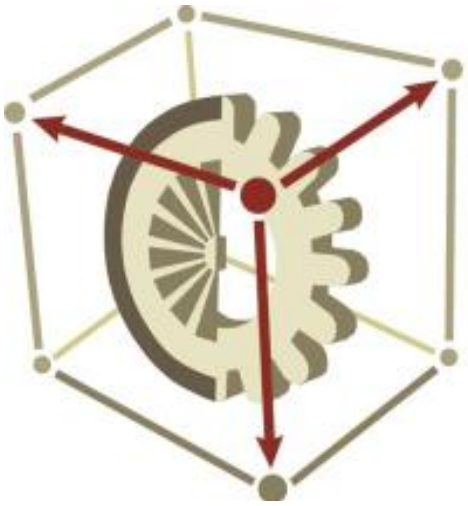

Newcomen and Beyond: A Celebration of 300 Years of Steam

Programme

Friday 11th May and Saturday 12th May 2012

A Scottish Transport and Industry Collections and Knowledge network knowledge sharing event to be held in the Creative Learning Room at The McManus: Dundee's Art Gallery and Museum Albert Square, Meadowside, Dundee, DD1 1DA and at the McManus Museum Stores

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Scottish Transport & Industry Collections Knowledge network

Newcomen and Beyond: A Celebration of 300 Years of Steam

Scotland for three centuries has been at the forefront of power technology. This event commemorates the tercentenary of the Newcomen engine but also looks at the broader legacy, including engines by Boulton & Watt and Stirling and their makers.

The event will focus specifically on matters arising from early power engines you might have in your museum stores or on display and the curatorial, conservation and collections management issues surrounding them. Topics will include effective curation and exhibition making, storage and movement and people and places to go for further advice. This event will include the STICK AGM.

Programme

Friday 11 May 2012

10:00 – 10:30	Registration (tea/coffee)
10.30 – 10.40	Welcome by M McDonald (STICK, Chair)
10.40 – 11.10	Alexander Hayward (National Museums Scotland) *Steam engines in Scotland: an introduction and reflection on cults, conundrums and paradoxes*
11.10- 11.35	Justin Parkes (North Lanarkshire Council Museums and Heritage) *Newcomen's Engine 100 Years On: the 1810 Farme Colliery Engine*
11.35 – 11.55	Jim Mitchell (Industrial Heritage Consulting Ltd) *Large steam engines: Do we run them at their peril?*
11.55 – 12.00	Questions
12.00 – 14:00	STICK AGM / Lunch (own arrangements)
14.00 – 14.25	Gordon Masterton (ICE/Babtie Jacobs/RCAHMS) *James Watt - his achievement and legacy: An engineer's perspective*
14:25 – 14.50	Bruce Glendinning (CFA Archaeology Ltd.) *Glasgow's Dalmarnock Water Works – recent excavations*

14.50 – 15.15 Mark Watson (Historic Scotland) *Housing the beam engine in eastern Scottish textile mills*

15:15 – 15.40 John Messner (Riverside Museum) *The story of South African Railway Locomotive 3007 at the Riverside Museum*

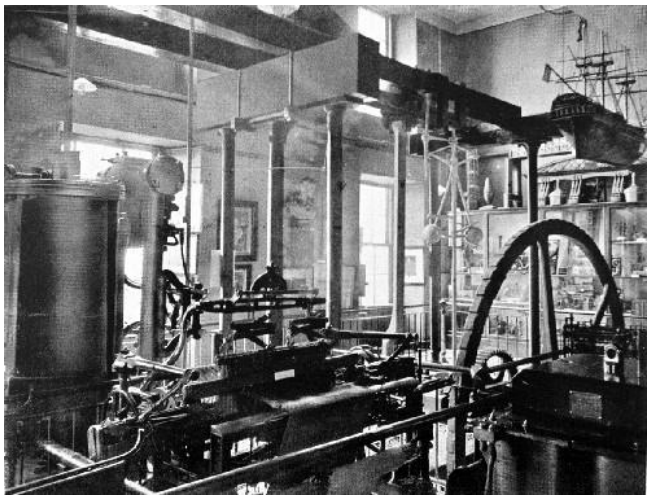
15.40 – 16.40 Questions and discussion panel with speakers.

Evening

Dinner (arrangements to be made by participants)

Saturday 12 May 2012

11.00– 13.00 Guided visit to McManus museum stores
PLEASE NOTE THAT IF YOU WISH TO COME ON THE MUSEUM STORES VISIT, BOOKING IS ESSENTIAL. To book a place, please send your cheque made payable to 'STICK' to: Jennifer Reid, STICK Membership Secretary, Curator, St Andrews Preservation Trust Museum, 12 North Street, St Andrews, KY16 9PW. See flier for details. Transport will be provided to take visitors to the McManus stores. The start time of 11.00 allows for trains arriving from Glasgow and Edinburgh (taking advantage of cheap advance day returns) and travel time to the museum stores from Dundee railway station.



Guided visit to McManus museum stores, including rare chance to see a disassembled Boulton & Watt sun and planet rotative engine of 1801. This was formerly in the Dundee Industrial Museum, Dudhope Park (left), but has not been displayed since 1939.

13.00 Departure

Why not visit other attractions while in Dundee?

