

Women's Engineering Society Centenary 2019

WES founded in the UK on
June 23rd 1919.

The first women's engineering
society in the world.

Why does Britain now have the
lowest proportion in Europe
(c.12%) of women in engineering?



W.E.S. annual conference 1924. Image courtesy of W.E.S.

Women's Engineering Society (WES)

- **Formed on 23rd June 1919**
- **Objects**
 - Promote the education of women in engineering
 - Advance the education of the public about women in engineering
 - Relieve poverty amongst women engineers

Today women still only make up just 12% of the professional engineering workforce in the UK, possibly the lowest rate in Europe

WES Centenary Trail

2019 is the centenary of the Women's Engineering Society, founded with the intention of supporting women into employment and education in the varied fields of engineering. WES has had many notable members, yet the only member who features widely in the popular historical narrative is pilot Amy Johnson.

The WES Centenary Trail aims to redress this by creating an interactive online map recording and sharing the history of WES with a wider public, building an audience for local and women's history connected with WES from new and improved Wikipedia entries, based on research into the WES and other archives. The Wikipedia entries will be generated by volunteers, trained and engaged through Wikithons around the country and entries will be pulled through to populate the map with 200 pins to explore.

The project is sharing these new and improved histories through local events, displays, social media and a small PR programme.





WES Centenary Trail

We are organising a Lottie Doll tour as part of the WES Centenary Trail, aimed at encouraging families to think of engineering and its heritage as subjects just as interesting for girls as for boys.

Follow the hashtag [#WESLottieTour](#) or if you would like to borrow a Lottie Doll to take part in the 2019 Lottie Tour please do sign up.

As part of the WES Centenary Trail, we are posting daily stories of women engineers who belonged to or were connected with WES on [@WESCentenary](#) on Twitter or [@wes_centenary](#) on Instagram [#WES100](#)

The WES Centenary Trail is funded by a grant from the National Lottery Heritage Fund, and supported by some brilliant partners including Heritage Open Days and Wellcome Collection & University of Leeds Electrifying Women



AHRC project: Electrifying Women: Understanding the Long History of Women in Engineering

Public engagement work in partnership with WES, IET, Wikimedia & Science Museum:

Aims:

- to share stories of women's collaborative participation in engineering from 19th century
- to show where more research is needed, how it can be done & how shared
- to enhance Wikipedia pages on women in engineering history through wikithons
- to develop inclusive forms of participation e.g. creative writing and drama
- to support recruitment of women to engineering through heightened historical awareness

Resources:

- WES archive & Caroline Haslett papers, Archives of Institution of Engineering & Technology
- *The Woman Engineer* (1919-) at <https://www.wes.org.uk/content/journal-archive>

Project team

- **Graeme Gooday** (University of Leeds) PI - [Domesticating Electricity](#)
- **Elizabeth Bruton** (Science Museum) Co-I – Curator of Engineering
- **Emily Rees** (University of Leeds) - Research and Engagement Assistant
- With much help received from Nina Baker, Helen Close, Patricia Fara, Sophie Forgan, Henrietta Heald, Sally Horrocks, Anne Locker, Alice White & many more
- Programme of lectures and events around the UK June 2019 – February 2020
- Funding to travel around the UK to anywhere willing to host us!
- Participation in events welcome – your ideas for new events welcome too

Twitter: [@ElectrifyingWmn](#)

Email: electrifyingwomen@gmail.com



History of Women in Engineering



Graeme Gooday
&
Helen Close

Caroline Haslett, First WES Secretary

WES visit to a Birmingham power station,
c.1938 Image source: NAEST 092/07/01
Caroline Haslett papers, IET Archives

