

ELGIN CARS TECHNICAL GUIDANCE

PART 5 – IRONWORK



Repairs should use appropriate techniques, methods of construction and high quality materials proven by tradition. This will normally be the same materials as were used in the original construction. Substitute or artificial materials are ineligible and their use is discouraged on grant-aided projects.

Work must be carried out in line with planning guidance, HES guidance and advice, BS 7913: The Principles of the Conservation of Historic Buildings and current Health and Safety legislation.

Ironwork

The identification of the form of ironwork to be repaired i.e. mild steel, cast iron or wrought iron should be made at an early stage to guide subsequent works.

Cast iron

1. Each project should be assessed and the most appropriate repair technique(s) employed given the application, materials and historic importance.
2. In certain circumstances cast iron may be welded by specialists using high nickel electrodes, or brazed using aluminium bronze. Plate repairs or pinning by drilling and tapping adjoining components may also be appropriate. Cold metal stitching may also be feasible.
3. Re-casting missing components using traditional techniques might also be considered. Design and quality should match existing.

Wrought iron

1. Wrought iron should be removed for repair by proven experts in this field.
2. To correctly repair wrought iron, use only suitable quality recycled wrought iron. Repairing in wrought iron is preferable to replacing in steel.
3. Pure iron has no superior corrosion resistance to steel and should not be used in preference to wrought iron for historically correct repairs.

Decorative and other metal work repair

1. Weathervanes, roof ventilation louvres, solum ventilators, railings, gates or other historic architectural ferramenta may be considered for repair as part of the eligible works.
2. Flame cleaning; needle gunning or blast cleaning may be appropriate. Chemical cleaning should be avoided, particularly for cast iron due to the porosity of the material.
3. Weathervanes may be gilded.

Metalwork protection

1. Generally new steel (not cast or wrought iron) should be galvanised following manufacture.
2. Suitable long life paint treatments for ironwork, such as zinc rich primers, and micaceous iron oxide build coats should be considered for use and applied in accordance with manufacturers' written instructions. Hard shell epoxy paints should not be used on cast iron; dry film thicknesses should strike a balance between protection and loss of detail.

Further information:

A wide range of information is available to help you plan your works. HES's guidance publications are available on 'The Engine Shed' website <https://www.engineshed.org/publications/>

