



UOA D32

ART AND DESIGN:
HISTORY, THEORY AND PRACTICE



RESEARCHER

Gordon Munro

OUTPUT TITLE

Iron: Mapping Material Practice

OUTPUT TYPE

Body of 21 Artefacts

DATE

2017 – 2020

FIG. 1

Gordon Munro, *The Genealogist* (*Searchlight, Block and Maul* and *Filter Funnel* installation), cast iron, 500 x 40 x 150cm, 2014. Image courtesy of The Royal Scottish Academy.



01 / STATEMENT

The output consists of a body of 19 sculptural works made of iron, produced by Gordon Munro in collaboration with Ewan Robertson.

The works were presented in two solo exhibitions – *Iron: Origins and Destinations* at Edinburgh Sculpture Workshop, 2017, and *Iron: Artefacts and Actions* at Park Gallery, Callendar House, Falkirk, 2018.

The research explores the historical, geological, social, cultural and aesthetic registers of iron and brings these findings to the contemporary practice of sculpture. By examining iron's multiple facets and roles within and beyond art, Munro and Robertson map the diverse territories that tie the art object into an expanded domain of inquiry. The research seeks to unveil diverse perspectives on and understandings of the physical world and bring new light to the complex creative potential of a singular material.

The exhibition *Iron: Origins and Destinations* was accompanied by a series of public events including a symposium, publication, practice workshops, archival film screenings and a documentary film about Munro and Robertson's practice (see Appendix, page 28).

The artists were subsequently invited to stage *Iron: Artefacts and Actions* at the historic Callendar House in Falkirk. The brief was to celebrate the 200th anniversary of Falkirk's iron industry and its global impact by creating work that responded to and explored Falkirk Community Trust's extensive Carron Works archive. A publication and public workshops accompanied the exhibition.

The complete list of 19 individual works:

1. *Searchlight*, cast iron, 70 x 20 x 20cm, 2014.
2. *Block and Maul*, cast iron, 50 x 50 x 40cm, 2014.
3. *Filter Funnel*, cast iron, 20 x 20 x 60cm, 2014.
4. *Timelines*, cast iron, 24 x 14 x 15cm, 2015.
5. *Coil*, cast iron, 23 x 23 x 10 cm, 2016.
6. *Block and Rope*, cast iron, 30 x 10 x 9cm, 2016.
7. *Book*, cast iron, 18 x 18 x 22cm, 2016.
8. *Pulse*, cast iron, 18 x 15 x 10cm, 2016.
9. *Hammer*, cast iron, 52 x 8 x 19cm, 2016.
10. *Sump*, cast iron, 20 x 14 x 28cm, 2016.
11. *Scroll*, cast iron, 30 x 8 x 8cm, 2016.
12. *Fuel*, cast iron, 60 x 30 x 30cm, 2018.
13. *Rake*, cast iron, 26 x 17 x 7cm, 2018.
14. *Sleeker I*, cast iron, 10 x 14 x 14cm, 2018.
15. *Sleeker II*, cast iron, 20 x 20 x 20cm, 2018.
16. *Sleeker III*, cast iron, 10 x 10 x 10cm, 2018.
17. *Spatula*, cast iron, 10 x 6 x 10cm, 2018.
18. *Material Book*, cast iron and cement block, 17 x 10 x 22cm, 2020.
19. *Meteorites from Wrocław*, cast iron, 20 x 10 x 10cm, 2020.

The full group of 19 works.



FIG. 2
Gordon Munro, *Searchlight*, cast iron,
70 x 20 x 20cm, 2014. Photo Gordon Munro.



FIG. 3
Gordon Munro, *Block and Maul*, cast iron,
50 x 50 x 40cm, 2014. Photo Gordon Munro.



FIG. 4
Gordon Munro, *Filter Funnel*, cast iron,
20 x 20 x 60cm, 2014. Photo Gordon Munro.



FIG. 5
Gordon Munro, *Timelines*, cast iron,
24 x 14 x 15cm 2015. Photo Gordon Munro.



FIG. 6
Gordon Munro, *Coil*, cast iron,
23 x 23 x 10 cm, 2016. Photo Gordon Munro.



FIG. 7
Gordon Munro, *Block and Rope*, cast iron,
30 x 10 x 9cm, 2016. Photo Gordon Munro.



FIG. 8
Gordon Munro, *Book*, cast iron,
18 x 18 x 22cm, 2016. Photo Gordon Munro.



FIG. 9
Gordon Munro, *Pulse*, cast iron,
18 x 15 x 10cm, 2016. Photo Gordon Munro.



FIG. 10
Gordon Munro, *Hammer*, cast iron,
52 x 8 x 19cm, 2016. Photo Gordon Munro.



FIG. 11
Gordon Munro, *Sump*, cast iron,
20 x 14 x 28cm, 2016. Photo Gordon Munro.



