



# Cast Iron Maintenance Guide

## Cleethorpes – North East Lincolnshire



Mermaid Café, North Promenade ©North East Lincolnshire Council

A Maintenance Guide for Building Owners with Victorian Cast Iron Balconies and Structures within The Central Cleethorpes Seafront Conservation Area.



This guide has been developed as part of the Townscape Heritage Project for Cleethorpes funded by the National Lottery Heritage Fund

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## **TOWNSCAPE HERITAGE PROJECT**

The Townscape Heritage (TH) project was launched in 2018, and the scheme was supported by £1.9m from The National Lottery Heritage Fund, £1m from North East Lincolnshire Council (NELC), along with 3<sup>rd</sup> party match funding from the many grantees who benefitted from grant funding.

This investment has helped to breathe new life into the historic buildings and public realm within The Central Cleethorpes Seafront Conservation Area, as well as providing opportunities to learn new heritage skills and crafts, and to become better informed about the historic environment.

Over the course of the last six years several properties with cast iron balconies have been fully restored along Alexandra Road and Sea View Street, along with a cast iron framed building on the North Promenade.

### **Introduction**

The railway arriving in Cleethorpes in 1863 brought with it a building boom, shaping the heart of the resort that we see today. The term 'Traditional Buildings' generally refers to buildings built before 1919, along with the cast iron balconies on Alexandra Road, and The Mermaid Café on the North Promenade date from this era.

Much of the early cast iron has been lost over the years, including along North Promenade and in Market Street.

The aim of this guide is to provide essential maintenance advice for the long-term care of the restored and unrestored Victorian cast iron balconies and structures that remain within Cleethorpes. These structures are of architectural and historical significance and form a key part of the heritage identity of Cleethorpes. They bring a defining heritage character to the heart of the Cleethorpes tourist area.

Proper maintenance will help preserve their character and structural integrity for future generations, and this guide provides advice and guidance of heritage cast iron.

## **1. General Maintenance Principles**

Maintenance is key with any historic property and fixtures. What can start out as a minor problem can quickly escalate into costly restoration if not detected and dealt with in the correct manner. Proper external maintenance visually enhances the building, making it more attractive. This is important when these cast iron structures are in an area of retail. The condition of a building forms part of customer experience.

A well-maintained shop front and balcony will look more inviting and attractive to visitors and suggest pride and attention to detail. All positive points to encourage customers to your premises.

Cleethorpes' marine climate accelerates cast iron corrosion far quicker than non-coastal locations due to airborne salts; therefore, regular care is essential.

Each freeholder or leaseholder, depending on the tenancy agreement, is responsible for the section of balcony attached to their property. Lack of regular maintenance in some instances can lead to damage going beyond what can be achieved with in situ repairs, resulting in the need for the cast iron to be removed for offsite restoration.

Regular inspection and maintenance save money in the long run and maintains the value of your property.

## 2. Inspections: What to look for

Balcony structures are attached to the main façade of a building, and in some cases, they facilitate the rainwater drainage from the guttering of the main building to drainage routes at ground level. Therefore, it is essential that the property guttering and downpipes are kept free of debris as water cascading over the guttering will not only accelerate deterioration of the timber and masonry of the main building, but it will also impact the balcony below.

Blocked downpipes are common and should be maintained as per the recommendations below, but it is essential and that work should be carried out in a safe manner. If in doubt, seek professional advice and guidance on how to carry out the work safely.



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### 2.1 Gutter and Hopper Outlet Maintenance

1. Clear the top-level gutters and hopper outlets at least twice a year, especially after the winter leaves fall. Remove leaves, debris, and any blockages to prevent water from pooling and overflowing.

Check for signs of rust or damage around outlets and downpipes. (see later section for remedial action).

Check the joints for leaks, and if leaks are found, use a proprietary sealant, or contact a competent person or contractor to carry out the work for you.

2. Once the hoppers from the main guttering into the downpipe have been checked, test that the downpipe itself is not blocked by pouring a bucket of clean water down the pipe.

If blocked, flexible drainage rods can be used from the shoe at the bottom of the downpipe, or by accessing the rodding points (if installed) to clear internal blockages. Flush again with water to clear any remaining debris in the downpipe.

High-pressure water jetting should be avoided as this can force the joints apart on the downpipe, causing more damage. Power tools or rigid rods could cause fractures to the cast iron.

3. In some cases, the downpipe from the main building empties into an open outlet on the decking, and the same process as per section 2.1 needs to be applied when maintaining the outlet and downpipe to the ground level.