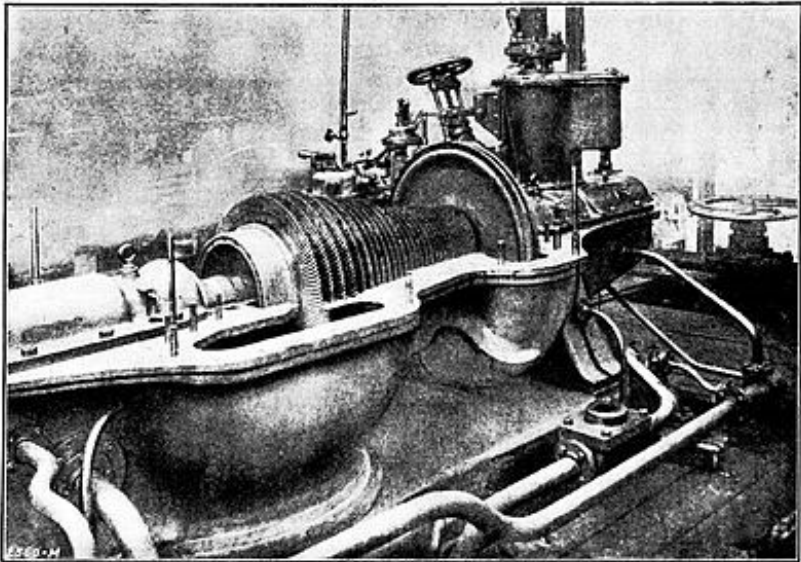


The Women's Engineering Society 1919

- Launched on 23rd June 1919 by six eminent and wealthy women:
- Lady EG Shelley-Rolls, Monmouth; Rachel Parsons, London; Lady Katharine Parsons, Newcastle-on-Tyne; Janetta Mary Ormsby, Newcastle-on-Tyne; Margaret Rowbotham, Kirkcudbright; Margaret Moir, SW London; Laura Annie Willson, Halifax
- To promote the study and practice of engineering among women; and...
- To enable technical women to meet and to facilitate the exchange of ideas respecting the interests, training, and employment of technical women and the publications and communication on such subjects
- Rachel Parsons (Univ Cambridge Mech Sci) as the first WES president
- Lady Parsons as W.E.S.'s chief financial sponsor, paying Haslett's wages
- Caroline Haslett as Secretary 1919-1929 and editor of *The Woman Engineer*

Hon. Charles Parsons & Katharine Parsons

The steam turbine engine
and 'Turbinia' c.1894



Lady Parsons documented in the *Transactions of the North East Coast Institution of Engineers and Shipbuilders*

Lecture: 'Women's Work in Engineering and Shipbuilding during the War' July 1919

'It has a been a strange perversion of women's sphere – to make them work at producing the implements of war and destruction and to deny them the privilege of fashioning the munitions of peace'

Discussion: James Driver (Technical College, Loughborough) agreed: 'during the latter part of the war, women had demonstrated in a most remarkable manner their ability to enter the engineering profession successfully.'

Obituary 'The Hon. Lady Parsons (Hon.Fellow)' published in 1933

'She was always at [Sir Charles Parson's] side, always there to help him when he needed her, always supporting him with her really powerful mind and ready tact, and perfect understanding.

Lady Parsons was the possessor of a remarkable character, she was almost fiercely independent... She had in many ways a very masculine brain - and a love of business organization and leadership.

Caroline Haslett & the Cochran boiler company 1914-19

- Suffragette in 1913, WW1: Caroline Haslett trains for secretarial work
- Join Cochran Boiler Co. as junior clerk drawing up specifications
- Manages London office in 1918, supplying boilers to the War Office
- Moves to Cochran's Scottish factory to learn practical boiler making: designed and sold some using genderless name 'C.Haslett'
- After WW1 Haslett is kept on, while many women obliged to leave
- Engineering journals advertise February 1919:
 'Required: Lady with some experience in Engineering Works a
 Organizing Secretary for a Women's Engineering Society'
- Lady Parsons hires Haslett: experience of shorthand & running an engineering works



Laura Willson
Halifax house builder

Caroline Haslett
WES Secretary

Margaret Partridge
Consulting engineer

Margaret Partridge among dozens of women recruited by Haslett in early days of WES.



Early patrons and Presidents: Rachel Parsons (above)

Lady Margaret Moir
'engineer by marriage'

Common themes
WW1, suffrage, cars...



Laura Annie Willson, WES President 1926-28

From Halifax textile worker to suffragette
From engineering spouse to independent builder

**WORKMEN'S
HOUSES.**

*Modern.
Attractive.
Durable.*

Can be built in
quantities of 48.



Price £400 each (Freehold).
ENQUIRIES SOLICITED.

LAURA A. WILLSON, M.B.E., Jumps, Halifax.



Amy Johnson/Mrs Mollison WES President, 1935-37

- Bringing aeronautics to WES
- 1935: Mr & Mrs Mollison debate record-breaking flights

The series of debates and discussions on subjects of aeronautical interest, arranged throughout this Spring, is of course the direct result of our having Mrs. Mollison as our President. Not only was the original idea hers, but she is herself taking part in as many of the meetings as her other engagements will permit.