FIG. 12
Gordon Munro, *Scroll*, cast iron,
30 x 8 x 8cm, 2016. Photo Gordon Munro.



FIG. 13
Gordon Munro, *Fuel*, cast iron,
60 x 30 x 30cm, 2018. Photo Gordon Munro.



FIG. 14
Gordon Munro, *Rake*, cast iron,
526 x 17 x 7cm 2018. Photo Gordon Munro.



FIG. 15
Gordon Munro, *Sleeker I*, cast iron,
10 x 14 x 14cm, 2018. Photo Gordon Munro.



FIG. 16
Gordon Munro, *Sleeker II*, cast iron,
20 x 20 x 20cm, 2018. Photo Gordon Munro.



FIG. 17
Gordon Munro, *Sleeker III*, cast iron,
10 x 10 x 10cm, 2018. Photo Gordon Munro.



FIG. 18
Gordon Munro, *Spatula*, cast iron,
10 x 6 x 10cm, 2018. Photo Gordon Munro.



FIG. 19
Gordon Munro, *Material Book*, cast iron
and cement block, 17 x 10 x 22cm, 2020.
Photo Gordon Munro.



FIG. 20
Gordon Munro, *Meteorites from Wrocław*,
cast iron, 20 x 10 x 10cm, 2020. Photo
Gordon Munro.

02 / RESEARCH DIMENSIONS



FIG. 21
Iron pour at Edinburgh Sculpture
Workshop, 2017. Image courtesy
of Graeme Yule.

The output is the result of practice-based research into the aesthetic and material properties of iron.

This research is situated within the context of post-minimalist practices of sculpture that foreground iron (for example, David Smith, Anthony Caro, Joseph Beuys) as well as the tradition of the work of art as an 'everyday' object. Munro and Robertson have deepened their engagement with iron through extensive training in the challenging rigours of iron foundry practice. This has enabled them to cultivate an intensive knowledge of the material that extends beyond aesthetic, formal and visual concerns and provide new ways of working with iron and its potentials.

Notions of presence, substance, objecthood, longevity, ubiquity and elementalism provide a conceptual armature for the making of the works. The result is a series of objects ranging in dimensions and form, which test various properties and traits associated with iron – such as its nature as a tool, its ubiquity as an element fundamental to the earth's formation, and an element found in the human body.

The geological and cosmological aspects of iron's character are vital concerns for Munro and Robertson, and by bringing these concerns into conversation with the examination of iron's quotidian and workaday nature, they impart to their objects qualities at once archaic and contemporary. Through this, they expand the visual and material language of abstraction.

The research led to a body of 19 individual works. These have been exhibited both singly and in groups, with new titles - *The Genealogist* and *Ordinary Artefacts*.

03 / ORIGINALITY

Iron is often overlooked as a creative material, in part due to the technical challenges of manipulating it.

Through a working knowledge of the material and chemical properties of iron cultivated over decades, Munro and Robertson have been able to master these challenges, and explore the untapped associations of this material to bring it to new prominence within contemporary art practice.

Munro and Robertson's research is motivated by the visual potential of iron and its elemental nature. Their research extends beyond traditional foundry practice to examine the wider registers of iron in our lives. As such, over the course of the project, the artists examined diverse ideas, objects, sites, and phenomena in which iron played a prominent role, from the cultural impact of war time mining on the Scottish Isle of Raasay to the properties of magnetite used by animals to navigate magnetic pathways.

The work brings new knowledge to iron as an artistic material, as well as the idea of the 'everyday' in art: by casting banal, functional objects such as coils, hammers and spatulas in iron, the work plays with tensions between functionality and symbolism, temporariness and permanence. It also emphasises self-reflexivity as process – since many of the cast objects refer to the iron making process (*Sump, Fuel, Rake*). By juxtaposing such tool-like objects with objects that look like meteorites, the work refers to the broad spectrum of associations conjured by iron. The research also brings to visibility hidden histories of the Scottish iron industry and the communities that were part of it, presenting a new approach to sculpture as socially engaged practice.



FIG. 22
Iron: Origins and Destinations
 Exhibition, Edinburgh Sculpture
 Workshop. Image courtesy of
 Graeme Yule.



FIG. 23
Gordon Munro, *Timelines*, cast iron, 24 x 14 x 15cm 2015. Photo Gordon Munro.



FIG. 24
Gordon Munro, *Coil*, cast iron, 23 x 23 x 10 cm, 2016. Photo Gordon Munro.



FIG. 25
Gordon Munro, *Block and Rope*,
cast iron, 30 x 10 x 9cm, 2016.
Photo Gordon Munro.



FIG. 26
Gordon Munro, *Fuel*, cast iron,
60 x 30 x 30cm, 2018. Photo
Gordon Munro.

