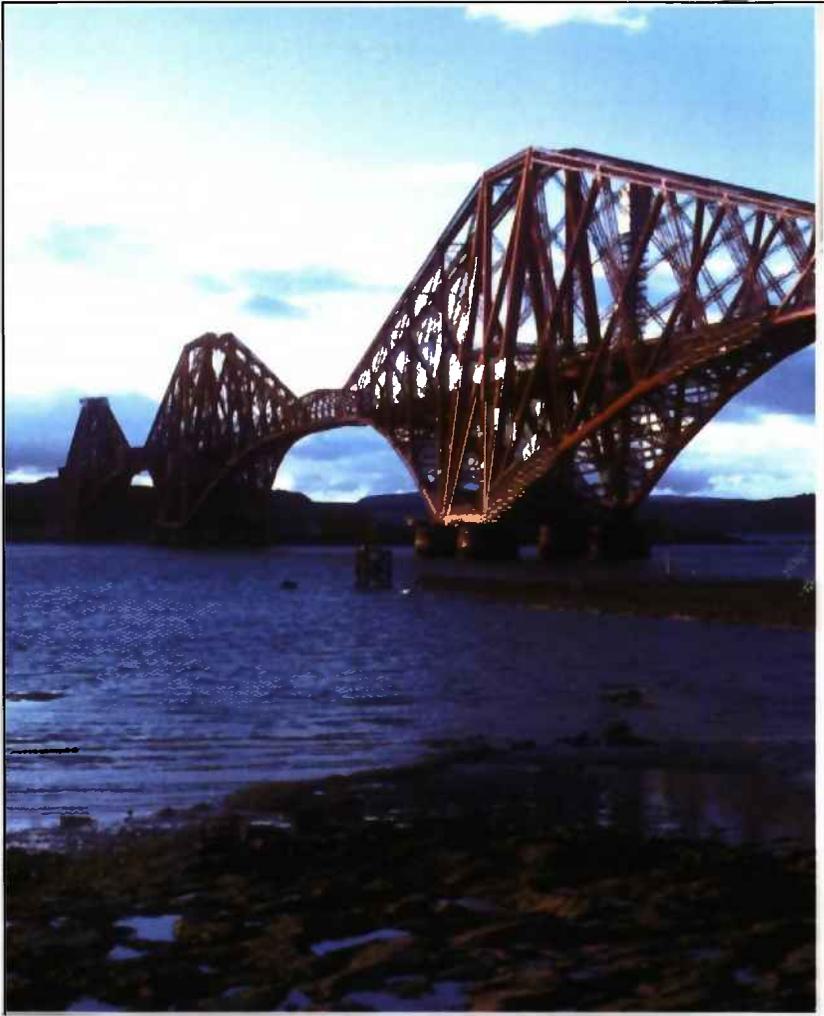


**A GUIDE TO THE  
INDUSTRIAL HERITAGE OF  
CENTRAL SCOTLAND**

**FORTH AND CLYDE**



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Whilst we have attempted to ensure that the details in this Guide are correct at the time of going to press, neither the author nor the publishers can accept liability for any loss or damage resulting from inaccuracy.

Each gazetteer record has a letter and number that relates to the location map at the beginning of each district and index. Each record also gives a site's name followed by a location. This is often quite general, for reasons of space, but a National Grid Reference is given to aid accurate location.

The abbreviation **A**, **B** or **C** after some entries refers to a site's Listed Building status, and **SCH** indicates a Scheduled Ancient Monument.

Note: the inclusion of sites in the gazetteer should not imply automatic public access. When ever in doubt it is always courteous to ask permission to enter a site.

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## AREA COVERED BY THE GUIDE

For geographers, geologists and perhaps even tourists, Scotland has three divisions: the Highlands, Central Lowlands and Southern Uplands. This guide, however, takes a more pragmatic view of the central area, omitting the Tay valley and the majority of Ayrshire, but including parts of the Tweed valley whose proximity to Edinburgh renders them easily accessible. The area covers the coastal areas of the Firths of Forth and Clyde, the drainage basin of the River Forth, the middle Clyde valley and the plateau between; with an extension southwards to take in the woollen district of the Southern Uplands. It is still extensive, and to avoid excessive subdivisions the guide is divided into six districts defined by contiguity rather than by reference to the single-tier local government boundaries established throughout Scotland in 1997. Divisions between the sections follow loose geographical features or cross high ground and are not definitive. Within each area, sites numbers have been sequenced as far as possible from NW to SE for easy reference on the section maps. The selection of sites is by no means exhaustive, but has been made on the basis that there is something to see from accessible places. Indications have been given where internal access is possible.

COVER ILLUSTRATIONS *front*: The Forth Railway Bridge, built 1882-90, (C48), see page 31.  
*back*: The Falkirk Wheel, completed in 2002, linking the Forth and Clyde Canal and the Union Canal, (C21), see page 26.

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JOHN CROMPTON



Edinburgh, from Calton Hill, with North Bridge and Waverley Station below and the Castle and Old Town beyond

## INTRODUCTION

### THE CONTEXT OF CENTRAL SCOTLAND'S INDUSTRIAL HERITAGE

Definitions of Central Scotland invariably begin with reference to the ancient geological rift valley which lies between the Scottish Highlands and Southern Uplands. The term 'Central Lowlands' points to a simplistic contrast with the Scottish Highlands and Southern Uplands, and obscures the very varied topography which reflects a complex underlying geology. In simple terms, the slowly subsiding Central Rift Valley provided a sedimentation zone throughout the Devonian and Carboniferous periods, but a zone much disturbed by widespread volcanic activity and by faulting. Volcanic deposits, resistant to subsequent erosion, form the hill masses of the Renfrew Heights, the Pentland Hills, Ochils and Campsie Fells; whilst volcanic intrusions and the necks of former volcanoes form steep, sudden crags which have often been chosen as defensive sites.

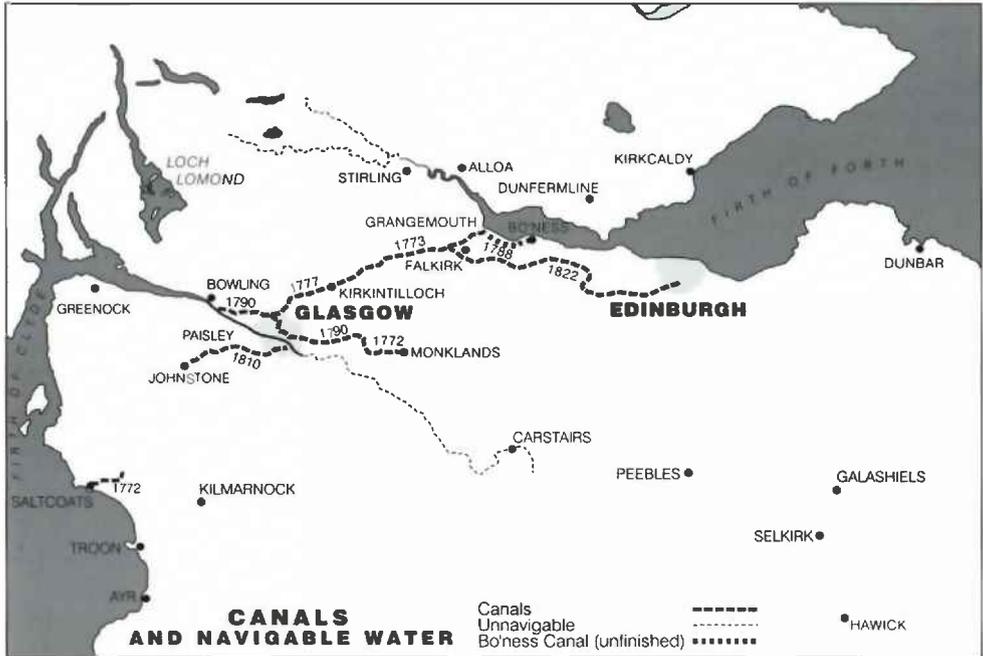
As in other parts of the UK, the manufacture of textiles was endemic long before the rise of coal as the basic underpinning resource for industrial growth. After the Act of Union (1707, following the near-bankruptcy of Scotland resulting from failure of the Darien expedition whose intention was to colonise and profit from a Scottish colony in central America), the twin activities of textiles and fishing were regarded as potential economic saviours, to be stimulated and supported by the Boards of Trustees for Manufactures and Fisheries. But coal had been

mined in the Lothians east of Edinburgh and at Bo'ness on the Forth since at least the 13th century. Edinburgh, 'Auld Reekie', was named for its coal-induced smogs, and the use of coal in English domestic fireplaces is commonly thought to have been influenced by James VI's accession, as James I, to the English throne. The mining engineer Robert Bald, amongst others, records the curious insistence of Edinburgh households on their supply of "great coles" in large lumps which were then hacked into manageable pieces. Small coals were used in limekilns and salt pans whose locations on the shores of the Clyde and Forth estuaries survive as placenames. So crucial to the national economy were coal mining and salt production that miners and salters were owned as slaves until 1799. Mining extended under the Forth at an early stage, notably at Culross in the 1660s when Sir John Bruce constructed an artificial island containing a drawing shaft from which coal could be loaded directly into boats. The idea was revived c1820 by Robert Preston, and the artificial Preston Island with its ruined engine houses and salt pans still exists. By the 17th century coal was forming a significant element of trade from the Forth estuary to Europe, and in the 19th and 20th centuries Fife in particular was a major coal exporter. Mining reached a peak in 1913, much produced by major combines such as the Fife Coal and the Lothian Coal Companies. After 1948 the National Coal Board embarked on a massive development scheme of new sinkings, most of which failed spectacularly. By 1984 there were few active pits in central Scotland and deep mining ceased in April 2002 with the closure of Longannet Colliery.

More apparent in the landscape west of Edinburgh are the waste bings of burnt red shale, the residue of the world's first extensive oil industry. After experiments in London, James "Paraffin" Young came to Bathgate in 1851 to distill cannel coal and 'torbanite'. Extensive oil shales were exploited across West Lothian and into Fife, the industry employing more than 10,000 workers at its peak in 1910. Ammonium sulphate fertiliser by-product enabled the shale oil industry to compete with direct oil production after 1869. Production ceased in 1962 and little remains but the bings; the Almondvale Museum, Livingston, has exhibitions of the industry. Limestone deposits have been exploited in Fife where the limekilns at Charlestown were once described as the largest in Europe, and in East Lothian near Dunbar where Scotland's only large cement works still operates. Smaller pockets of limestone are scattered across the region, with kilns producing lime for agriculture, building and the ironworks. Some of the many igneous intrusions have been quarried for road and building stone. Rural vernacular architecture draws on bright red pantiles in the east and tiny Scottish slates in the west. Lowland agricultural improvements are expressed in large steadings, frequently with horse-gin houses and sometimes windmills or engine houses.

Domestic textile manufacture, based on wool and flax, was endemic across Scotland and fulling was being mechanised in the Borders by the late-14th century. The arrival of the new cotton fibre in the 1780s transformed the industries of the Clyde valley, although only one of the four great water-powered cotton villages, New Lanark, is there; the others were at Catrine on the River Ayr, Deanston on the Teith and at Stanley on the Tay. Linen manufacture, once widespread, was concentrated in Fife and on Tayside, lacemaking at Newmilns and Darvel in the Irvine valley. Woollens, both woven and knitted, retained their superiority in the islands and the Borders, the latter as important for machine knitwear as for cloth bearing the generic name 'Tweed'. Another new fibre, jute, came to Dundee in the 1830s, and the city came to control the industry in Bengal as well as in Tayside. The demands of the textile industry encouraged the first large scale production of sulphuric acid by John Roebuck at Prestonpans (1749) and of bleaching powder by Charles Tennant at St Rollox, Glasgow in 1799. In the early 19th century Scotland's chemical industry led the world.

