

7 Model of Hydraulic crane

Location: First floor, Tyneside Challenge

This hydraulic crane was Armstrong's first commercial success. It was designed to speed up the loading and unloading of ships on the Newcastle quayside.



It was based on the principle that the pressure of water in a pipe can create a force that is powerful enough to move machinery. Armstrong demonstrated this working model of his crane at Newcastle's Literary and Philosophical Society (the Lit & Phil) in 1845.

8 Armstrong No. 1 Gun

Location: Tyneside Challenge

Armstrong was 'the inventor of modern artillery' said The Times on his death in 1900.



It all began with the Armstrong No. 1 Gun, a light field gun developed after the Crimean War (1854–56), where the British army was still using old-fashioned and heavy canon. Armstrong's gun was designed to fire elongated 5-pound shells rather than round balls. Its success made the inventor world-famous. He later went on to design heavy naval guns weighing up to 111 tons.

9 Model of Baikal

Location: Tyneside Challenge

Baikal was an ice-breaking ferry built at the Armstrong Mitchell yard at Low Walker to carry carriages across Lake Baikal in Siberia. In the 1890s the 30 mile wide lake, frozen for half the year, was preventing the completion of the Trans-Siberian Railway.



The vessel was constructed in Newcastle and then dismantled for transportation. The various pieces, weighing more than 3,000 tons in total, were shipped to St Petersburg, from where they were transported in 6,900 packages by rail and river to Irkutsk. Then they traveled by pony sledge to the lake shore, where the ship was reassembled and launched in June 1899.

10 Armstrong Whitworth Car

Location: Tyneside Challenge

'Built like a battleship' was how this car was described. Within a few years of its first appearance in 1906, the Armstrong Whitworth car had established itself as one of the leading makes. This car was made at Scotswood in about 1911. The list of optional extras included silk or leather cushions, fleece rugs and flower vases. Only five Armstrong Whitworth cars are known to have survived, three in Britain and two in Australia. The Armstrong Whitworth brand became Armstrong Siddeley in 1919, when production moved to Coventry.



Free talks and events

Find out more about William Armstrong at these free events:

Free Family Activities

12 and 23 August and 26 October
10.30am - 12.30pm and 2 - 4pm

Free Armstrong-themed craft activities.

William Armstrong: Magician of the North

Tuesday 28 September, 6.30pm – 8.30pm

Book launch and discussion with author Henrietta Heald and Dr Penny Smith, Principal Lecturer in Creative Writing at the University of Northumbria.

To book a free place please
email: linda.grogan@twmuseums.org.uk

William Armstrong: Hydraulic Engineer

Tuesday 5 October, 6.00pm

Discover what we can learn today from Armstrong's water powered machines, with Robin Wright of the National Trust at Cragside.

No booking required

Armstrong and Innovation: Electricity from Sunlight Today

Tuesday 23 November, 6.30pm

Explore the history and the future of solar electricity with Professor Nicola Pearsall of Northumbria University.

To book a free place please
email: linda.grogan@twmuseums.org.uk

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Discover a genius in his time

William George Armstrong (1810–1900) was an inventor, engineer, scientist, industrialist and benefactor who symbolises the energy and drive of the Victorian Age. He brought global fame to his great Elswick Works on the north bank of the Tyne, and in 1887 he was made Baron Armstrong of Cragside.

Follow this trail around the Museum to discover ten exhibits that illustrate Armstrong's outstanding achievements and his contribution to the history of Tyneside, his country and the world.



1 Royal visit of 1906

Location: Ground floor, Newcastle Story

Cheering crowds and lavish decorations greeted King Edward VII and Queen Alexandra when they visited Newcastle in July 1906 to open Armstrong College. It was founded by William Armstrong in 1871 as the College of Science and later became Newcastle University. The King also opened the Royal Victoria Infirmary, to which Armstrong had donated £100,000 (about £5.75 million in today's money).



2 Model of HMS Victoria

Location: First floor, Story of the Tyne

HMS Victoria was launched at Elswick shipyard in 1887, and named in honour of the Queen's golden jubilee. Victoria was the first war vessel to be built, fitted out and armed by one company. In 1890, she became the flagship of Britain's Mediterranean fleet under Admiral Sir George Tryon. But a terrible fate awaited her in 1893, when a bungled order by Tryon led to a collision off the coast of Lebanon. Victoria was struck by the battleship HMS Camperdown, causing her to capsize and sink, taking the lives of 358 men including the admiral.