04 / RIGOUR



FIG. 27
Objects selected from the
Callendar House Archive, 2017.
Photo Gordon Munro.

Research was conducted in the archives of Callendar House and National Museums of Scotland, the BFI London, and the National Library of Scotland's Moving Image Archive.

Research trips were made to Raasay, Scotland, to investigate the wartime iron mine and explore the cultural impact of wartime mining on the community and to Hamburger Bahnhof (Berlin) to investigate Joseph Beuys' seminal iron work *Tramstop* (1976). These trips were documented in a commissioned film by Rachel Nolan (see Appendix, page 28).

Responding to Falkirk Community Trust's extensive iron industry related archives the artists produced six new works specially for the Callendar House exhibition. These works were made in response to historical pieces of foundry equipment selected from the archive. The subsequent exhibition at Callendar House developed the research as a form of social and community engagement, since Falkirk is the site of much of industrial iron innovation.

The archival material was used as source material to inspire new works that celebrated not only iron but also the people who used these tools and worked in the foundry industry. This was achieved by creating sculptural patterns that echoed the shape, form and scale of tools that were used in the moulding and casting process, and then giving them a new elevated status by casting them into the material they once helped shape. Munro and Robertson used iron extracted from discarded cast iron objects that had been made in foundries similar to the historical foundries that they researched. Through the process of casting, these unwanted and forgotten elements were melted down and given new purpose and agency as artworks.

Research into the historical roots of ironworking was key to Munro and Robertson's approach. The British Film Institute archive films brought insight into historical tools, processes and techniques that they were able to employ in the creation of their own works. The footage also enabled new understanding of the relation between iron workers, their material, their community, and the global influence of the Scottish iron foundry industry.

Dialogue with scientists and curators with expertise in mineralogy (Peter Davidson, Senior Curator of Mineralogy, NMS and Gemma Cruikshanks, Post-excavation Officer for National Museums Scotland) was also an important part of the research process.

The process of making individual works combined traditional iron foundry practice and moulding techniques with contemporary studio practice. Munro and Robertson developed expertise in a number of techniques: green sandcasting, resin bonded sand casting, direct burn out casting, and ceramic shell and lost wax methods of mould making. In collaboration with Edinburgh Sculpture Workshop, they built a gas-fuelled furnace capable of melting iron for casting.

As a creative material, iron presents a number of technical challenges and limitations: brittleness, high melting point, the fact it cannot be welded or patched. As such, Munro and Robertson needed to find novel ways of working with the material, and harnessed these limitations as new aesthetic possibilities.

FIGS. 28–31
Exploring Raasay iron mine and
collecting iron ore samples, Raasay
field trip, 2016. Images courtesy
of Rachel Nolan.





FIG. 32
Iron casting at Edinburgh College
of Art, 2017. Image courtesy
of Kate Ive.



FIG. 33
Resin mould making at Edinburgh
Sculpture Workshop, 2017. Photo
Gordon Munro.

FIG. 34
Gordon Munro *Ordinary Artefacts*,
120 x 30 x 160cm, cast iron, 2017.
Image courtesy of Royal Scottish
Academy.



05 / SIGNIFICANCE

Iron: Origins and Destinations was a commission by Edinburgh Sculpture Workshop. It was held at Edinburgh Sculpture Workshop, 6 – 20 May 2017 and had 1,200 visitors

The exhibition was accompanied by a public symposium, *Iron: Origins and Destinations Symposium*, in partnership with Edinburgh Sculpture Workshop. This hosted 50 international delegates from a wide range of disciplines and arts organisations, taking the exhibition as the focal point. Munro and Robertson also ran a series of iron casting workshops.

Munro and Robertson were subsequently invited to stage the exhibition as a solo show at Falkirk Park Gallery, Callendar House, Falkirk. 27 January – 27 May 2018.

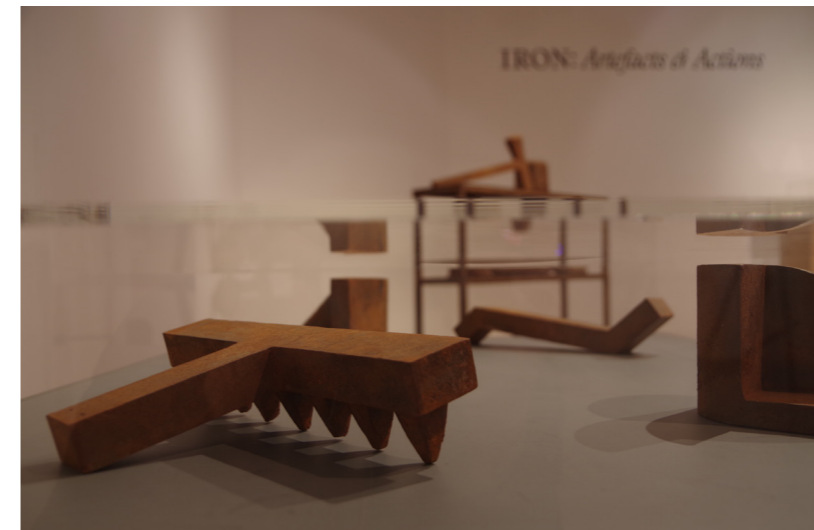
The exhibition was a focal point for Falkirk's community and the Falkirk Community Development Trust's celebration of the 200th anniversary of its iron industry. It was accompanied by a publication and had 15,333 visitors. The project was funded by Edinburgh Sculpture Workshop and Falkirk Community Trust, with support from the University of Edinburgh.