2 Scotland's iron industry has been another contributor to world fame. The Scottish Bloomeries Project has identified many highland ironmaking sites, and English ironmasters found new sources of charcoal on west coast sites in the mid c18th. Scotland's first coke smelting works, 'on the Coalbrookdale principle' and at the same time Scotland's first large joint-stock com-

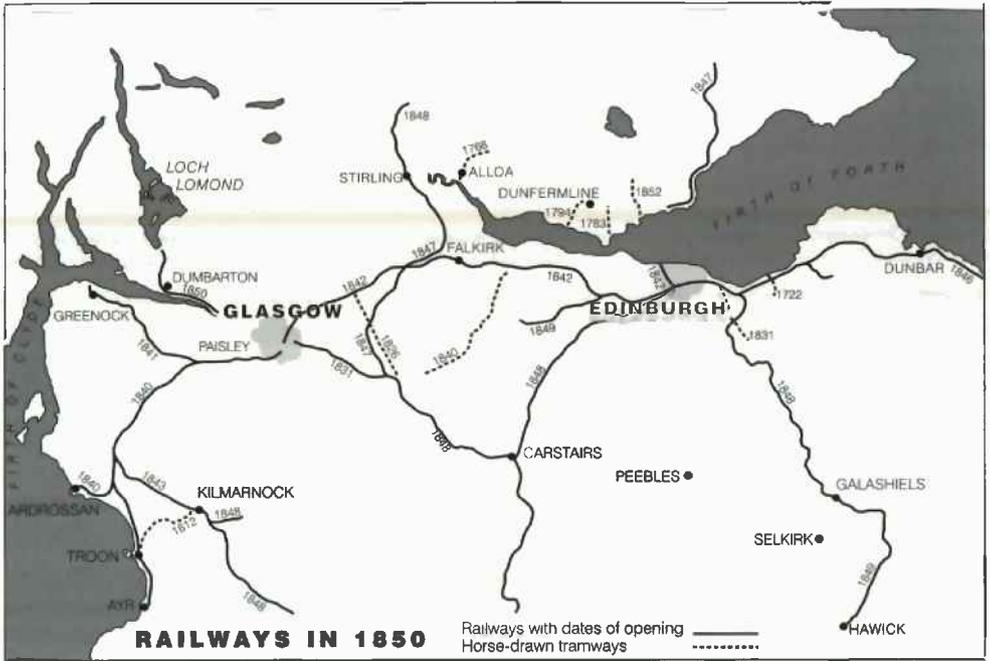


pany, was the Carron Company, established by Roebuck, Garbett and Cadell in 1759 and going into blast in December 1760; in 1767 John Smeaton designed new waterwheels and blowing cylinders. Other works followed slowly at first, Wilsontown in 1779, ten by 1810; but the great period of expansion followed the introduction of J B Neilson's hot blast in 1828 which, with the suitability of local blackband ores, made Scotland a major pig iron producer with 128 furnaces providing 1.15 million tons in 1869. Of the greatest concentration around Coatbridge, hemmed in by the furnaces of Gartsherrie, Gartcosh, Summerlee and Dundyvan, and with 160 puddling furnaces on the banks of the Monkland Canal, it was written:

*"To appreciate Coatbridge, it must be visited at night, when it presents a most extraordinary and startling spectacle. . . . the flames of no fewer than fifty blast furnaces may be seen. For a half-a-mile round each group of furnaces, the country is as well illumined as during full moon, and the good folks of Coatbridge have their streets lighted without tax or trouble."*

The move to steel began c1880; in 1892, 93 open-hearth furnaces produced 462,000 tons and in 1900 the output was 960,000 tons. Iron smelting ceased at Carron only in 1981, and bulk steel making with the closure of Ravenscraig in 1992.

Shipbuilding is as much a function of trade as of resources, and until the nineteenth century Scotland's trade across the North Sea was supported by many small east coast yards. East coast tradition continued in Aberdeen, Dundee, Leith and Burntisland to the mid-twentieth century, but its output was totally eclipsed by the phenomenal rise of the Clyde to world dominance. That rise began with the development of transatlantic trade in the plantation products of tobacco and cotton, took advantage from the dredging of the Clyde to Glasgow, and built its fame on the twin strengths of innovation and new materials. Henry Bell's Comet, the first practicable steamship in Europe, married a wooden hull to John Robertson's side-lever engine and Robert Napier's boiler, and in later years Napier was to receive a presentation from "officers of the Royal Navy, in grateful recognition of his assistance concerning the building and operation of steam vessels". The Clyde led developments in marine steam engine design



with compounding, triple and quadruple expansion, for more than a century, and added a penchant for innovation in composite, iron and then steel hulls. By 1913 the Clyde was the world's largest shipbuilding centre, launching more than 750,000 tons. Furthermore, the deepened Clyde lined with shipyards encouraged the growth of myriad supporting manufactures of ships' fittings, furniture and everything required to equip the humble coasters and great floating palaces on the Atlantic run. Two great wars maintained demand, but post-war reorganisation and amalgamation failed to halt the steep decline to the four remaining yards still in operation.

If Scotland's economy was slow to develop through much of the 18th century, its transport links were similarly slow to improve. The drovers' trails from the Highlands to Falkirk's great cattle market (tryst) and south to England remained important until the coming of the railways. Despite a tax on landowners and the appointment of county overseers to direct statute labour in 1719, road improvement came slowly and turnpike Acts, often general Acts covering a county or district, were rare before the 1750s; even then, the Trusts were generally slow to complete their roads. Thomas Telford, better known for his 900 miles of Highland roads, contributed some outstanding bridges to the improvement of the network.

With the exception of the Stevenston coal canal at Saltcoats, 1770-72, the earliest canals were conceived not as carriers of coal but as linking east and west coasts. A canal linking Forth & Clyde was proposed by Charles II, a route surveyed in 1726, but only in 1768 were the various interests reconciled in a Bill based on Smeaton's second survey. The Forth & Clyde Canal opened from Grangemouth to Glasgow in 1777 and was completed to Bowling on the Clyde in 1790. 8ft deep and 40ft wide at bottom, the dimensions of its locks, 80ft x 19.5ft, were to control the dimensions of Scotland's famous coastal craft, the 'puffer', many of which were launched into the Forth and Clyde at Kirkintilloch. At Dundas Basin in Glasgow a link was made (in 1791) with the Monkland Canal, built 1770-90 to carry coal into the city from the 'Monklands', later Coatbridge and Airdrie. Such was the traffic on this canal that the lock flight at Blackhill, four staircase pairs, was hopelessly congested. A parallel flight was built in 1841,

and in 1849-50 an incline with wheeled caissons was designed by James Leslie to carry empty boats up the 96ft change of level. Leslie's model is displayed in the Museum of Scotland. A canal from Glasgow to Ardrossan Bay, promoted by the Earl of Eglinton and reported on by Rennie and Telford, received its Act in 1806 but was completed only from Glasgow to Johnstone by 1811.

Scotland's first railways were, as in other parts of Britain, short horse-drawn lines taking coal to coastal harbours. The 1722 Cockenzie waggonway became a defensive line in the 1745 battle of Prestonpans. On the north shore of the Forth, the Elgin Railway (1768), Halbeath Railway (1783) and Fordell Railway (c1750) brought coal to the harbours of Charlestown, Inverkeithing and St Davids. The Fordell Railway, rebuilt in 1833 with iron rails, retained its 4ft 4in gauge until closure in 1944; a curious waggon is preserved by the National Museums. The Duke of Portland's Kilmarnock & Troon plateway, opened in 1812, saw the brief trial of a Stephenson locomotive in 1817. In 1829 the plateway was described as "built on an unimproved and objectionable principle", but the plate rails remained until 1848 when it was absorbed by the Glasgow, Paisley, Kilmarnock & Ayr Railway. The Monkland & Kirkintilloch, opened in 1826 as a feeder to the Forth & Clyde Canal and to break the monopoly of the Monkland Canal on coal prices in Glasgow, soon found itself competing with the direct Glasgow & Garnkirk Railway, the first in Scotland to adopt the rapid engineering advances already appearing in England by 1831. From these advances, and the perceived potential of Scottish industry to provide returns to railway investors, the modern Scottish railway network was born.

With a rapidly developing infrastructure and booming staple industries, Scotland seemed set fair to justify the epithet, 'workshop of the British Empire'. Prosperity seemed assured and confidence flourished, reflected in Glasgow's late-19th century commercial buildings. 'Sic transit gloria mundi!'. The 1914-18 War dealt a savage blow to Scotland's coal exports, but demands for ships, armaments and aircraft dragged manufacturing Scotland back from the brink of outdated management and machinery. The 2nd World War rescued manufacturing again, but subsequent peace has seen the decline to near extinction of industries which carried the names of Scottish products and Scottish engineers to all corners of the world. Glasgow's foundries and engineering workshops have all but disappeared, Johnstone's machine toolmakers and Greenock's sugar refineries are no more. Glasgow's world-famous builders of railway locomotives, Neilsons, Dubs and Sharp Stewart, amalgamated in 1903 to form the North British Locomotive Company, Europe's largest producer, but the new company was slow to embrace diesel technology and failed in 1962. The need for new industry had been foreseen in the 1930s when the Scottish Industrial Estate at Hillington began the process of providing new working premises, a process which makes industrial buildings the same countrywide. In recent years Scotland has been particularly fortunate in attracting foreign investment and modern technology; there were 62 Japanese companies operating in Scotland in 1999, mainly in the electronics and telecommunications industries of 'Silicon Glen' which are currently in recession.

Scotland has a long tradition of concern for industrial heritage, going back at least as far as Robert Napier's rescue of the engine from Henry Bell's Comet after she foundered off the west coast in 1820. John Hume's pioneer survey of the IA of Glasgow and his work with Michael Moss are outstanding examples of concern and action. In 1977 the University of Strathclyde established the Scottish Industrial Archaeology Survey whose staff and activities were transferred in 1985 to the Royal Commission on the Ancient and Historical Monuments of Scotland, to continue the fine traditions of recording already established by Geoffrey Hay. Scotland has been fortunate in its recorders, not quite so fortunate, perhaps, in its industrial museums which have suffered massive reductions of financial support in recent years. As for the surviving heritage of industry, this Guide can give no notion of what has been lost, only a taste of what remains.

Famed as one of the great architectural cities of Europe (the city centre is a World Heritage Site), and now the revitalised capital of devolved government, Edinburgh has also been a city of some industrial significance. Scotland's traditional trading links were across the North Sea and Leith was the country's principal port until the accolade was wrested away by the growth of trans-Atlantic trade and the rise of the Clyde. John Rennie, born some twenty miles east of the city, made a major engineering contribution to the infrastructure of the port, some of which remains. Ships, dock machinery and locomotives led the array of engineering activities, joined in the mid-19th century by electrical engineering and the manufacture of gas meters.

Domestic rather than industrial consumption of coal earned Edinburgh the soubriquet 'Auld Reekie'. The majority came from the Lothian basin to the south east of the city, where mining dates back to the 12th century and in later years reached the margins of the city, continuing until the 1990s. The Water of Leith, traversing a deep valley north of the old city, provided water power for early industry. Edinburgh's status as an administrative and university centre encouraged papermaking outside the city, printing and publishing within it; and the city became a world leader in the manufacture of paper making and printing machinery. John Roebuck established sulphuric acid production based on coastal salt boiling, and there were important pottery and glass works.

## EE1 SLATEFORD AQUEDUCT

*Slateford Rd, 3 miles SW of city centre*

NT 221708

*Access: seen from street*

8 semi-circular arches carry Union Canal 75ft above the Water of Leith, built 1818-22 by Hugh Baird, modelled on Thomas Telford's aqueduct at Chirk on the Ellesmere Canal.

Immediately E, a reinforced concrete aqueduct, 1936 over A70 Lanark Rd.

**B, SCH**

## EE2 SLATEFORD MALTINGS

*Slateford Rd, 2 1/2 miles SW of city centre*

NT 227715

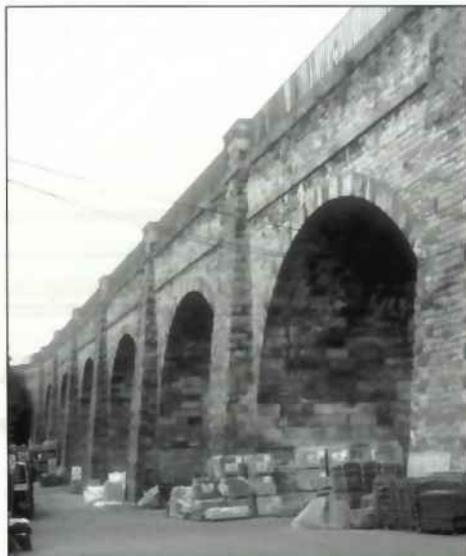
*Access: seen from street*

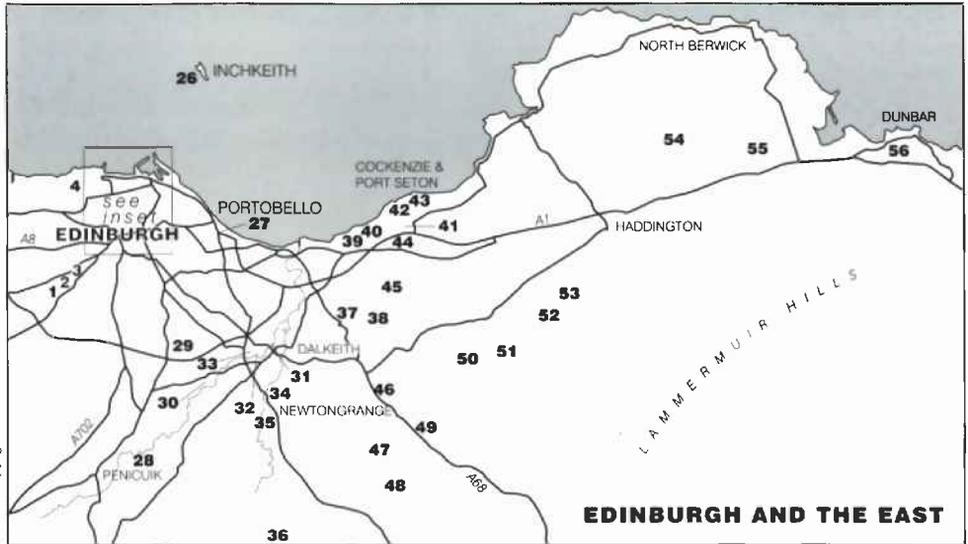
2 blocks forming court with kilns behind, adjacent block with central arch, all 6-storey with upper 4 floors in giant segmentally arched recesses, c1900. Operated by Scottish & Newcastle Breweries, said to be largest floor-maltings in the world. Closed 1980s, converted to dwellings 1990s with grant assistance from Historic Scotland.