4. Depending on the design of cast iron, some of the front cast iron columns of the balcony act as rainwater outlets (downpipes), taking water from the decking above, see image as an example. Use the same approach as item 3 above to clear any blockages.

Other cast iron structures are likely to have standard cast iron guttering, but in some cases they too could have cast iron columns that act as downpipes.



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## 2.2 When to stop and seek help

If at any time you are unsure of how to proceed, professional advice should be sought. Examples of more serious issues could include:

- A downpipe is cracked or leaking
- Guttering joints are seized or heavily corroded
- Access cannot be made safely
- A blockage repeatedly returns

### 3. Balconies

#### 3.1 Decking Care



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The decking structure of the balconies is mainly made up of following components:

1. Timber decking boards with waterproof membrane beneath which prevent water going through to the pavement below. This material can be like that used on flat roofs. If the balconies have not recently been restored, then materials could differ, and there could be a single concrete type material finish, or a membrane with no timber decking over.
2. Cast Iron panels which form the safety barrier, which are fixed through the decking material.
3. Rainwater outlet could be present see section 2.1 (3) above.

Regular maintenance of the decking should include:

- Sweeping the decking to remove sand, leaves, and other debris.
- Avoid placing sharp objects on the surface which could pierce the waterproof membrane below.

Inspect for signs of wear or punctures in the waterproof membrane periodically and arrange for professional repair if damage is found. This will prevent water damage to the structural metal decking frame beneath, and the soffit (boarding which you see underneath from the pavement) and fascia on the front edge of the decking.

## 4. Inspection of cast iron balconies and structures

Regular inspection and prompt treatment of small defects are essential in keeping cast iron components serviceable and avoiding costly repairs or replacement.

Most of the cast iron structures within the Cleethorpes Central Seafront Conservation Area are Victorian, which evidences how robust this material can be when effectively maintained.

Inspections should be visual and focus on the areas most exposed to the marine airborne salts, which can escalate corrosion.

### 4.1 What to look for

Paint failure is often the first sign that moisture is reaching the iron beneath. Rust spots or 'gingering' is caused by a break in the surface of the paint, exposing the metal to the marine environment, leading to corrosion. Early detection and remedial action are key to protecting the structures and saving money. They do not indicate a failure of the material but left untreated they could become a structural issue in the future.



©NELC

Visual inspections should be carried out 6 monthly, with a more thorough annual check. This will identify any changes to the structures which could have been caused by inclement weather or impact.

Check all columns, panels, brackets and posts for:

- Flaking or blistering paint
- Rust spots or staining running down the ironwork
- Exposed bare metal
- Areas that remain damp after rainfall
- Look for loose or missing fixings.
- Inspect for cracks or separation in cast iron sections.

## 4.2 What to do if rust or damage is found

This recommended procedure is for preparing small areas of rust only. When carrying out maintenance, full scale stripping of paint in situ is not recommended due to the marine environment as the cast iron will react to the salt and rust very quickly. This example shows what can happen when the whole of the surface coating is taken back to bare metal.



©NELC

Before commencing the painting, check the weather forecast to ensure that there are at least two or three consecutive dry days ahead. Bare iron should never be left exposed to the marine environment, as mentioned above. Therefore, plan your day so any prepared metal can have the base coat applied immediately.

Ensure the surface is completely dry before coating as moisture trapped under the paint can cause the iron to rust from the inside.

For small areas the aim is to remove any loose material first, without damaging the cast iron beneath.

1. Appropriate methods can be any of the following:

- Hand wire brushing
- Abrasive pads or fine sandpaper
- Gentle scraping of flaking paint

Historic cast iron can crack if overstressed or overheated by the use of power tools. Therefore, the following **should be avoided** as these can cause damage to the cast iron:

- Power grinding tools
- Aggressive blasting on historic iron
- Striking or levering against the metal

2. Once the rust and loose paint has been removed, wipe clean to remove any fine dust and debris.

Apply a suitable metal primer as soon as the preparation mentioned in 4.2 (2) above is completed. Follow the instructions of application and topcoat in a satin finish with a proprietary protective paint to match the existing colour. It is important to use the same paint systems for the primer and topcoat, as if mismatched it could cause early paint failure.

For those balconies restored as part of the TH Project, colour codes for the cast iron are as follows:

RAL3003 Ruby Red  
RAL5023 Distant Blue  
BS226 Brunswick Green  
RAL1013 Oyster White

The paint system used on the restored balconies as part of the TH project is as follows:

Sherwin Williams Acrolon two pack top coat Ref C237 in Sheen Finish. Durability and life to first major maintenance is up to 15 years. This product is available from commercial decorators' centres on-line. To be applied as per their Technical Data Sheets.