The works have also been shown in different groupings, at The Royal Scottish Academy, 2014 and Wrocław Academy of Art and Design, Poland, 2020.

FIG. 35
Iron: Origins and Destinations,
Edinburgh Sculpture Workshop.
Image courtesy of Graham Yule.



FIG. 36
Gallery view, *Iron: Artefacts and Actions*,
Callendar House, 2018.
Image courtesy of Ewan
Robertson.



'I remember the exhibition distinctly. The appearance of the individual pieces was evocative of the stuff that used to lie around my part of Falkirk when the foundries were still going. The mysterious shapes of the small pieces reminded me of the fettling stars that we used to play with when we were children.'

George Burt, Falkirk resident



FIG. 37
Iron: Artefacts and Actions,
The Park Gallery, Falkirk,
2018. Image courtesy of
Ewan Robertson.

FIG. 38
Mould preparation, Wrocław
Academy of Art and Design,
2019. Image courtesy of Ewan
Robertson.



FIGS. 39–42
Clockwise from top left:
Pouring ceramic shell moulds.
Ceramic shell moulds cooling.
Clearing furnace at the end of the pour.
Objects in sand mould.
Photos Gordon Munro.

FIG. 43
Iron casting workshop,
Wroclaw Academy of Art
and Design, Poland. 2019.
Photo Gordon Munro.



06 / APPENDIX

Film, exhibiton & workshop

<https://edinburghsculpture.org/news-featured/iron-origins-destinations/>

Interview

Wood, S (2017) *Iron: Origins & Destinations* [Pamphlet]. Edinburgh: Edinburgh Sculpture Workshop

Documentary film

Iron: Origins and Destinations documentary.

https://media.ed.ac.uk/media/t/1_z4ka16c3

Related publications

Iron: Artefacts & Actions, 2017. Gordon Munro and Ewan Roberston. Writing by Kamini Vellodi with additional text from Daisy Lafarge.

Commissioned writing

Homo Ferens, Daisy Lafarge, 2017.

<https://edinburghsculpture.org/news-featured/iron-origins-destinations/>

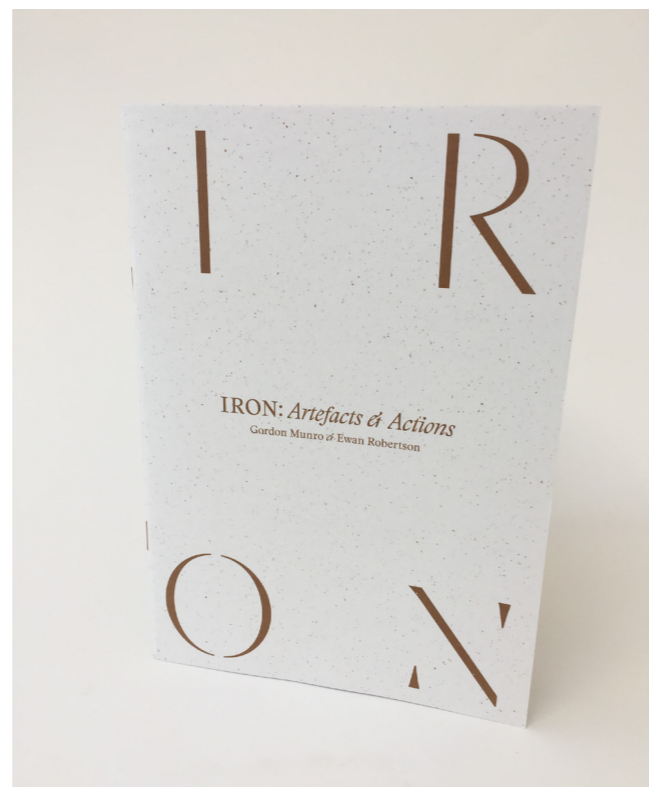


FIG. 44
Iron: Artefacts & Actions
publication. Photo Gordon Munro.



FIG. 45
Still from *Iron: Origins and Destinations* documentary.
Image courtesy of Rachel Nolan.



FIG. 46
Honey bees, still from *Iron: Origins and Destinations* documentary.
Image courtesy of Rachel Nolan.



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