**B**

*left: EE1: Slateford Aqueduct*

*below: EE2: Slateford Maltings*





### EE3 CALEDONIAN BREWERY

Slatford Rd, 2 miles SW of city centre

NT 231720

Access: *seen from street*

Very complete example of brewery complex, late-19thC/early 20thC, comprising offices,

**B**



EE3: Caledonian Brewery

maltings with double kiln and double barley kiln, brewhouse, chimney and ancillary buildings. Main ranges in red brick with white brick dressings, partly whitewashed. Last surviving traditional Edinburgh brewery; Edinburgh was once a major brewing centre in Scotland, but by 2000 only two breweries operating.

### EE4 GRANTON GASHOLDERS

West Granton Rd, 2½ miles NNW of city centre

NT 224771

Access: *private; surrounding land under redevelopment*  
 Three gasholders, the centre one telescopic, 1903, the others waterless German, 1933 and 1967, mark the site of Edinburgh & Granton Gas Works, established 1902 (engineer W R Herring). Out-of-town site had its own railway station which still survives. Site currently being redeveloped, and two large waterless gas holders and most surviving buildings are to be demolished.

**B**

### EE5 MADELVIC MOTOR FACTORY

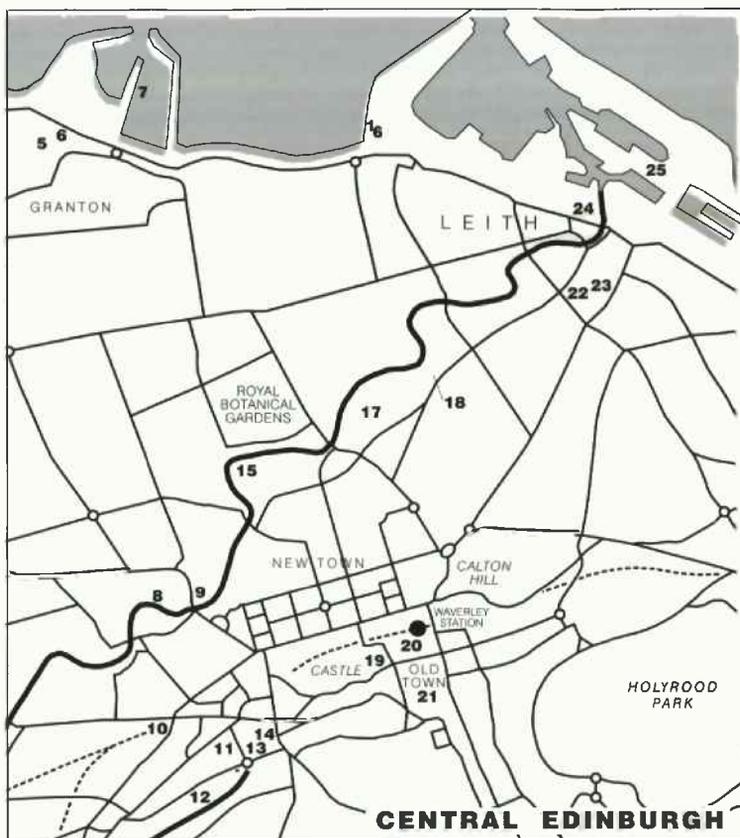
Granton Park Ave, 2½ miles NNW of city centre

NT 233772

Access: *seen from street*

Red brick 2-storey office block, with chain-driven wheel emblem above the door, and 2-storey factory beyond, probably Britain's first purpose-built motor factory. Established 1899 by the Madelvic Motor Carriage Co., which made battery-electric vehicles. From 1900 other companies made or assembled cars to 1912.

**B**



Later a torpedo factory, then weaving shops of United Wire, 1925-2001, who specialised in the production of wire cloth for a variety of industrial uses, notably the paper industry, still very important in the east of Scotland.



EE5: Madelvic motor factory

### EE6 LIGHTHOUSE AND DEPOT

*West Harbour Rd*

NT 234774

*Access: seen from street*

Engineering, buoy store and testing facility for the Northern Lighthouse Board, with experimental light tower added 1884. From 1891 gas was compressed for replenishing buoys and beacons. To E, railway warehouses including 2-storey with 3 arched doorways and bracket hoists.

### EE7 GRANTON HARBOUR

*Lower Granton Rd*

NT 237774

*Access: public*

Harbour enclosed by 2 breakwaters, with central pier, developed 1835-63 by the Duke of Buccleugh. In 1848 it was connected with Edinburgh by the Edinburgh, Leith & Granton Railway and by steam ferry to Burntisland, Fife; the world's first train ferry, designed by Thomas Bouch, ran from here 1850-90. West basin part-



EE6: Lighthouse and depot

filled. Adjacent, in Granton Square, Customs House c1838.

### EE8 BELL'S MILLS, DEAN VILLAGE

*Dean Path, 3/4 mile W of city centre*

NT 239740

*Access: seen from street*

Dated 1805-1806 on wheatsheaf roundel. 4 and 5-storey, rubble-built, roundel window features, twin sluice arches. Latterly a warehouse, now converted to dwellings. Immediately downstream, a sizeable dam.

### EE9 DEAN BRIDGE

*Edinburgh, Queensferry Rd*

NT 242740

*Access: public space, at road level, and by river*

4 semi-circular arches carrying roadway flanked by segmental arches on slim panelled piers carrying footpaths, by Thomas Telford 1829-31. Best seen from below on Water of Leith walkway.

### EE10 HAYMARKET STATION

*Haymarket Terrace, West End*

NT 240732

*Access: public place*

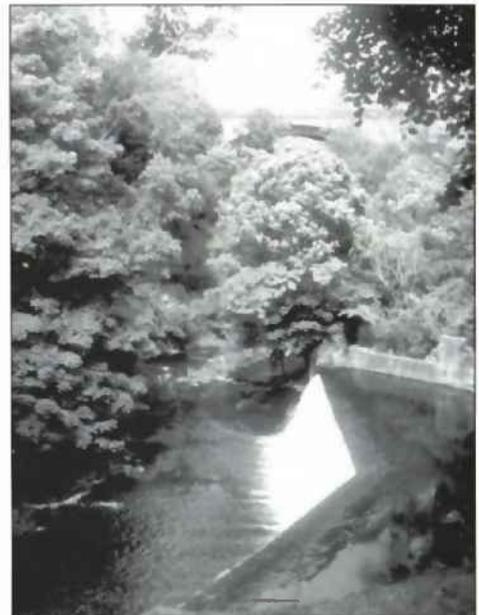
John Miller, engineer, 1840, opened 1842. Italianate 2-storey entrance block with central

clock, set at an angle to the 4 platforms at lower level. Original trainshed reconstructed by Scottish Railway Preservation Society at Bo'ness (C39).



above: EE8: Bell's Mill, Dean Village

below: EE9: Dean Bridge





EE11: Rosemount Buildings

### EE11 ROSEMOUNT BUILDINGS

*Gardener's Crescent, Fountainbridge*

NT 245730

*Access: seen from street*

Quadrangle of 96 flats for 'artisans', polychrome brick with corner towers, 1859, restored c1990. Adjacent, 4-roomed terraced cottages, 1853.

### EE12 LEAMINGTON LIFT BRIDGE

*Gilmore Park, 1 mile SW of city centre*

NT 244726

*Access: public space*

Unusual early 20th century lifting bridge, rivetted steel framework and a short lifting span. Control cabin incorporated within framework, electrically operated, pedestrian footbridge adjacent. Moved from Fountainbridge (replacing a wooden drawbridge) at closure of city basins in 1922. Under restoration, 2002.



EE12: Leamington Lift Bridge

### EE13 EDINBURGH MEAT MARKET

*56-58 Fountainbridge*

NT 247729

Listed

*Access: seen from street*

3-storey meat market and former abattoir built 1884; a three-arched frontage with bulls' heads under the pediment. Latterly a restaurant, now seeking new use.

### EE14 LOTHIAN HOUSE

*Lothian Road, West End*

NT 247731

*Access: seen from street*

Very large building on the site of terminal of the Union Canal, a mix of shops, offices and flats, mid 1930s. Metal panels between windows depict various trades; central bay has a canal boat and horses (*below*) with the legend 'On this site stood Port Hopetoun, 1822-1922'.





EE13: Edinburgh Meat Market

### EE15 STOCKBRIDGE COLONIES

Glenogle Rd. 1 mile NW of city centre

NT246748

Access: *seen from streets*

Pioneering housing scheme of 11 terraces of 2-storey flats, built 1861-76 by the Edinburgh Co-operative Building Company. Insignia of building trades workers on gable ends.

### EE16 NEWHAVEN HARBOUR

Newhaven, Pier Place

NT 254772

Access: *public place*

Small harbour built and rebuilt from c1812, still used by small boats; the concrete West Pier, 1876-8, has a small octagonal cast iron leading light. On the E side a fish market, converted to restaurant and museum (free admission). Traditional buildings in Newhaven village have been restored and modernised.



EE16: Newhaven harbour and fish market

### EE17 LAING'S FOUNDRY

Beaverbank Place, Canon Mills 1 mile N of city centre

NT 255754

Access: *private, entry by appointment*

Small iron foundry specialising in commemorative plaques and architectural ironwork, some for repairs to Edinburgh's historic buildings, some replicating the products of Scotland's famous ornamental iron foundries.

### EE18 POWDERHALL REFUSE DEPOT

Edinburgh, 165 Broughton Rd

NT 258755

**B**

Access: *seen from street*

Baronial style single storey symmetrical range of offices with 2-storey central and terminal pavilions, by the City Engineer, 1893. Domestic rubbish now rail-freighted to fill limestone quarries near Dunbar.

### EE19 CASTLEHILL RESERVOIR

Edinburgh, top of Royal Mile

NT 253735

**B**

Access: *exhibition space and shops*

Part of Edinburgh's early, extensive water supply, an Act concerning which was passed 1621. Built on site of a smaller reservoir of c1755. Former deep reservoir now used as tartan weaving shop/exhibition area.

### EE20 WAVERLEY RAILWAY STATION

Edinburgh, entered from Waverley Bridge

NT 258738

**A**

Access: *public place*

Established 1846 by the North British Railway, soon joined by the Edinburgh & Glasgow and Edinburgh, Leith & Granton Railways. Rebuilt 1892-1902. Since 2000 subject of a controversial redevelopment application which would raise the height of the roof, requiring a special Act of parliament.

### EE21 ROYAL MUSEUM

Chambers St, 1/2 mile S of city centre

NT 258733

**A**

Access: *museum (free admission)*

Established 1854 as the Industrial Museum of Edinburgh, impressive galleried main hall and side wings, cast iron columns and glass roofs completed in 3 stages, 1865-89. Headquarters of the National Museums of Scotland; adjacent Museum of Scotland completed 1998. Large stationary engines and significant industrial displays.

### EE22 WAREHOUSES

Leith, Great Junction St

NT 268762

**B 11**

Access: *View from street*

Fine classical-fronted ranges of 3-storey ware-

houses with cart entrances, c1810; part formerly housed the brewing plant of Crabbie's Green Ginger Wine.

