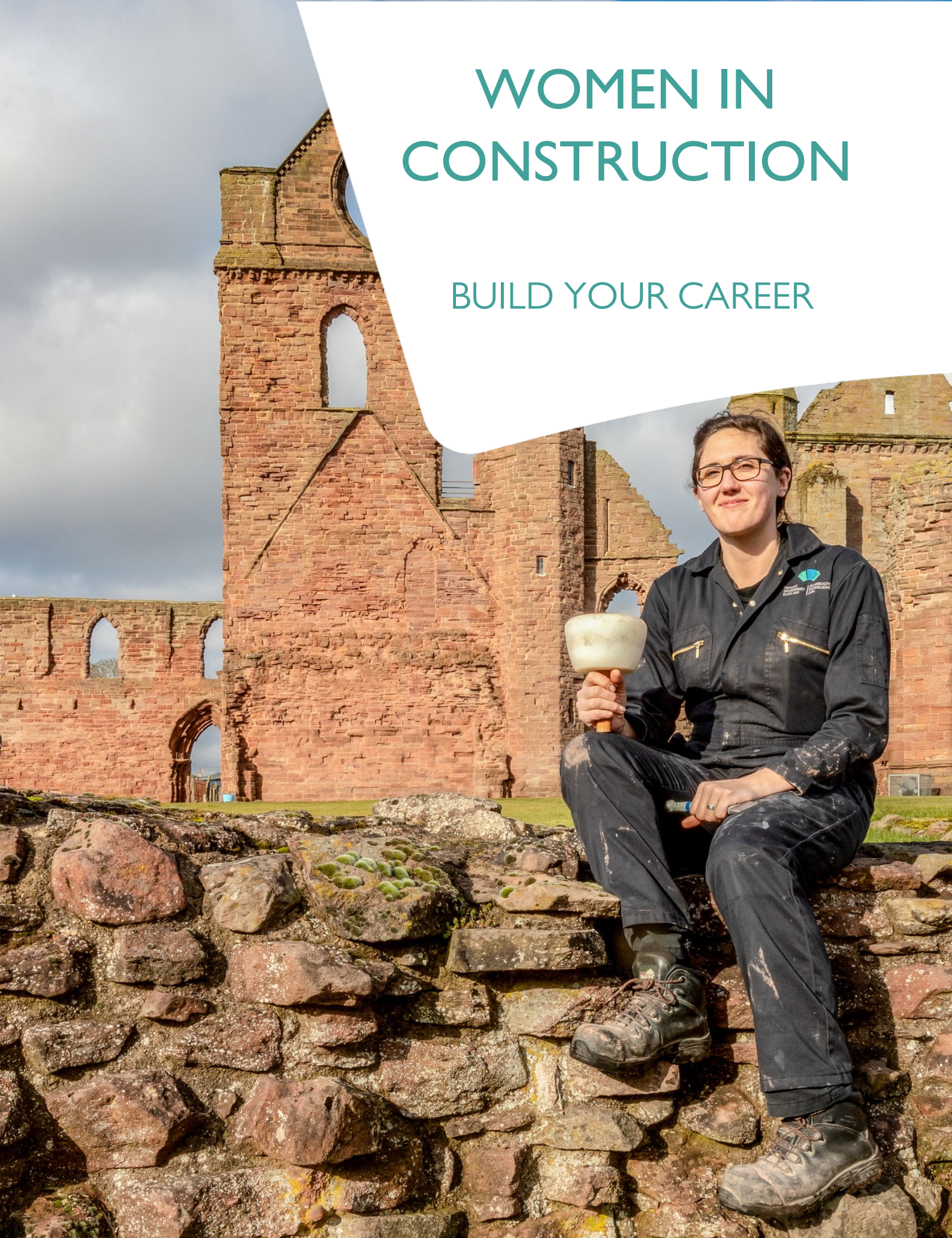


# WOMEN IN CONSTRUCTION

BUILD YOUR CAREER



HISTORIC  
ENVIRONMENT  
SCOTLAND

ARAINNEACHD  
EACHDRAIDHEIL  
ALBA



Thatching a traditional thatch roof at Taigh an-t Seanachaidh, Aldonia, Muthill, Crieff



Stonemason Heather Griffith at Elgin Masonry Training Facility stone yard

## Why consider a career in traditional building conservation?

Nearly one in five of Scotland's buildings is traditionally constructed. This means they were built before 1919 using materials and skills that have been used for centuries. Research shows that more than half of these buildings need urgent repair. The impacts of climate change, on top of their age, means that many traditional buildings are more at risk than ever. As a result, the demand for skills to maintain and upgrade these buildings is growing.

## Career choices

By training in traditional building and conservation skills, you'll be helping to meet a skills shortage and will have the chance to protect traditional buildings across Scotland. Several careers are vital to building conservation. Historic Environment Scotland supports apprenticeships and traineeships in:

- Stonemasonry
- Joinery
- Electricians
- Painting
- Gardening
- Climate change impacts and adaptation
- Technical conservation research
- Building materials
- Conservation science
- Digital documentation.