Colour of timber soffit boarding and fascias on the restored balconies is RAL9003 Signal White.

Paint analysis of the balconies along Alexandra Rd has been completed by the University of Lincoln, and ideally the heritage colour palette should be maintained for any of the balconies not yet restored. For more information, please contact [Planning and building control | NELC](#) or email [Planning@nelincs.gov.uk](mailto:Planning@nelincs.gov.uk)

#### **4.3 When to seek specialist advice**

Specialist advice should be sought where:

- Cracks are visible
- Section loss is suspected
- Load-bearing elements are affected
- Decorative features are historically significant

Early intervention usually keeps specialist repair costs manageable.

If further advice is required contact a specialist cast iron conservator who will be able to advise on process and suitable paint systems and materials.

## **5. Timber Elements**

Inspect timber decking, panels, windows, fascia boards for rotting, warping, or loose fixings.

### **5.1 Painted surfaces**

For those properties supported by TH grant funding, use a proprietary external paint system in gloss finish and in the timber RAL colour as mentioned, for all timber elements excluding the Ekki timber decking, which is positioned on top of the waterproof balcony deck.

Any other timber elements requiring replacement, use Accoya as a like for like replacement. Accoya timber although softwood, it has similar properties to hardwood and therefore is much more robust and harder wearing in the harsh marine environment. Initially the financial outlay will be more for this material, but it has a much longer life span and is therefore much more cost effective over time.

Ensure all timber is treated and painted with a good quality external paint system to ensure its longevity in the harsh marine environment.

### **5.2 Balcony decking boards**

Replace damaged boards with like-for-like materials: Ekki timber has been used for the TH grant funded decking boards, and these should be treated with a proprietary breathable oil-based product. This will penetrate the surface, rather than sealing it and thus it does not trap moisture within the timber. It also means that the surface weathers gradually to a lighter patina (colour), and there is no flaking or peeling on the surface. If a varnish type product is used it will cause more maintenance issues in the future because varnish peels, thus leading to a lot of preparation to remove this surface before a new coat can be applied. The use of the correct oil-based product will save time and money in the longer term.

Application of a breathable oil-based product should be applied as per the manufacturer's instructions.

## **6. Conservation Notes**

See planning guidelines below for general maintenance work carried out within The Central Conservation Area for Cleethorpes, and/or if your building is a nationally Listed Building:

- Before making any changes or repairs to the building or cast-iron structures, or if your building is listed, you must seek approval from North East Lincolnshire Council Planning Dept. This includes changes to materials, how things look, or any structural work.
- Try to keep and fix original parts of the building whenever possible. Use materials that closely match the original and use traditional building methods.
- Where possible ensure that work is carried out by contractors who are competent to work on heritage structures.
- Keep good records of any work done. Take notes about what was done, when, and what was found. Take photos of any problems or repairs for future reference. This could help with future interventions.
- Make sure to send all required documents and photos to the council or relevant authorities as part of the approval process.

## **7. Record Keeping**

Should you decide to sell the property in the future, the information pack required for new owners is commonly referred to as a “Property Information Pack” or “Seller’s Pack.” This may include documents such as the Townscape Heritage Grant documentation including the grant and technical guidelines, logbook of maintenance, inspection records, details of repairs, approvals from the council, guarantees, the guidance booklet and any other documentation related to the property's upkeep and compliance. For listed buildings or heritage properties, these records are particularly important as they demonstrate the care taken to preserve the structure and adhere to legal requirements.

Therefore, maintaining a logbook of inspections, cleaning, and repairs to the cast iron could provide useful in the future.

Try and photograph any issues and repairs carried out for reference

## **Useful links for information**

[Metals in Conservation | Historic England](#)

[Other Garden Features | Historic England](#)

[Maintaining and Repairing Coatings on Iron Structures](#)

[Painting Historic Ironwork](#)