### EE23 TRINITY HOUSE OF LEITH

*Leith, Kirkgate*

NT 270761

Access: view from pedestrianised street

Built 1555 as a hospital for 'decayed mariners' by the Fraternity of Masters and Mariners of Leith, and rebuilt in classical style 1816. Leith has many buildings relating to its former maritime importance.

**A**

### EE24 DOCK WAREHOUSES

*Leith, Commercial St*

NT270767

Access: private, view from street

Long 4-storey range of rubblestone warehouses by John Rennie and John Paterson, 1810, now converted to offices. Also in Commercial St, Leith Customs House, in classical style, 1812, currently a museum store.

**A**

### EE25 LEITH DOCKS

*Leith Waterside*

NT 271768

most components: **B**

Access: private, but S margin open to view at several points

Edinburgh's port in the mouth of the Water of Leith, the first docks, East and West, designed by John Rennie 1800-06 and 1810-17, now filled. New docks, Victoria 1847-51 (J M Rendel), Prince of Wales Graving Dock 1858, Albert 1869, Edinburgh 1877-81, Imperial and Alexandra 1896-8; the outer harbour enclosed with new entrance 1943. Hydraulic power station now converted to Dock Offices; by Albert Dock is an early hydraulic dockside crane.

### EE26 INCHKEITH LIGHTHOUSE

*On Inchkeith Island in Firth of Forth*

NT 293829

Access: private

Lighthouse and ancillary buildings for the Commissioners of the Northern Lighthouses, 1804. First lighthouse in Britain to be fitted with a revolving optic with Fresnel lenses, 1835. Later optic displayed in the Royal Museum, Edinburgh (EE21).

**B**

### EE27 PORTOBELLO POTTERY

*Pipe St, 3 miles E of city centre*

NT 304742

Access: seen from street

Pottery manufacture established c1879, all buildings demolished except 2 bottle kilns, 1906 and 1909, preserved.

### EE28 DALMORE PAPER MILL

*On B7026 S of Auchendinny*

NT 253616

Access: seen from B7026.

Last remaining paper mill of several on River Esk, begun 1837. From 1860s it produced paper from esparto grass and expanded rapidly. Most of brick buildings rebuilt late-19thC. Penicuik railway ran through complex.

### EE29 BURDIEHOUSE LIME WORKS

*Burdiehouse Mains, Burdiehouse Road.*

NT 277673

Access: visible from A701 and A720 Edinburgh bypass.

Three interconnected kilns comprising one three-draw polygonal, one single segmental and one two-draw, well built in coursed rubble and brick lined, probably early-19thC. Burdiehouse Limestone originally worked by series of quarries between Straiton and Burdiehouse Mains and S of Pentland Mains.

**B**

### EE30 BILSTON GLEN RAILWAY VIADUCT

*Crossing Bilston Burn, S of Loanhead, Midlothian.*

NT281648

Access: Footpath, open to the public.

Single deep wrought iron truss on low abutments with second pair of massive abutments supporting the line at high level on either side of the truss, on North British Railway Glencorse branch, 1872, 150ft above burn. Recently restored, receiving a Saltire award for conservation.

**A**

### EE31 IRON MILL - GRAIN MILL

*Iron Mills Park, Dalkeith.*

NT 326670

Access: seen from public park.

Iron milling began in Dalkeith in 1648, this water powered mill produced iron goods including clogs for miners. Complex includes iron mill, 3-storey and attic rubble building on L-plan with Gothic windows, single storey wing linked to miller's house and cart shed range. Converted to corn mill early 19thC and for residential use 1982. Substantial masonry weir upstream.

**B**

### EE32 DALKEITH WATER TOWER

*Dalkeith, Cemetery Road (A6094).*

NT 327671

Access: seen from road.

Erected 1879 by recently founded Dalkeith Town Council, to provide supply of clean water for Eskbank. Designed by James Leslie, octagonal polychrome brick tower with ashlar dressings and slatted timber tank housing on stone cornice at top. Sympathetically converted to house, 1989.

**B**

### EE33 GLENESK VIADUCT

Off B6392 on outskirts of Dalkeith

NT 324671

**A**

Access: *public cycleway*

Large semicircular arch which carried Waverley route over River North Esk. Usually assumed to have been built by Grainger and Miller in 1849, but possibly earlier, for Edinburgh & Dalkeith railway. Owing to mining subsidence, masonry strengthened with steel centring. Railway closed to passengers 1969.

### EE34 NEWBATTLE VIADUCT

Adjacent to A7 just north of Newtongrange.

NT 327648

**B**

Access: *seen from road.*

23-span viaduct with brick arch rings and coursed rubble piers braced with old rails, carrying Waverley route over River South Esk, 1849. Replaced earlier bridge for the Edinburgh and Dalkeith Railway which had stone pillars and cast-iron arches supporting timber structure over 1000ft long.

### EE35 LADY VICTORIA COLLIERY

By A7 2 1/2 miles S of Dalkeith

NT 334637

Access: *Scottish Mining Museum (admission charge)*

Sunk 1890-94 by the Lothian Coal Co, single shaft (used nearby Lingerwood Colliery as 2nd shaft) with Grant Ritchie steam winding engine, boiler house with 7 Lancashire boilers and economiser, Baum washer and extensive screens over multiple rail tracks. To N, Newtongrange village, built at same time by the company to house miners.



EE35: Lady Victoria Colliery

### EE36 ESPERSTON LIME KILN

c1 mile NE of Esperston Farm.

NT 345577

Access: *Private land. Not easily visible.*

Three-draw kiln, 19thC, at S end of an embankment which carried narrow gauge railway serving extensive quarries. Four large kilns 1/2 mile E demolished 1992, despite being scheduled. Lime burning continues to E at Middleton.

### EE37 DALKEITH COLLIERY WASTE TIP

On A6124 at Crossgatehall

NT 364686

Access: *seen from road*

Originated by Smeaton Colliery, later Dalkeith Colliery (1903-1978) before being taken over by NCB who built one of Scotland's first central preparation plants adjacent to mine and continued tipping. Few remaining coal tips are only obvious remains of a once extensive industry in Mid and East Lothian.



EE35: Newtongrange village

### EE38 COUSLAND SMIDDY

*Cousland, 31 Hadlast Rd*

NT 378685

**B**

*Access: seen from road*

Late 18thC rubble built, pantile roofed single storey structure attached to dwelling, both currently disused. Interior complete with anvils, bellows and full range of tools. Cousland Smiddy Preservation Trust hopes to repair and develop it further.

### EE39 PRESTONGRANGE BRICK KILN

*Prestongrange Museum, on B1348, W of Prestonpans.*

NT 371736

**B**

*Access: Museum, site open to the public.*

Prestongrange Colliery, sunk 1829 and owned by Summerlee Iron Co. before passing to NCB, produced good quality fireclay in addition to coal, used on site to produce firebricks, tiles and pipes. Round downdraft kilns demolished when the pit closed 1962 but the Hoffman-type kiln with 24 chambers remains, forming part of the Prestongrange Industrial Museum.

### EE40 PRESTONGRANGE PUMPING ENGINE

*Prestongrange Museum, on B1348, W of Prestonpans*

NT 373736

**A, SCH**

*Access: Museum, site open to the public.*

Prestongrange pit was sunk 420ft. by Matthias Dunn in 1829, and rebuilt 1872-74 by Matthew Loam of Liskeard, who sank a second shaft to the Beggar Coal and purchased the present re-conditioned engine from Harveys of Hayle. Engine was "fourth-hand", having been built originally by J E Mare & Co., Plymouth to a Hocking and Loam design. Worked at Wheal Exmouth and Adams, Christow, South Devon 1853-62, Old Wheal Neptune, Perranuthnoe, Cornwall, 1862-9 and Great Western Perranuthnoe, 1869-73. Harveys fitted new cast beam to make 12ft. stroke (10 ft in shaft) with 2 x 26" plunger lifts. In 1952 engine was operating 2, 3-hour shifts at 2 1/2 strokes per minute each day. 1954 last certain operation. Pit closed and site partially cleared 1962 to 1964. Preserved as centrepiece of Prestongrange Industrial Museum.

### EE41 COCKENZIE POWER STATION

*Cockenzie, prominent on shores of Forth estuary*

NT 395754

*Access: seen from adjacent B1348*

One of Scotland's 3 remaining coal-fired stations, 120MW, two tall chimneys and massive steel and glass framed generating hall, steelwork by Sir William Arrol & Co, 1962-65. Built on site of Prestonlinks Colliery.

### EE42 COCKENZIE HARBOUR

*Cockenzie, West Harbour Road*

NT 399757

**B**

*Access: public place.*

Small harbour on Forth, rebuilt in present form by Robert Stevenson and Sons, 1835. L-plan east pier and west breakwater, both rubble built. Two boat slips leading from modern boat repair shed.

### EE43 PORT SETON HARBOUR

*At E end of Port Rd, Port Seton.*

NT 405759

**B**

*Access: public*

Small harbour formed by 2 concrete-faced piers (but C18th) with angled heads, with central pier giving two basins. Still in use by fishing craft.

### EE44 COCKENZIE WAGGON WAY

*Runs from Cockenzie to Tranent, part beside B6371.*

NT 398757

*Access: seen from public place.*

Scotland's first railway, opened 1722 by York Buildings Co. from coal pits at Tranent to Cockenzie Old Harbour, c2 1/2 miles. Track can be followed beside B6371 and as footpath between hedges.

### EE45 BIRSLY BRAE COAL WORKINGS

*Tranent, Birsley Road, in woodland*

NT 392728

**SCH**

*Access: seen from public place.*

Tranent/Cockenzie area mined extensively since medieval times. At Birsley Brae on outskirts of Tranent, overgrown remains of several bellpits, more easily seen in winter.

### EE46 LOTHIAN BRIDGE

*On A68, NW of Pathhead.*

NT 391645

**A**

*Access: public place; best seen from minor road to W*

Five-span bridge with almost semicircular arches 80ft. high and 50ft. span, commissioned by Sir John Dalrymple when he was convener of roads for district and built by Thomas Telford, 1827-31. Flat segmental arches carry footpaths as at Dean Bridge, Edinburgh.

### EE47 KILN WOOD LIME KILN

*On minor road 1 mile SE of Crichton*

NT 392616

**C(S)**

*Access: just visible from road*

Two very substantial 3 draw kilns at right angles to each other, with range of single-storey offices/houses nearby, early 19thC; disused and ruinous.

### EE48 TYNEHEAD FARM CHIMNEY

*On B6367, 1 1/2 miles N of A7*

NT 393593

*Access: seen from road.*

Well-constructed steading, 1850, had a steam-

powered threshing mill; substantial brick chimney still stands.

### EE49 MAGAZINE LIME KILN

Off A68, E of Hope Farm.

NT 411627

Access: seen from road.

Three-draw rubble kiln in good condition but disused early 19thC. North Greens limestone was quarried and mined at this site. Across road, adjacent to Hope farm, remains of substantial set of kilns, not visible from any nearby road.

### EE50 GLENKINCHIE DISTILLERY

On minor road, two miles W of West Saltoun

NT 443668

Malt Barns: **B**

Access: Visitor Centre open to the public.

Originally founded circa 1840, one of few lowland distilleries still in production. Brick buildings dating from 1890 when Glenkinchie Distillery Co. was formed. Several blocks of red and white brick cottages associated with distillery. Visitor centre has working model distillery made for 1936 Empire Exhibition.

### EE51 WEST SALTOUN MILL

Just off minor road at Milton Bridge W of West Saltoun

NT 459667

**B**

Access: seen from road.

L-shaped group of buildings, consisting of mill, granary and brick-lined kiln in stone and pantiles, early 18thC, on site of first pot-barley mill in Scotland. Machinery removed and buildings converted to housing.

### EE52 MIDDLEMAINS LIME KILN

Near Middle Mains cottages between West Saltoun and Samuelston

NT 473692

**B**

Access: seen from road

Bank of 4-draw kilns in reasonable repair, rebuilt 1817-20. Saltoun Lime Works worked the

excellent Long Craig and Skateraw limestones in long opencast pit.

### EE53 EAST MAINS FARM CHIMNEY

On minor road at Samuelston, c3 miles SW of Haddington.

NT 486710

Farm: **C**

Access: seen from road.

Square red brick chimney and associated tall, hipped-roofed boiler house, mid 19thC, served steam-driven threshing mill, typical of many once active in East Lothian and Berwickshire.

### EE54 EAST FORTUNE AIRFIELD

Off B 1347, 31/2 miles NE of Haddington

NT 55 79

Part Listed, Part Scheduled

Access: part private, part museum (admission charge)

Established 1915 for Royal Naval Air Service, as defensive aeroplane and airship station; R34 began first trans-Atlantic flight here, 1919. Hospital to N and other dispersed ancillary buildings make this the UK's most complete WW1 airfield. Active in WW2 when various buildings added. Now Museum of Flight, part of National Museums of Scotland.