## Women in construction

There is a shortage of women in traditional skills, especially construction skills.

Currently, [women make up only around 6% of the UK's builders, plumbers, and plasterers](#). Despite decades of campaigning by [Women and Manual Trades](#) and efforts by some public sector employers and further education colleges, women remain more under-represented in the construction trades than in other engineering and STEM-related skilled crafts. In 2015, women made up only [0.5% of manual occupations in construction](#), and around [2% of Modern Apprenticeships in construction](#) in 2021.

This booklet tells you some of the stories of women in traditional buildings and skills. There are links to blogs, films and other resources to help you explore future learning and career paths in construction and conservation.

## Isabella Twaddle and Scotland's women plumbers



Caption: Isabella Twaddle, from 'The plumber in Glasgow: the history of the firm of Hugh Twaddle & Son, Ltd from 1848 to 1948', by Jack House.

Have you heard the one about women plumbers? Probably not, because women have historically been under-represented in the trades which help to build, repair, and maintain property in Scotland.

But just because they were under-represented doesn't mean they weren't there. In this Engine Shed blog, read all about the women plumbers and gasfitters of Scotland, running successful businesses in the mid-late 1800s. Discover the stories of women like Elizabeth Pearson and Isabella Twaddle, and how the under-representation of women in trades is still a problem today.

Scan the QR code below or follow the link to:

[blog.engineshed.scot/2023/03/07/isabella-twaddle-and-scotlands-women-plumbers](https://blog.engineshed.scot/2023/03/07/isabella-twaddle-and-scotlands-women-plumbers).



## Meet Scotland's Arts and Crafts women



Caption: Back row: Frances Macdonald. Middle row (left to right): Margaret Macdonald, Katherine Cameron, Janet Aitken, Agnes Raeburn, Jessie Keppie, John Keppie. Front row (left to right): Herbert McNair, Charles Rennie Mackintosh. Image: public domain.

The Arts and Crafts movement gained momentum in Scotland from the 1880s. It was a reaction against the Industrial Revolution which encouraged mass production and uniformity.

Up until this time, women gained little recognition for their crafts, but during the Arts and Crafts movement women started to gain acceptance for their work.

In this Engine Shed blog, discover the work of just some of these women, Margaret and Frances McDonald and Jessie Newbery, and their contribution to artistic craft skills in Scotland.

Scan the QR code below or follow the link to:

[blog.engineshed.scot/2019/11/13/scotlands-arts-crafts-women](http://blog.engineshed.scot/2019/11/13/scotlands-arts-crafts-women).



## A day in the life of a conservation scientist



Caption: Sarah working inside our conservation science lab at the Engine Shed in Stirling.

What is a conservation scientist? What do they do? And how do they do it? Find out from Sarah Hamilton, one of four scientists based at the Engine Shed, our building conservation centre in Stirling.

From analysing some of the most spectacular and rare fossils in the British Isles, to data processing from the kitchen table in the time of COVID-19, read this blog to learn more about the life of a conservation scientist.

Scan the QR code below or follow the link to: [blog.engineshed.scot/2021/02/11/day-in-life-conservation-scientist](https://blog.engineshed.scot/2021/02/11/day-in-life-conservation-scientist).



## Margaret, Lady Moir: champion of women engineers



Caption: Lady Margaret Moir.

As the Women's Engineering Society celebrates its centenary, Frank Hay looks back at the life of Lady Moir and the part she played in opening up a male dominated profession to women. The story begins with the construction of UNESCO World Heritage Site the Forth Bridge.

Scan the QR code below or follow the link to:  
[blog.historicenvironment.scot/2019/04/lady-moir](http://blog.historicenvironment.scot/2019/04/lady-moir).



## Other resources

Sign up to the Engine Shed newsletter to receive updates about events and opportunities in building conservation: [engineshed.scot/newsletter-registration](https://engineshed.scot/newsletter-registration).

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Training opportunities and career advice

### Build a future from Scotland's past

Visit our Engine Shed website to find out about training and skills development within the historic environment in Scotland. Learn about:

- Shaping the future of building conservation
- Working in the Historic Environment Sector, including how to get involved, the types of jobs available, ways you can train for your career, tips for career planning, and other organisations to find out more.
- Professional development in building conservation
- Providing training in building conservation
- Resources for teachers
- Fun for families.

Scan the QR code below or follow the link to: [www.engineshed.scot/learning/skills-and-training-advice](https://www.engineshed.scot/learning/skills-and-training-advice).



### Learn a building conservation skill

This is an important, challenging and rewarding time to train in building conservation skills.

Visit our HES website to discover why you should learn a building conservation skill, and how to become an apprentice, trainee, or craft fellow, and how to collaborate with us.