3 Working Model of the Swing Bridge

Location: First floor, Story of the Tyne

In 1876 the Swing Bridge replaced a low-arched stone bridge, allowing big ships through for the first time. Armstrong built its wrought iron superstructure and used his innovative hydraulic system to operate it. The bridge's two openings are spanned by a huge girder that swings around a central pier. Each opening can provide a clear passage of 104 feet (32 metres) – wide enough for the largest ships when it was built. By the time of the First World War, however, battleships had become too large to pass through the Swing Bridge.



4 Model of the River Tyne

Location: First floor, Story of the Tyne

This was the Tyne in 1929, two years after Armstrong Whitworth merged with Vickers, its greatest rival in the production of armaments, to become Vickers-Armstrong. While both companies prospered during the First World War, orders for ships and guns disappeared when the war ended, so they had to merge to survive. Vickers-Armstrong's Walker Naval Yard continued to thrive until it was absorbed by Swan Hunter in 1968. The Elswick Works, two miles upriver from Newcastle, produced artillery shells and tanks during and after the Second World War.



5 Stained-glass window from the Blast Furnace Inn

Location: First floor, Working Lives

During the heyday of the Elswick Works in the late 19th century there were more than 40 public houses along the nearby Scotswood Road. This window is from the Blast Furnace Inn, whose name recalls the iron-smelting furnaces that were such a prominent part of the Elswick Works. Other pub names included the Rifle, the Mechanics, the Forge Hammer, the Shell, and the Hydraulic Crane. Workers could enjoy a drink both before and after their shifts, since pubs were allowed to open at 5:55am.



6 An Elswick apprenticeship

Location: First floor, Working Lives

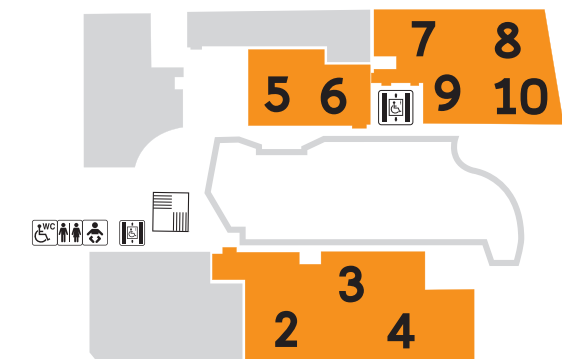
Apprentices played a crucial role at Elswick from the time the firm was founded in 1847.

19th century recruits included Hamilton Rendel (the hydraulic engineer for London's Tower Bridge), Henry Brunel (the second son of Isambard Kingdom Brunel) and Charles Parsons (the inventor of the steam turbine).

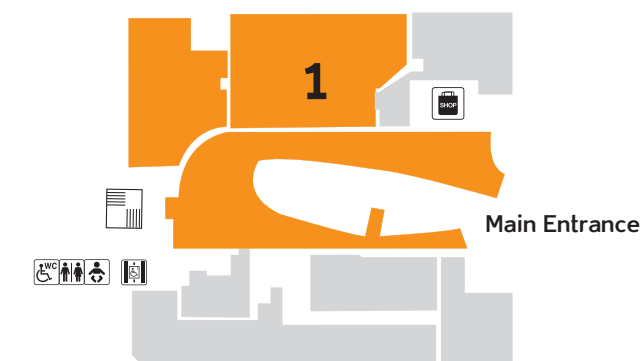
An apprenticeship was a good preparation for progress through the ranks of the company. Sydney Pybus Stobbs served as an apprentice at Vickers-Armstrong from 1935 to 1940. By 1975 he had become a senior quality engineer, ensuring that the factory's products were made to customers' requirements.



Second Floor



First Floor



Ground Floor

Floor Plan

Newcastle Story	1
Story of the Tyne	2,3,4
Working Lives	5,6,7,8,9,10

- Stairs
- Lift with disabled access
- Shop
- Toilets/baby changing
- Cafe