### EE55 PRESTON MILL

Off B1407, 4 miles NE of Haddington

NT 595778

Access: National Trust for Scotland (admission charge)

Low rubblestone and pantile single-storey & attic mill, octagonal drying kiln with oasthouse type cowl. Early 20thC machinery restored and can be demonstrated.

### EE56 BELHAVEN BREWERY

Brewery Lane, 1 mile W of Dunbar

NT 663787

Access: seen from road

Established 1719, rebuilt c1814, single and 2-storey pantiled buildings with 2 pyramidal-roofed malt kilns and 1884 chimney, still brewing traditional beers.



EE55: Preston Mill

South of Scotland's central rift valley lie the southern uplands, drained eastwards in narrow valleys by the Tweed and its tributaries. The economy is predominantly rural and agricultural, but the combination of sheep farming and copious flowing water encouraged a widespread woollen textile industry, of which Galashiels, Selkirk and Hawick became the chief centres. The area's other major contributors to industrial heritage are the routes between the Central lowlands and the English border, as they meet the challenges of hilly terrain and large rivers. The closure in January 1969 of the North British Railway's 'Waverley route', from Edinburgh via Galashiels and Hawick to Carlisle, and its branches has been a major factor in the economic decline of the area.

**B1 PACKHORSE BRIDGE, STOW**

*By A7, 6 miles N of Galashiels*

NT 458444

*Access: seen from road*

Three segmental arches of diminishing size across the Gala Water and its flood plain, built 1654-5 by the Kirk Session to allow west-bank dwellers access to the church.

**B2 CUDDY BRIG, INNERLEITHEN**

*Crossing Leithen Water N of village centre*

NT 333372

*Access: public place*

Single-span packhorse bridge of rubble masonry, built 1701 with funds from the stipend of the local ministry which was vacant.

**B3 CAERLEE MILL, INNERLEITHEN**

*In village, NW of A72*

NT 331369

*Access: seen from street*

Earliest woollen mill in the Borders, built 1788-90 by Alexander Brodie, 4-storey & attic, with mid-19thC extension and later weaving and knitting sheds. Powered by lade from Leithen Water, the intake surviving at NT 336385. Two 19thC turbines survive in wheelpit. Still in use, by Ballantynes Cashmere Ltd.



B3: Caerlee Mill, Innerleithen  
right: B6: Waverley Mills, Innerleithen

**B4 TRAUQUIR HOUSE BREWERY**

*1 1/4 miles S of Innerleithen*

NT 331354

*Access: part of the historic house tour; admission charge*  
Small, 2-roomed brewery in service, c1739, has been restored to regular production. The original boiler is still in use.

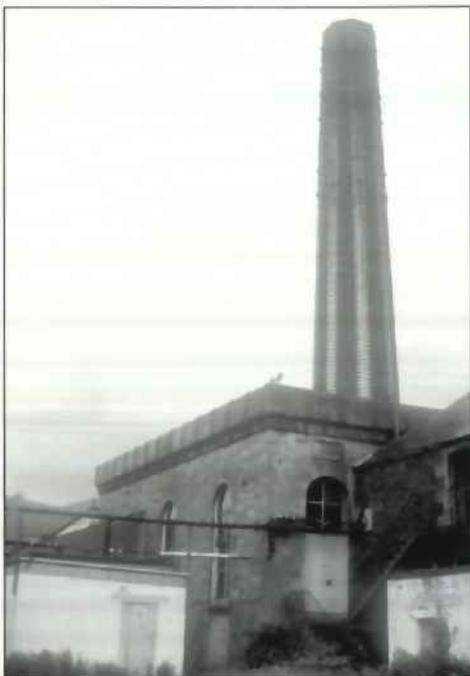
**B5 ROBERT SMAIL'S PRINTING WORKS**

*7-9 High St, Innerleithen*

NT 332367

*Access: National Trust for Scotland, open to visitors; admission charge*

Small town printing workshop established 1867. The lade (see B3) passes beneath and contin-



ued to serve a 14ft waterwheel at Meikle's saw mill, and another wheel at Hogg & Robertson's Engineering (both Listed B); wheels survive but are difficult to access.

### **B6 WAVERLEY MILLS, INNERLEITHEN**

*In village S of A72*

**NT 333365**

*Access seen from streets*

Built 1870 as a steam-powered mill, the boiler house (dated 1871) with cast iron roof tank and octagonal polychrome brick chimney survive. Carpet yarn still produced in 1920 reinforced concrete spinning shed.

### **B7 WALKERBURN VILLAGE**

*On A72 8 miles W of Galashiels*

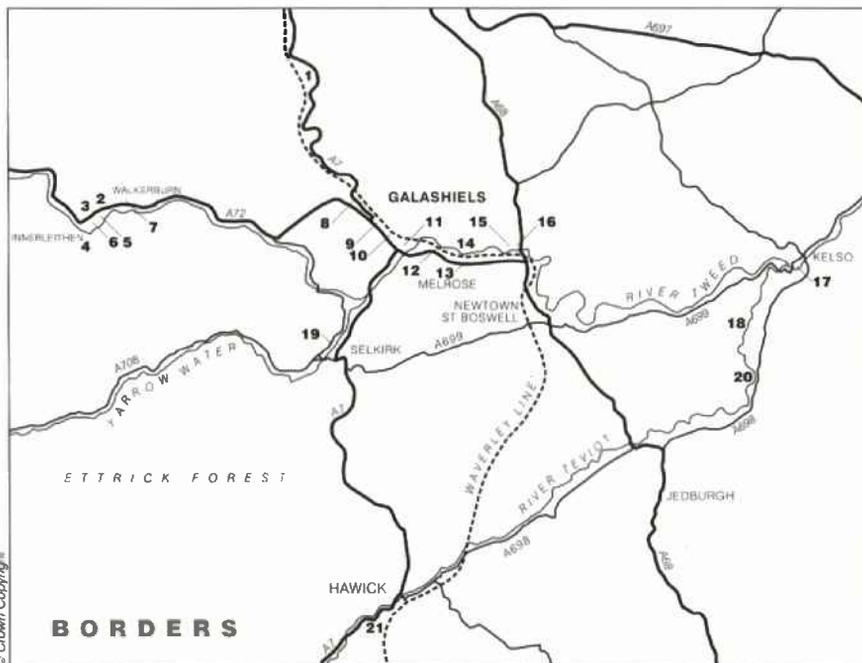
**NT 363372**

*Access: seen from public roads*

Village founded by Galashiels weavers Henry Ballantynes, with Tweedvale (1855) and Tweedholm (1859) Mills powered by lade from the R Tweed. Tweedvale weaving sheds (NT 359370) now converted to industrial units, later Tweedholm buildings (NT 358372) empty; opposite is a cast iron urinal c1897 by Walter Macfarlane's Saracen Foundry. Company housing includes block of mass concrete tenements, 1876.



B7: Cast iron urinal, Walkerburn





**B8 TWEED MILL, GALASHIELS**

*By A72, 1 mile NW of town centre*

NT483369

*Access: seen from road*

Long 3-storey & attic block with two projecting stair towers and central clock, a steam mill built 1852 for P & R Sanderson, later Kemp Blair, Dyers & Finishers. Partly converted to housing, as is adjacent 3-storey West Mill.

**B9 CORNMILL FOUNTAIN, GALASHIELS**

*Cornmill Square, at S end of town centre*

NT 493360

*Access: public place*

Town's water lade follows W side of A72 and was transformed by no less than Sir Robert Lorimer, 1912-13 into a water feature with cherubs on dolphins guarding a sluice.

**B10 VALLEY MILL (MID MILL), GALASHIELS**

*Paton St, off Cornmill Square*

NT 494359

*Access: seen from car park*

Mid-19thC 4-storey block added to site established 1793, reduced to plain range when projecting central stair block and 1866 engine house demolished 1984 for addition of Tesco's supermarket shed.



*left: B7: Concrete tenements, Walkerburn  
above: B12: Waverley Castle Hotel*

**B11 NETHERDALE MILL, GALASHIELS**

*By riverside (Gala Water) 1 1/2 miles ESE of town centre*

NT 506353

*Access: seen from street*

4-storey block in reddish stone, 1873, formerly part of a major complex for J & W Cochrane, much of which has been demolished, now incorporated into Galashiels College of Textiles, part of Heriot-Watt University.

**B12 WAVERLEY CASTLE HOTEL**

*By B road on W outskirts of Melrose*

NT 532347

*Access: seen from grounds and as patron*

Originally the Waverley Hydropathic Institution, extensive 3-storey and basement building of mass concrete by J C Walker, 1869-71, using Charles Drake's patent 'Concrete Builder', and extended 1876.

**B13 MELROSE RAILWAY STATION**

*By A6091 Melrose bypass*

NT 541340

*Access: seen from bypass, accessible only from town*

2-storey station building in Flemish style, 1847-49 by John Miller for the North British Railway. The 'Waverley' route was closed January 1969, and the Melrose bypass follows the trackbed, passing the forlorn down platform, still with its



**B8: Tweed Mill, Galashiels  
right: B13: Melrose railway station**



wooden canopy, at 1st floor level of the station building, converted to offices and restaurant.

### **B14 GATTONSIDE CHAIN FOOTBRIDGE**

*Crossing R Tweed between Gattonside and Melrose*

**NT 544346**

*Access: public footpath*

Originally built 1826 with blacksmith-forged chains supported on gothic crenellated pylons, Redpath Brown & Co, massively and unsympathetically rebuilt 1991 with new deck.

**B**

### **B15 LEADERFOOT VIADUCT**

*By A68, crossing R Tweed*

**NT 563347**

*Access: seen from roads*

Tall, slender viaduct of 19 arches, 1865 for the Berwickshire Railway which joined the North British 'Waverley' line  $\frac{1}{2}$  mile south.

**A, SCH**

### **B16 DRYGRANGE BRIDGE**

*On old road adjacent to A68 Tweed bridge*

**NT 574347**

*Access: public place*

4-arched masonry bridge with 100ft centre span, by Alexander Stevens 1779-80. Invisible from the box girder viaduct by Alexander Gibb & Partners, 1971-3 which now carries the A68.

**B**

### **B17 KELSO BRIDGE**

*Carries A699 across R Tweed*

**NT 728336**

*Access: public road*

Five elliptical spans of 72ft on rounded cutwaters with Doric columns, supporting a level roadway, designed 1799 by John Rennie, built 1801-04 by Murray & Lees, cost £12,876. Single storey tollhouse in matching style at N end; lamps from London Bridge.

**A**

### **B18 ROXBURGH VIADUCT**

*3 miles SW of Kelso*

**NT 702304**

*Access: minor roads from A698 and A699*

Curved viaduct with 6 large ashlar and 8 smaller coursed rubble arches, 1850 for the North British Railway, closed 1964. Three centre piers carry a footbridge at lower level with lenticular cast and wrought-iron trusses.

**B**

### **B19 SELKIRK RIVERSIDE**

*In valley on NW edge of Selkirk*

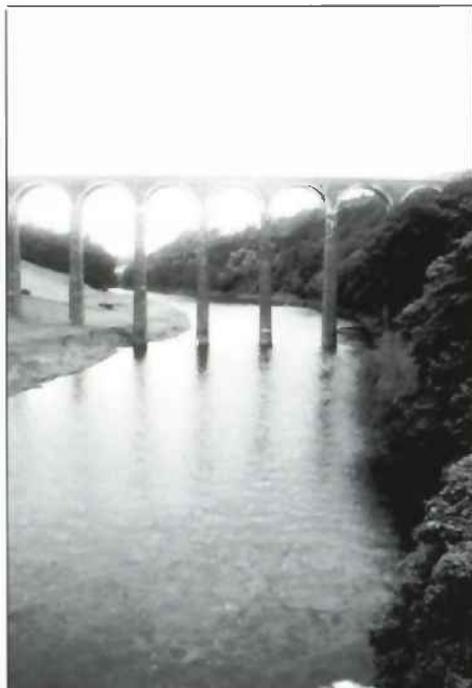
**NT 47 29**

*Access: seen from roads*

Early 19th century linear industrial estate on flat Ettrick Water valley floor, exploited by Galashiels mill owners to build state-of-the-art woollen mills when all water-powered sites in Gala were occupied. Another ten mills added after 1856 arrival of the railway bringing coal for steam power. From N to S along Dunsdale Road, Dunsdale Mill (NT 474295, Listed B) 1837, and a second mill of 1863-6 with handsome beam engine house; Ettrick Mill (NT 472293, Listed A) 1836 and 1850, recently converted for business, 2-storey

*left: B15: Leaderfoot Viaduct*

*below: B19: Ettrick Mill, Selkirk*





B19: St Mary's Mill, Selkirk

block with engine house, boilerhouse and chimney to rear; Tweed Mill 1883, recently disused. At Yarrow Mill, 1866-92, only an isolated engine house and modern sheds remain. Forest Mill (NT 467288, Listed B) 1838, square-plan 4-storey spinning mill, long 3-storey hand-loom shop and extensive weaving and wool sorting sheds; tartans still made on Dobcross looms by Andrew Elliot; visitors are admitted.