Scan the QR code below or follow the link to: [www.historicenvironment.scot/learn/skills-and-training/learn-a-building-conservation-skill](https://www.historicenvironment.scot/learn/skills-and-training/learn-a-building-conservation-skill).





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## Online exhibitions

### The women of Scotland

Discover the dramatic stories and significant achievements of Scotland's well-known women, alongside the unsung heroines who quietly shaped the country we know today, including:

- Scotland's STEM pioneers
- Makers and creators
- Women's work.

Scan the QR code below or follow the link to: [www.historicenvironment.scot/archives-and-research/online-exhibitions/the-women-of-scotland](http://www.historicenvironment.scot/archives-and-research/online-exhibitions/the-women-of-scotland).



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## YouTube playlist

### I make history

Stonemasons, blacksmiths, digital innovators, modern apprentices and more. Hear directly from those working in conservation and heritage about what their jobs are really like.

Scan the QR code below or follow the link to: [www.youtube.com/watch?v=yuQ7PrnNnko&list=PLjP3TtHXSFfU5qicpljctlhXCQ6Q\\_jZF8](http://www.youtube.com/watch?v=yuQ7PrnNnko&list=PLjP3TtHXSFfU5qicpljctlhXCQ6Q_jZF8).



## Discover heritage careers: working with Scotland's history and heritage

Heritage is all about learning from the past, to inform how we live today. But what's it like working with Scotland's history and heritage? Meet the people across the country caring for heritage, and sharing Scotland's story, to find out.

Scan the QR code below or follow the link to:

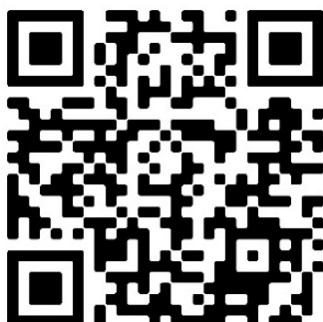
[www.youtube.com/watch?v=QbCKOAHg3Vw](http://www.youtube.com/watch?v=QbCKOAHg3Vw)



## Young people in conservation: working with Historic Environment Scotland

As part of Year of the Young People 2018, young people working in conservation gathered at the Engine Shed to talk about careers in conservation.

Scan the QR code or follow the link to: [www.youtube.com/watch?v=UGCfY46Q\\_k0](http://www.youtube.com/watch?v=UGCfY46Q_k0)



## How to become a stonemason: pathways to traditional Scottish building skills

Meet Lara, who has been working as a stonemason for eight years. Find out how Lara got into stonemasonry, learn about the different types of stonemasons, and discover what it's like being an apprentice.

Scan the QR code below or follow the link to: [www.youtube.com/watch?v=ZF7T-3P\\_pQg](http://www.youtube.com/watch?v=ZF7T-3P_pQg)



### **A minute with Blacksmith Victoria Martin**

Meet Historic Environment Scotland trainee blacksmith, Victoria Martin. Victoria uses this traditional technique to create bespoke pieces of art that decorate and protect buildings. From gates to railings and even sculptures, see blacksmithing in action.

Scan the QR code below or follow the link to:

[www.youtube.com/watch?v=7jb0QTREMZk](http://www.youtube.com/watch?v=7jb0QTREMZk)



### **A minute with Signwriter, Ross Hastie**

Ever looked up at the traditional shopfronts around you and wondered how their beautiful signs were created? Meet signwriter Ross Hastie in our film to find out about how this traditional skill is still being used today to give individuality to shops across Scotland.

Scan the QR code below or follow the link to:

[www.youtube.com/watch?v=BndCXYeopUI](http://www.youtube.com/watch?v=BndCXYeopUI)



### **A minute with Stonemason Charlie Brough**

The short video is from Charlie Brough, a stonemason located at our depot in Oban, Argyll. Check out what she has to say about being a stonemason today.

Scan the QR code below or follow the link to: [www.youtube.com/watch?v=ABlqPzJjeeE](http://www.youtube.com/watch?v=ABlqPzJjeeE)

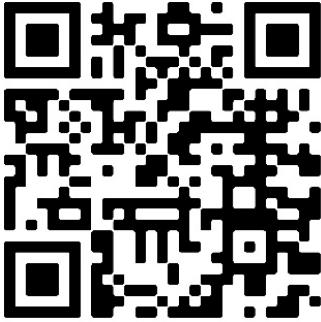


## A minute with Apprentice Stonemason Megan Crawford

Megan, an apprentice at Blackness Castle near Falkirk, tells us why she loves working with stone.

Scan the QR code below or follow the link to:

[www.youtube.com/watch?v=mG4TijzgP2M](https://www.youtube.com/watch?v=mG4TijzgP2M)





Blacksmith, Stacey Hibberd, forging a piece of steel, St Ann's Maltings



Inspections taking place at Rothesay Castle



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