Verdant Works, West Henderson's Wynd, Dundee, DD1 5BT Email: admin@dundeeheritage.co.uk

A VisitScotland five star visitor attraction, Verdant Works is a tale of two cities, both of them Dundee. For thousands in the 19th century it was a city of long working hours poor pay and ill health. For the privileged few it was a city of opportunity and wealth. At Verdant Works the rattle and road of the original restored machinery, the Juteopolis film show and computer displays transport you back over 100 years to an era when jute was king and Dundee was its realm. An award-winning visitor attraction and former winner of European Industrial Museum of the Year, Verdant Works is a hands-on experience for everyone. Multimedia technology lets you touch the lives of the mill workers. Interactive displays demonstrate how jute fibre was grown and how it was woven. It's a unique journey that brings the past alive. See http://www.rrsdiscovery.com/index.php?pageID=133

RRS Discovery, Discovery Quay, Riverside Drive, Dundee, Angus DD1 4XA, Tel: 01382 203240

This is the story of *Discovery* from her beginnings in Dundee and Captain Scott's remarkable Antarctic expedition, This is the story of *Discovery* from her beginnings in Dundee and Captain Scott's remarkable Antarctic expedition, through her long ocean-going career until her final journey home. Find out about life on board and the essential design features that allowed her to survive the extreme polar conditions. Explore *Discovery* for yourself with an area-by-area tour of the ship. See http://www.rrsdiscovery.com/index.php?pageID=151

HM Frigate Unicorn, Victoria Dock, Dundee, DD1 3BP

His Majesty's Frigate *UNICORN*, of 46 guns, was built for the Royal Navy in Chatham dockyard, and she was launched in 1824. The classic sailing frigate was a fast and powerful warship, and was one of the most successful and charismatic ship designs of the age. *UNICORN* is a unique survivor from the brief transitional period between the traditional wooden sailing ship and the revolutionary iron steamship, and is now one of the six oldest ships left in the world. See http://www.frigateunicorn.org/ for details.

Newcomen Engines in Scotland: some notes

NATIONAL MUSEUMS SCOTLAND

Newcomen Atmospheric Steam Engine, originally built at Carron Iron Works, Falkirk in 1781; a further Newcomen engine was ordered from Carron Company in 1811 and parts of the earlier engine were recycled. Used at Caprington Colliery, Ayrshire for pumping drainage water at a depth of 50 metres. The engine ceased work around 1898, was dismantled and replaced by electric pumps in 1901, and acquired by The Dick Institute, Kilmarnock, where it was reconstructed in a court behind its museum building. When it became structurally unstable it was donated to the Royal Museum in 1958. It has been re-erected in the National Museum of Scotland, where it is operated on hydraulic power. T.1958.117

The display is complemented by a working model of a Newcomen engine built by the Royal Museum's model-making workshop, to a scale of 1 inch to 1 foot. It is the model of an original engine that was installed in 1810 at Farme Colliery, Rutherglen, by John MacIntyre, and in use till June 1915. T. 1923.11. See http://www.nms.ac.uk/our_museums/national_museum/explore_the_galleries/scotland_transformed/power_from_water_to_steam.asp

Reference: Engineering, 1903

Summerlee Museum

Rotative Newcomen atmospheric engine, 1810. The first of three Newcomen engines installed at Old Farme Colliery, Rutherglen (sunk 1809). One of only three surviving rotative Newcomen engines, it is particularly unusual in being hand-operated.

Drawings were made of the engine by apprentices of William Arrol at the time the engine was dismantled. These drawings were used as the basis for the NMS model. Beam, connecting rod, piston and cylinder rebuilt in the 1980s in a loose reconstruction of the engine house and incorporating fabricated parts to replace those lost in storage. Replica winding drum completed in 1999 using only photographic evidence.

When the colliery closed in 1931 the *Rutherglen Reformer* stated that James Watt had been a regular visitor to the engine while overseeing a pipeline for the Glasgow Water Works in Dalmarnock. Watt certainly spent time on the Cuningair peninsula in 1809 while surveying for a pipeline and reservoirs. However, his correspondence of the time does not mention the engine at Farme Colliery.

References: The Engineer, 1879; Engineering, 1903.
Hunterian Museum, University of Glasgow

Model of a Newcomen Engine.
While attempting to repair this model at the University of Glasgow during the winter of 1763-4 James Watt came up with his idea for a separate condenser. Condensing the steam outside the cylinder improved the efficiency of the engine by avoiding the need to waste energy reheating the cylinder with every stroke of the engine.

Recorded Early Newcomen Engine Sites in Scotland

(Engines built during Thomas Newcomen's lifetime. Information from 'The Steam Engine of Thomas Newcomen' by LTC Rolt and JS Allen, 1997)

- Stevenston Colliery, Saltcoats, Ayrshire: engines built 1719, 1720, 1725 (in rebuilt 1719 engine house) and 1732.
- Tranent Colliery, East Lothian, c.1719 (NB: Tranent to Cockenzie wagonway opened 1722).
- Elphinston Pit, Tranent, East Lothian, 1720 (recorded in the diary of Richard Reynolds, quoted in a 1930 article by Hans Dominik).
- Dryden Colliery, Midlothian, pre-1720.
- Edmonstone, Midlothian, 1726.

Surviving Newcomen Engine Houses in Scotland (Information from SCRAN)

- Grangepans, Bo'ness
- Saltcoats
- Caprington, Kilmarnock
- Kilmux, Kennoway, Fife (possibly)