Behind the above, either side of line of former railway, mainly single-storey steam-powered spinning and weaving mills: St Mary's Mill and Linglie Mill both 1894, the former houses Borders Regional Archives and an extensive textile-related collection. Heather Mill and Whinfield Mill 1864 and 1875/1926, still working; Bridgehaugh Mill 1865.  $\frac{1}{2}$  mile upstream to SW, Philiphaugh Mill (NT 451280) retains a large turbine, not usually accessible (the engine by Petrie, Rochdale is now at New Lanark - C9). Nearby, a saw mill (NT 4502780 with 12ft wide by 15ft diameter wheel (private).

## **B20 KALEMOUTH SUSPENSION BRIDGE**

*Minor road off A698, 4 miles S of Kelso*

**NT 709274**

**B**

*Access: public road*

Light suspension bridge over R Teviot, with iron link chains and wooden deck and parapets, supported on pyramidal stone pylons, c1830 by Captain Samuel Brown.

## **B21 HAWICK RIVERSIDE**

*Commercial Rd.*

**NT 50 15**

*Access: seen from street*

Dangerfield Mill (NT 502 150, Listed A), founded 1804, is the place where the term "Tweed Cloth" originated through the misreading of "Tweel". William Watson and Sons' wool-spinning mules installed by Platt Bros in 1873, carding engines and line shafting continued in commercial use until the firm closed in 1991, and are preserved by International Knitwear Ltd. Willton Mills (NT 502152, Listed B) with clock tower, next to Dangerfield on the same lade; machine hosiery was introduced here. Tower Mill (NT 502144, Listed A) built on an arched bridge over the River Slitrig has a large waterwheel and is to be an archives centre. Later mills in Hawick are either former tweed weaving sheds now adapted to hosiery (eg., Victoria Mill, Howlands Mill, Glebe Mill and Eastfield Mill), or hosiery works that have expanded over the years, eg Buccleuch Mills with its large hand frame shop having characteristic small windows, and Scott Mill, Buccleuch St.

From Edinburgh on the southern shores of the Forth to Glasgow in the lower Clyde valley is less than fifty miles, but the area between provides many contrasts. Direct roads climb over moorland ravaged by mining and quarrying, scorning the lowland corridor of the Carron and Kelvin valleys traversed by the Forth & Clyde Canal and the Edinburgh & Glasgow Railway. West of Bo'ness the Forth is fringed by reclaimed mudflats, the 'kerse'; whilst the Middle Clyde has excavated a deep valley whose sides are divided by the steep gullies of tributaries. Mining has been the unifying factor, oil shale in the east but coal over most of the area, with its ancillaries of ironstone and fireclay mining and the manufacture of bricks. Opencast mining is still active on the central and western moors. The great centres of the Scottish iron industry were here, in the Monklands centred on Coatbridge, and in Kirkintilloch and Falkirk to the north; over two centuries Falkirk has had 42 foundries.

**C1 LUGGIE AQUEDUCT**

*Kirkintilloch, off A8006 E of town centre*

NS 657739

*Access: public place*

Single masonry span carrying Forth & Clyde Canal over Luggie Water. In 1848 the Edinburgh & Glasgow Railway's Campsie branch built through the arch and the stream was culverted.

**B**

**C2 TOWNHEAD RESERVOIR**

*Off A803 1½ miles E of Kilsyth*

NS 736785.

*Access: public footpaths*

One of a number of Forth and Clyde Canal reservoirs, this was filled by 1773. By 1786, over 2000 lockfull of water could be taken from this reservoir alone.

**C3 GLENBOIG UNION FIRECLAY WORKS OFFICES**

*Main Street, Glenboig, 2¼ miles N of Coatbridge*

NS 724687

*Access: seen from road*

2-storey offices in yellow brick with red sandstone dressings and etched windows with G U F, 1905.

**C4 SUMMERLEE HERITAGE PARK**

*By A89, ½ mile W of Coatbridge centre*

NS 730654

*Access: museum (free admission)*

Industrial museum, part open-air, established 1982 on the site of the Summerlee Ironworks (founded 1836, maximum of eight hot blast furnaces, closed 1930 and demolished 1939); excavated foundations and 1830s office building remain. Reconstructed drift mine, miners' cottages, atmospheric colliery winding engine

**SCH**

(c1820, from Rutherglen), street tramway and enormous machine halls with varied industrial collections displayed as in a trade exhibition.

**C5 CALDERBANK IRONWORKS ETC**

*Off B802, 3 miles ESE of Coatbridge*

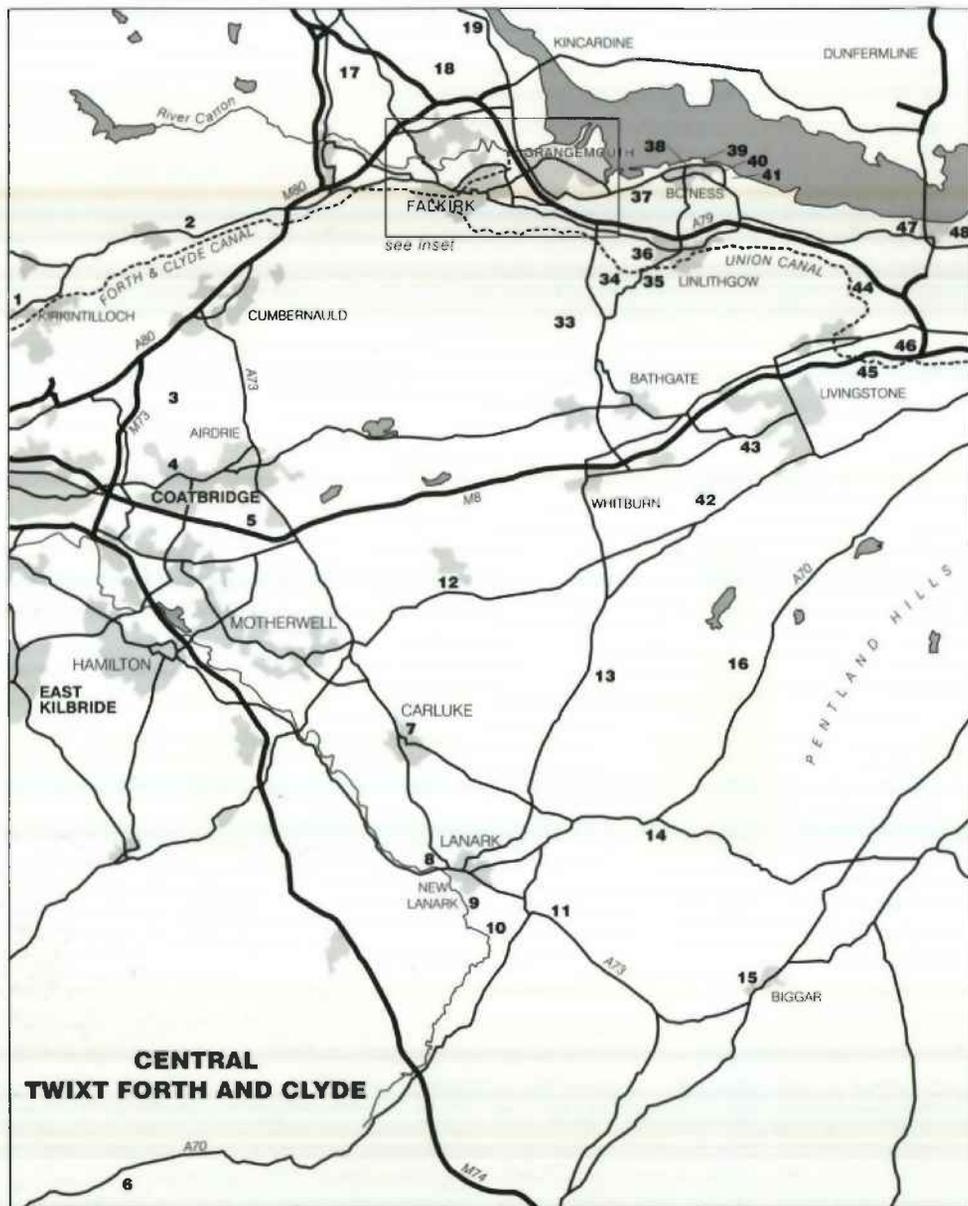
NS 771 628

*Access: public place,*

Calderbank Iron Co established 1797, with 6 furnaces and 60 puddling furnaces by 1841,



C4: Foundations of Summerlee Ironworks



becoming Monklands Steel Co. Closed 1887, new steel works operated c1900 – 1930. Great variety of slags studied by Scottish Analytical Services for Art & Archaeology.

**C6 MUIRKIRK IRON AND COAL FIELDS**

*Off A70, 16 miles SW of Lanark*

NS 69 26

*Access: mainly open moorland*

At 695257, foundations of stillhouse and kilns of tarworks established by Archibald Cochrane, Earl of Dundonald, 1786 (later leased by J L

**SCH**



**C6: MacAdam's tar kilns, Muirkirk**

MacAdam); coke bye-product a factor in Muirkirk Ironworks, founded 1787 with 3 furnaces by 1796. Ironworks closed 1923, demolished 1968. Detailed survey by RCAHMS, 1991-92, recorded landscape of coal pits, limestone quarries, tramways, water leats and workers' housing.

### **C7 CARLUKE WINDMILL**

*By A721 in town centre*

**NS 849508**

*Access: seen from street*

3-storey tapering tower mill with 2-storey extension and outbuildings. Some of the internal machinery conserved and in store.

### **C8 CARTLAND CRAGS BRIDGE**

*On A73 1 mile NW of Lanark*

**NS 869445**

*Access: very difficult to see*

Provides gentle crossing on three 62ft masonry spans 122ft above the Mouse Water, which flows in a very deep wooded gorge. Telford, 1820-1823.

### **C9 NEW LANARK MILLS AND VILLAGE**

*In Clyde Gorge 1 mile S of Lanark*

**NS 880426**

mostly Listed **A**  
tenement stair: **SCH**

*Access: public place (admission charge to exhibitions and themed ride)*

Most famous of Scotland's water-powered cotton mill sites, founded 1784 by David Dale and Richard Arkwright, but best known for social policies of Robert Owen. Mill 1 1785, rebuilt 1789; Mill 2 1788; Mill 3 1790-92 rebuilt c1829; Mill 4 1791-3, destroyed 1883; Institution for the Formation of Character 1809-16; school 1817; housing rows 1785-c1810. Ceased production 1968, acquired by New Lanark Conservation Trust c1974 and brought back to life. Mill 1 reconstructed as hotel, 1995. Inscribed on List of World Heritage Sites 2001.



**C9: New Lanark Mills and village**

## C10 CLYDE FALLS POWER STATIONS

On R Clyde, 1 mile SW and NW of Lanark

NS 883416 and 855440

Access: seen from footpaths (private road to Stonebyres)  
Two stations built under Lanarkshire Hydro-electric Power Act 1924, to use Falls of Clyde above and below New Lanark. Bonnington commissioned 1927, 11,000kW, Stonebyres 1928, 5,500kW, both 'through stations' (no reservoirs).

## C11 CARMICHAEL MILL

Off A73 1 1/2 miles S of Lanark

NS 922416

Access: seen from road; entry by appointment

Mid-19thC 3-storey corn mill with wheelhouse and outbuildings, converted to dwelling but retaining internal machinery as a feature. Site also has remains of early (horizontal?) mills and ironworking; whilst a separate wheel drove long shaft under yard to adjacent farm steading. Close to Hyndford Bridge over Clyde, 1760s.

## C12 SHOTTS IRONWORKS

Bt B7057, 1/2 mile E of Shotts Railway station

NS 879598

Access: open space

Shotts Ironworks established 1802, but only the L-plan rubblestone furnace bank and tall brick water tower survive.

