centuries iron as a material became more affordable and readily available, as a result much of our historical ironwork dates from this period.

Ornate entrance gates with cast iron pillars and wrought iron railing.

Ironwork
There are two basic types of historic ironwork - wrought iron and cast iron. Each type has different properties and requires different treatments for its repair and maintenance.

Wrought iron is forged and can be worked into a variety of shapes. In the forge, iron bars are heated and hammered into shape by the blacksmith. In this way the basic structure of a gate, railing or roof was created. Decorative elements such as spear heads, leaves and scrolls were then attached. Distinctive local design was often applied to the ironwork, adding interesting local character to an area. Wrought iron is a very tough and pliable material and is strong in both tension and compression. Historic wrought iron is no longer produced and the surviving elements are a valuable resource which merit protection and maintenance.

Wrought iron farm gate.

Cast iron is produced by pouring molten iron into a mould and this work usually took place in a foundry. Cork city had a number of iron foundries such as Perrott's Hive Ironworks and the maker's name is often incorporated into the design. As moulds can be reused designs tend to be composed of repeating identical sections. It became popular from the early 19th century as production became quick and cheaper to produce. Historic cast iron is strong in compression but weak in tensions and brittle. Damage to cast iron usually results in a crack or elements broken off, whereas wrought iron is more likely to bend.

In the late 19th century mild steel was developed. This is made by removing carbon from cast iron and quickly began to replace wrought and cast iron in structural works.

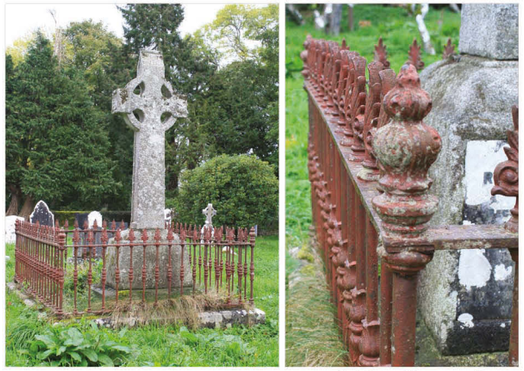
Legal Requirements

Decorative ironwork may form part of a Protected Structure or be in an Architectural Conservation Area (www.corkcocodevplan.com) and/or forms part of a Archaeological Monument (www.archaeology.ie). It may therefore be legally protected under the Planning and Development Act (2000 as amended) and/or the National Monuments Act (1930-2004). Prior to undertaking any works or repair please contact the Heritage Unit of Cork County Council for general advice and to establish if any statutory conditions apply.

Care of Historic Ironwork

Maintenance: Regular maintenance and painting is the most practical way to protect ironwork. Routine maintenance should include cleaning with water and a cloth or where necessary a hand or powered wire brush. Corrosive methods of cleaning are not recommended such as chemical agents; blasting or high pressure power hosing may be considered but only under specialist supervision. Inspections should take place regularly to identify any signs of damage or decay. Ideally, prompt and correct repairs should then ensue. The most serious problem with iron is corrosion (rust) caused by the presence of water and oxygen. This can be triggered by defects such as poor joints, surface hollows or plant growth which traps water. Please ensure for any work undertaken that appropriate Health and Safety procedure is complied with and relevant insurance in place.

Distinctive wrought iron gate latch.



Cast iron railings around grave.

Painting: A prepared surface is essential before applying paint. Ensure the surface is clean, dry and free of corrosion, grease and dirt. This will ensure that the paint adheres properly to the iron or underlying paint and this improves its effectiveness. If corrosion is not too severe it can be removed by using a chisel, wire brush and sandpaper. Where the underlying paint is sound, spot painting may suffice. If the corrosion is severe, the assistance of a professional may be required. Where it is necessary to remove all the paint, it may merit detailed analysis to determine the original colour scheme. The use of gilding and different coloured paints was not uncommon in Ireland in the past. The use of black paint dates to the late Victorian period. It is recommended that painting is carried out during calm warm weather. Brushes are usually the most effective means of applying paint. It is important to allow each coat to dry thoroughly before applying the next. Paint thickness is also important. Several thin coats are more effective that fewer thicker coats. To distinguish one coat from another it is recommended that each undercoat is a different colour. It is important that the paint is compatible with the ironwork and existing paint layers. It is advised to consult with a paint expert and/or use the manufacturer's guidelines for directions on this.

Where complete repainting is required current best practice recommends

- Two undercoats of zinc- based primer
- Then one or two coats of micaceous iron oxide (MIO)
- Followed by one or two coats of gloss paint.

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