The first Debate, held on Tuesday, January 22nd, was a discussion between Mr. and Mrs. Mollison on the value of record-breaking flights, Mrs. Mollison proposing the motion "That record-breaking flights no longer serve a useful purpose," and her husband opposing. The Viscountess Elibank, J.P., was in the chair.

Mollisons divorce in 1938 and Amy Johnson returns to flying - killed in ware service 1941



Miss Johnson shortly after her return from her first flight.



Mrs. J. A. Mollison, C.B.E.

Amy Mollison, be re-elected for the coming year.



Verena Holmes

President of WES 1930-1
First practising UK female
mechanical engineer



Monica Maurice

Yorkshire Lady of the
Lamps

A WOMAN ENGINEER TO-DAY.

Miss H. M. MAURICE, Comp.I.E.E., on the extreme left, at the Convention of Mining Electrical Engineers. Miss Maurice is the only woman member of the Association.

Photograph by courtesy "Electrical Review."



Images from <https://www.magnificentwomen.co.uk/engineer-of-the-week/55-helen-monica-maurice>



Mary Maxwell Channell

A tale of bigamy, bankruptcy,
blackmail and bombs

Mary Maxwell Channell runs a
factory on lines which will appeal to every woman,
and makes of her workers willing partners

A WOMAN IN INDUSTRY

by ALICE HOOPER BECK

EVERY child, boy or girl, wants to see the wheels go round, but long before she was out of ankle-straps Mary Channell wanted to know *how* they went round, why the bridge over the stream near her Lancashire home stayed up, what made her mother's sewing machine go.

Fortunately, she was not fobbed off with vague, unsatisfactory replies to these burning questions. Her father knew the answers and he made them clear. In his spare time he made beautiful furniture from traditional designs. Mary needed no encouragement to help him. When you work a lathe, make a fine chair with slender tapering legs and find it will support the weight of a heavy man you begin to understand the mystery of a bridge or a sewing machine.

At sixteen Mary Channell went to the Technical School of Engineering. When she had finished her training she spent some time doing experimental work. By 1938 she had several patents to her credit and was running a small, flourishing business which turned out plastic combs and ornaments. She was twenty-three

and war was on the way. When this young Lancashire girl told hard-headed Midland executives that women would be needed in every kind of industry and should be trained as soon as possible they laughed. At that time any job a woman did in an engineering works—if she was allowed inside the works at all—was about as simple as daisy-chain picking and just about as stimulating.

When the Government called for a vast increase in essential production Mary Channell did not say 'I told you so.' She was a trained engineer, member of the Women's Engineering Society. In the village of Flore, in Northamptonshire, she had a cottage and it was here that she started her engineering works. She had one foot lathe, a general fitter, a boy and a labour force of three women whose only experience of engineering lay in getting the wash house boiler to work. From these small beginnings she developed an enterprise which in due course turned out twenty million vital parts for the Ministry of Aircraft Production, including complicated secret parts for fire bombs.

She had no proper premises so she used old barns, wash houses, a Salvation Army hut. Because she loved the beautiful old village she had no intention of spoiling its looks with her workshops, so thatched roofs were left on buildings she converted as the business expanded, and when she built a modern factory for thirty new machines it was cleverly sited behind the eighteenth century house which was her own home and the company's offices.

PEOPLE, including the Labour Exchange, said she would never find workers in Flore and its neighbourhood. She did, but in her own way. In communities where the Labour Exchange despaired of getting a single worker she put up attractive posters setting out what she had to offer. The shops that displayed the posters got half a crown for

every recruit they brought in. On the first day sixty women applied for jobs. She tailored the work to suit the time women could spare for it and made notable success with part time labour. She employed elderly women—one who could not walk but who was wonderful at her job came to the factory in a bath chair! Women who could only work in the very early morning or in the evening were made welcome.

All this took time and trouble to arrange but it was worth it. The plant ran twenty-four hours a day and throughout the war there was a waiting list for employment in all Mary Channell's factories. When the war ended she was given the M.B.E. for her services for industry.

The men of Flore came back from the Services and the women went home to look after them, but in the Erinex works



Longer term view of WES

- World War 2 brings only short-term opportunities for women to take leading role in engineering
- Post-war Britain gave less prestige to engineers than scientists
- Less British establishment support for WES in 1945 than in 1925
- Caroline Haslett drawn in to many other roles away from WES

- But: collegiality and warm mutual support very sustaining for WES
- Outlived indirect rival EAW by continuing to adapt to new challenges