## C13 WILSONTOWN IRONWORKS

Off A706, 11 miles SSW of Bathgate

NS 95149

Access: seen from roads/open ground

Traces of Scotland's second ironworks, founded 1779 by Wilson Brothers and by 1812 employing c500. Closed 1812, reopened 1821-42 by William Dixon, most remaining buildings demolished 1974. Foundations of 2 blast furnaces, foundry, coke ovens and workers' rows; area of bellpits now afforested.

## C14 CARNWATH MILESTONE

Middle of village, 6 miles ENE of Lanark

NS 978464

Access: public place

Distance marker in the form of obelisk, recording distances from Edinburgh to Air (sic) and Peebles to Glasgow; the mason had difficulty with letter 'N'.

## C15 BIGGAR GAS WORKS

Gas Works Lane, off A72/702 at W end of village

NT039377

Access: Historic Scotland Guardianship site, open summer afternoons (admission charge)

Traditional small town gas works, established 1839, enlarged 1914, ceased production Janu-



C15: Biggar Gas Works

ary 1973. Retort house with 4 and 5-retort settings, exhaustor house, 2 holders, exhibition in former office; live steam some summer weekends.

## C16 OIL SHALE WORKS SITE AND VILLAGE, TARBRAX

Minor road off A70, 6 1/2 miles NE of Carnwath

NT 027553

Access: open land

Rows of single-storey shaleworkers' cottages, 1904 for the Tarbrax Oil Co. Oil shale mined and retorted at this bleak upland location from 1866, but bing and foundations date from 1904. Closed 1926. To N, significant remains of



C18: Letham Moss Peat Railway

Cobbinshaw 1 and 2 (NT 029567) and entrance to Cobbinshaw 5 Pit (NT 032572).

### **C17 PLEAN COKE OVENS**

By 'Roman road' 5 1/2 miles NW of Falkirk

NS821863

Access: *seen from road in field*

Part-section of one beehive oven in bank of made ground, associated with West Plean Colliery No.3 Pit.

**SCH**

### **C18 LETHAM MOSS PEAT RAILWAY**

Off minor road 4 miles N of Falkirk

NS 87 86

Access: *seen from road*

Peat-carrying industrial railway from diggings on Letham Moss reaches the processing sheds; 2ft gauge, tippler for emptying high-sided trucks.

### **C19 DUNMORE MODEL VILLAGE**

Off A905 9 miles N of Falkirk

NS 893895

mostly Listed: **A**

Access: *public place*

Mid-19thC stone cottages surrounding green for the Earl of Dunmore's estate workers, a mixture of Scots and Cotswold styles. Smithy with horseshoe doorway, and water supply under slated roof on Doric columns. The amazing 'Pineapple', a garden folly of 1776, is 1 mile S at NS 887884.

### **C20 LARBERT VIADUCT**

Over R Carron and A9 2 1/2 miles NW of Falkirk

NS 859820

**B**

Access: *seen from road*

15 segmental arches of coursed rubble crossing, from S - N, the A9 Stirling Road, R Carron and leat for Carron Ironworks, whose curved dam of c1760 is 1/4 mile upstream.



C19: Pump, Dunmore Model village



C21: Falkirk Wheel

**C21 FALKIRK WHEEL**

Off Tamfourhill Rd, 2 1/2 miles W of town centre  
NS 853802

Access: *public place (charge for boat trip and car park)*  
The world's only rotating boat lift, completed June 2002 to link Forth & Clyde and Union Canals, replacing 11 locks closed and filled in 1933. Designed by RMJM, the rotating parts manufactured by Butterley Company, it raises and lowers boats 80ft from a marina lock above the F&C to an aqueduct. New canal passes under the Antonine Wall and Edinburgh – Glasgow railway, then via a new staircase pair lock and 3/4 mile extension to join the Union Canal at NS 865794.

**C22 FORTH & CLYDE CANAL LOCKS**

Bankside to Glenfuir Road, Falkirk  
NS 897814 to 868801

**SCH**

Access: *seen from roads and towpath*  
Canal climbs westwards, the locks increasingly close towards Lock 16, where the Union Inn,



26

C22: Forth & Clyde Canal locks

c1820, marks former entrance to Port Downie and the bottom of 11 locks to the Union Canal, closed 1963. F&C locks repaired and canal reopened 2001, Scotland's Millennium Link.

**C23 ROSEBANK DISTILLERY**

Camelon Rd, Falkirk  
NS 877804

Access: *seen from street* **B**  
Abandoned complex of brick buildings with tall chimney established c1817, and until recently with wooden wormtub condensers, removed without planning permission 2001. Across road and canal, 1864 warehouse with curved gable wall, now converted to restaurant.

**C24 UNION CANAL TUNNEL**

Falkirk Rd to Slamannan Road, Falkirk  
NS 884784 to NS 881790

**B, SCH**

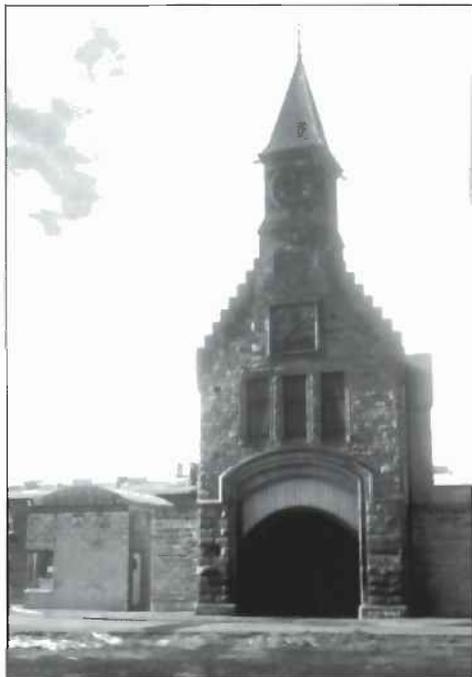
Access: *towpath through tunnel*  
Scotland's only canal tunnel, 600m long through rock with towpath, mostly unlined, to avoid William Forbes' Callendar Park—though he later built a length of canal near his house. Hugh Baird, 1818-22.

**C25 CARRON IRON WORKS**

Off B902, 2 miles N of Falkirk  
NS 881825

**B**

Access: *seen from street*  
Site of Scotland's first integrated coke-fired smelting ironworks, founded 1759, the first furnace blown in in 1760. Much enlarged during 19thC and much demolished since; ornate gatehouse and clocktower, 1876 and once the centrepiece of a long office range fronting the site, has dated portions of furnace lintel and



C25: Carron Iron Works gatehouse

steam cylinder set into walls, and specimen cannon under arch. Late 19thC buildings behind. Canal and lock which served site filled 1995, but tramway bridge of 1906 over R Carron survives, as do parts of water lade further upstream.



C26: Grahamston Gates

### C26 GRAHAMSTON GATES

Gowan Avenue, off Grahams Road

NS 885808

Access: *seen from street*

Monumental iron arched gateway with flags and shields, made by Grahamston Foundry for 1886 Edinburgh International Exhibition and afterwards used as foundry main entrance. Moved 2002 to Carron. Foundry office adjacent, foundry site has been pre-cast concrete works and is now to be redeveloped

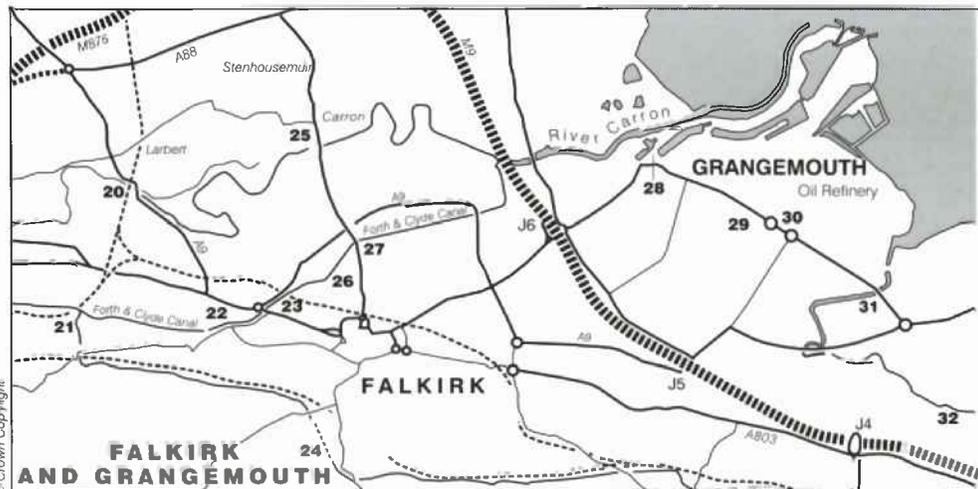
### C27 FALKIRK IRON CO OFFICES

Grahams Rd, 1/2 mile N of Falkirk town centre

NS 888811

Access: *seen from street*

Falkirk Ironworks established by workers from Carron, 1810; only remaining building is the office, 1930s, by J G Callendar.





C30: Grangemouth Oil Refinery

### C28 GRANGEMOUTH DOCKS

*Parallel to R Carron estuary*

NS 93 83

*Access: modern dock estate private (Forth Ports), Old Dock accessible by walking*

Entrance lock of the Forth & Clyde Canal into R Carron, begun 1768; the first basin site now under large modern warehouse. Old Dock 1842, acquired by Caledonian Railway 1867 and further developed with Carron Dock 1882; Western and Eastern Channels 1906 by building out on mudflats. Coal and timber were important commodities; now much related to chemicals. Alexander Hart's shipyard built the Charlotte Dundas, William Symington's steam tug successfully trialled on the canal in 1802-3.

### C29 AIRCRAFT HANGARS

*Abbotsinch Road, Grangemouth*

NS 937814

*Access: seen from street*

Two hangars of former Central Scotland Airport, with remains of warning lights on gables, and part of terminal building/offices. B9143 road follows former runway. Opened 1939, used in the 2nd World War as a Spitfire base. Closed June 1955.

### C30 GRANGEMOUTH OIL REFINERY

*Bo'ness Rd, Grangemouth*

NS 95 81

*Access: seen from roads; visitor centre at 942814*

Established 1924 by Scottish Oils, a subsidiary of Anglo-Persian Oil Co, later BP. Closed 1939-46, with Europe's first ethylene cracker commis-

sioned 1952. Now a huge complex with petrol and oil refining and related companies for the manufacture of various plastics.

### C31 BO'NESS CANAL AQUEDUCT

*Bo'ness Rd East, Grangemouth*

NS 954805

**C(S)**

*Access: public road*

Present road bridge across R Avon built as an aqueduct for a branch of the Forth & Clyde Canal to Bo'ness, 'almost finished' c1788 but abandoned 1796.

### C32 BIRKHELL FIRECLAY MINE

*In deep valley of R Avon, 2½ miles SW of Bo'ness*

NS 964789

*Access: by Bo'ness & Kinneil Railway from Bo'ness, or by minor roads off A904; admission charge*

Former drift mine begun by Mark Hurl from Glenboig Firebrick Works, 1911. Approached by steep former incline, exploited thick, gently sloping bed of fireclay. Surface buildings derelict, but regular underground tours in summer in conjunction with trains on the Bo'ness and Kinneil Railway.

### C33 AVONBRIDGE BRICKWORKS

*Candie End, off minor road 5 miles SSE of Falkirk*

NS 933736

*Access: abandoned track*

Derelict Avon Brick Co works with loading bank, processing shed with 3 machine bases, square chimney and 30-chamber coal-fired continuous kiln in fair condition. Possibly 1876 as Redford Firebrick Works, then 1952-78.

### C34 AVON AQUEDUCT

*3 miles WSW of Linlithgow*

NS 966758

**A**

*Access: walk along towpath*

Twelve-span aqueduct with 810ft long cast iron trough on masonry piers 86ft above R Avon, completed 1822. At W end is a small drydock and, beside the towpath, a milestone and an-



C31: Bo'ness Canal aqueduct



**C37: Watt's Workshop, Kinneil**

other stone marking the boundary between the 3rd and 4th stages of the journey from Edinburgh to Falkirk.  $\frac{1}{4}$ -mile W at Causewayend, interchange basin with the Slamannan Railway, 1840, much overgrown.

### **C35 CANAL STABLES**

By A706  $1\frac{1}{4}$  miles SW of Linlithgow

NS 976759

Access: *on canal towpath*

2-storey stable block for hauling horses, with loft above. Day boats were the norm on Scottish canals.

### **C36 AVON RAILWAY VIADUCT**

Edinburgh & Glasgow Railway, 2 miles W of Linlithgow

NS 981769

Access: *seen from roads at Linlithgow Bridge*

Dressed masonry, with 20 segmental arches, 3 semicircular arches at E end, by John Miller, 1842.