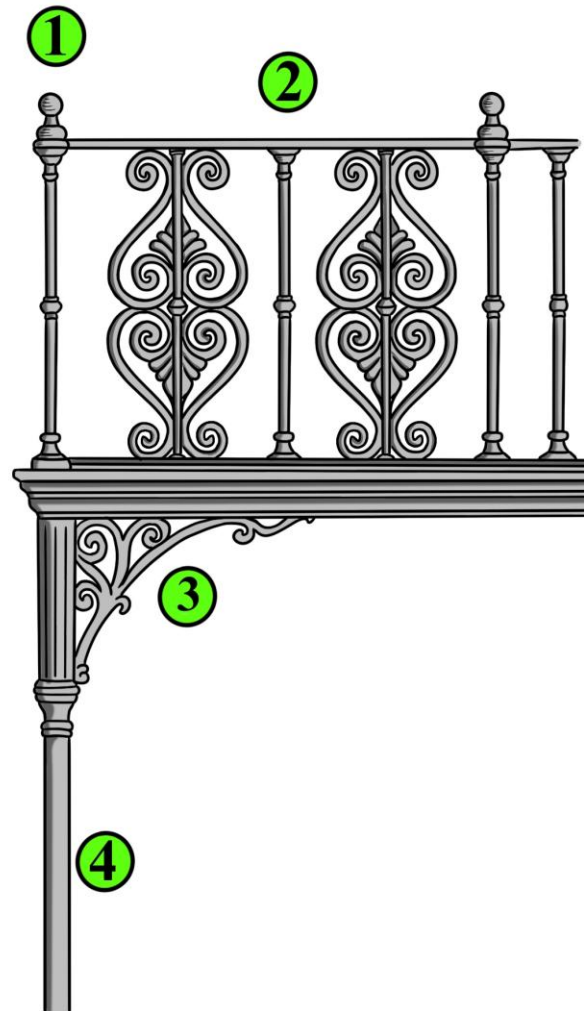
[Planning and Building Control | NELC](#)

[Heritage and Conservation NELC](#)

[Cleethorpes Townscape Heritage Programme | NELC](#)

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## Example of a cast iron framework



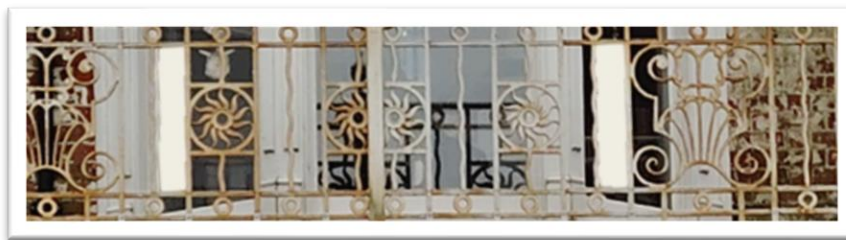
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1. Post
2. Panel
3. Spandrel Bracket
4. Column

## Photographic Examples of Common Issues with cast iron



Examples of rust spotting and vegetation growth



Example of cast iron which has been stripped back to the metal and not had the correct propriety coatings applied for a marine environment



Example of fractured cast iron which required specialists to repair

## Maintenance List Tick Box

### 1. Rainwater Goods (Gutters, Hoppers and Downpipes)

Inspection Item	6-Monthly ✓	Annual ✓	Comments / Actions Required
Gutters free from leaves, sand and debris	<input type="checkbox"/>		
Hopper outlets clear and draining correctly	<input type="checkbox"/>		
No visible leaks or overflow during rainfall	<input type="checkbox"/>		
Downpipes tested and free-flowing		<input type="checkbox"/>	
No cracks, corrosion holes or failed joints		<input type="checkbox"/>	
Cast iron column downpipes clear (if applicable)		<input type="checkbox"/>	

### 2. Balcony Decking and Waterproofing

Inspection Item	6-Monthly ✓	Annual ✓	Comments / Actions Required
Decking surface swept and clean	<input type="checkbox"/>		
No sharp objects or damage to decking surface	<input type="checkbox"/>		
No standing or ponding water	<input type="checkbox"/>		

Decking boards are secure and in good condition		<input type="checkbox"/>	
Waterproof membrane intact with no punctures		<input type="checkbox"/>	
Underside soffit and fascia free from moisture damage		<input type="checkbox"/>	

### 3. Cast Iron Structure (Columns, Panels, Brackets)

Inspection Item	6-Monthly ✓	Annual ✓	Comments / Actions Required
Paint generally intact with no major flaking	<input type="checkbox"/>		
Small rust spots or staining noted	<input type="checkbox"/>		
No areas of exposed bare metal	<input type="checkbox"/>		
All fixings secure and present		<input type="checkbox"/>	
No cracks, fractures or separation in cast iron		<input type="checkbox"/>	
Decorative elements complete and undamaged		<input type="checkbox"/>	

### 4. Timber Elements

Inspection Item	6-Monthly ✓	Annual ✓	Comments / Actions Required
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Timber decking boards free from rot or splitting	<input type="checkbox"/>		
Painted timber surfaces sound with no peeling	<input type="checkbox"/>		
Ekki decking treated with breathable oil-based product		<input type="checkbox"/>	
Timber fixings secure with no loose sections		<input type="checkbox"/>	

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*that all works are conducted safely and in accordance with relevant legislation and building regulations.*

**Notes page for Freeholders/Leaseholders**

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