### **C37 WATT'S WORKSHOP, KINNEIL**

By Kinneil House, W end of Bo'ness

NS 983805

Access: *public park*

Small single-room roofless stone building, reputed to have been erected as James Watt's

workshop whilst perfecting his steam engine and sponsored by John Roebuck. A lightly-built cast iron cylinder from Schoolyard Pit, Bo'ness, stands outside.

### **C38 BANDSTAND**

Glebe Park, off School Brae, Bo'ness

NS 998814

Access: *public place*

Octagonal cast-iron bandstand with slated roof and lacy crown, by Walter Macfarlane's Saracen Foundry, Glasgow 1902

**B**

### **C39 BO'NESS & KINNEIL RAILWAY**

Bo'ness Station, N of town

NT 003817

Haymarket train shed: **A**

Access: *museum and heritage railway, runs summer weekends, holidays and every day July-August; admission charge to trains*

Preserved historic railway from Bo'ness to Birkhill, by the Scottish Railway Preservation Society. Bo'ness Station includes relocated Haymarket (Edinburgh) train shed (1841), and North British Rly station building from Wormit, Fife.

### **C40 WINDMILL**

Bridgeness Rd, Bo'ness

NT 013815

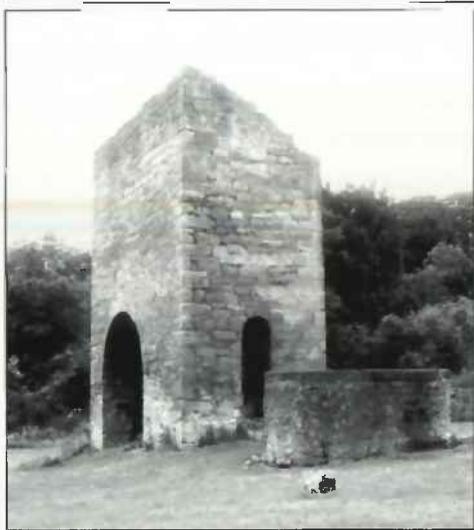
Access: *seen from street*

Former windmill c1750, reconstructed as observatory tower for a local shipmaster, with battlemented top added 1895. Close by (NT 014813) on open ground, stone built beam engine house of unusually narrow form with large arched openings in side walls, formerly draining coal pits on the Grange estate; later rebuilt as a doccot.

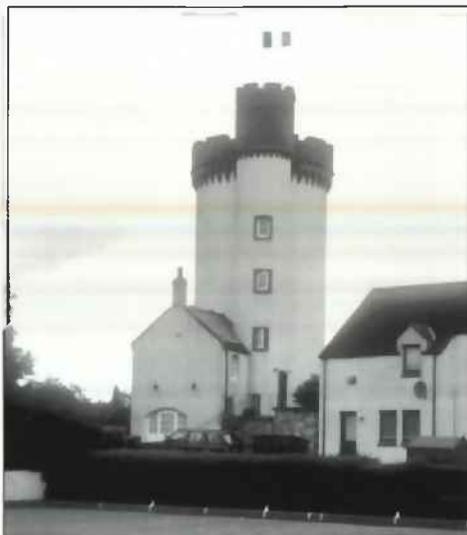
**B**



**C39: Bo'ness Station**



C40: Beam engine house



C40: Windmill

### C41 JOHN ROEBUCK'S TOMB

*Carriden old churchyard*

NT 020813

*Access: open graveyard*

Burial place of Dr John Roebuck, pioneer of sulphuric acid manufacture, founding partner of Carron Company and sponsor of James Watt's development of the steam engine, died 1794.

### C42 FIVE SISTERS SHALE BING

*1 mile NW of West Calder*

NT 010640

*Access: seen from surrounding area*

Group of five conical bings, allowing mechanised tipping to be directed, according to wind direction, to whichever side would minimise dust nuisance. Associated crude oil works, 1941, now a stonemason's yard.

**B, SCH**



C44: Oil shale workers' housing, Winchburgh

### C43 LIVINGSTON MILL (ALMONDVALE)

*West side of Livingston, signposted off A704*

NT 033668

*Access: independent museum (admission charge)*

Late 18thC mill with breast-shot wheel driving 3 sets of stones, with drying kiln and threshing barn. Part of Almondvale Heritage Museum, which also has an exhibition on the oil shale industry.

**B**

### C44 OIL SHALE WORKERS' HOUSING, WINCHBURGH

*On B9080, 5 1/2 miles E of Linlithgow./*

NT 0874

*Access: seen from streets*

Mining village of single-storey red brick rows, built by Oakbank Oil Company from 1901 and now renovated. At E end of the village a bridge carries B9080 over trackbed of Scotland's first electric railway, running from the mines to the refinery.

### C45 ALMOND AQUEDUCT

*Union Canal, 9 miles W of Edinburgh*

NT 105706

*Access: minor roads and canal towpath*

Originally planned as single arch, altered to 5 cast iron trough spans on masonry piers 7ft above R Almond on advice from Telford; completed 1822.

### **C46 ALMOND VIADUCT**

*Newbridge, 9 miles W of Edinburgh*

**NT 109723**

*Access: best seen from A89*

Edinburgh & Glasgow Railway carried on 36 masonry arches, now strengthened with old rails, across valley of R Almond, with skew arch over A89.

### **C47 FORTH ROAD BRIDGE**

*South Queensferry, on the A90*

**NT 125795**

*Access: public road*

Proposals for a road crossing of the Forth, by tunnel or bridge, go back at least to the early 19th century but present suspension bridge designed by Freeman, Fox and Partners, completed 1964 replacing the Queen's Ferry. Main span 3300ft; main contractors included Sir William Arrol and Co, Glasgow.

### **C48 FORTH RAILWAY BRIDGE**

*South Queensferry off the A90, on the A924*

**NT 135794**

*Access: seen from roads*

Famous cantilever railway bridge built 1882 - 1890 for the Forth Bridge Railway Company.

**A**



**C47: Forth Road Bridge**

a consortium set up by the North British, North Eastern, Great Northern and Midland Railways. Designed by John Fowler and Benjamin Baker, built by Tancred, Arrol and Co; total length 8300ft in 3 double cantilevers and dramatically high approach girders. Two main spans each 1700ft long. A superb bridge, one of the wonders of Victorian times.

**A**



**C48: Forth Railway Bridge**

North of the Firth of Forth lies the Kingdom of Fife, physically close but isolated until recent times, except by passage across the waters. Stirling is the classic 'lowest bridging point' of medieval times; and whilst rail bridges were built downstream during the 19thC (Falkirk to Alloa 1885, Forth Bridge 1890) not until 1934 did the Kincardine Bridge provide a new road route into the county. Jetties and small harbours sent out cross-river ferries and many served the Edinburgh–Stirling steamboats and developed their own North Sea trade.

The topography again presents a varied agricultural landscape, exploited in places for road, building stone and limestone, the latter often from underground chambers. The long-established linen and woollen industries based on local fibres and water power just about survive, but the evidence of their past significance is widespread and occasionally spectacular. Again, coal underlies much of the district. The last act of underground coal mining in Scotland was played here in 2002 and the marks of mining's more prosperous times are still widespread.

**FN1 LOCH KATRINE (RESERVOIR)**

End of A821

NN495073 (access point)

Access: *Scottish Water, car park and walks*

Glasgow Corporation's 1856-60 scheme took water via 26 mile long aqueduct via 77 separate tunnels with numerous shafts, arched conduits mostly covered but visible at various river and road crossings, to Mugdock Reservoirs, NS 560755, for distribution. Loch level raised and parallel aqueduct 1885-1900, including raising and capture of Loch Arklet. Scotland's last

screw steamer SS *Sir Walter Scott*, supplied by Denny Bros., via Loch Lomond and assembled at Stronachloch, 1900; carries tourists in the summer.

**FN2 SLATE QUARRIES, ABERFOYLE**

Duke's Pass, 1 1/2 miles N of Aberfoyle

NN 505030

Access: *footpaths*

Waste heaps mark site of quarry on W side of Creag Innich; line of a tramway interrupted by trial pits, winds S and descends to Aberfoyle by steep incline at NN 516015.

**FN3 DEANSTON MILLS AND VILLAGE**

Off A84, 7 1/2 miles NW of Stirling

NN 715015

Access: *seen from streets*

One of the four great Scottish cotton mills, established 1785 with massive lade and 4 huge waterwheels; the low wheelhouse survives as a boiler house with short square chimney. Late 19thC 5-storey L-plan mill and minor buildings. Converted to distillery, 1960s with modern extensions in dark brick. Teith Road has 2-storey & attic and colony-style houses c1875, early C19th cottages above.

**FN4 MURRAYSHALL AND CRAIGEND LIMEWORKS**

2 miles W of Stirling

NS 770920, 771910, 762905

Access: *seen from tracks and footpaths*

Banks of 6, 3 and 4 kilns all adjacent to different workings of the Murrayshall Limestone at the base of steep cliffs formed by a dolerite sill.

**FN5 HAYFORD MILLS**

Cambusbarrow, 1 1/2 miles W of Stirling

NS 775927

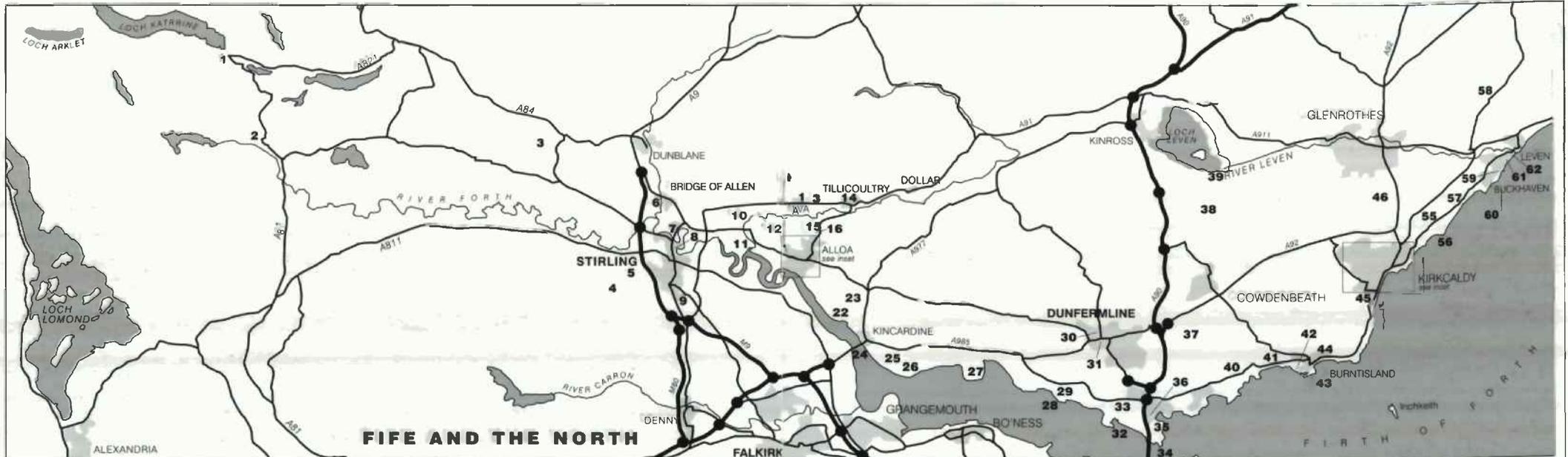
Access: *seen from street*

Large complex of 2, 3 and 6-storey blocks of polychrome brick and single-storey stone weaving sheds, founded c1860, making 'wincey'

right: FN5: Hayford Mills



FN3: Deanston





FN6: Bridge of Allen Mill

cotton warp, woollen weft), all under conversion to housing

### FN6 BRIDGE OF ALLEN MILL

By A9, at NW end of village.

NS 788976

Access: seen from street

Small L-plan corn mill with crow-step gables, drying kiln and skeleton iron low-breast wheel outside, over now dry lade; converted to offices.

### FN7 STIRLING BRIDGES

On A9 and railway, 1 mile N of Stirling centre

NS 798944

Access: public place

Once the lowest bridging point; R Forth still tidal. Earliest bridge (Listed A, Scheduled Ancient Monument) late 15thC, 4 arches. E arch rebuilt after destruction in 1745 rebellion; now footpath. New bridge with 5 segmental spans, Robert Stevenson 1831-2. Adjacent railway bridge for the Scottish Central Railway (Caledonian from 1865), 1848; original wooden span replaced by lattice steel.



FN7: Stirling Bridge

### FN8 STIRLING RAILWAY STATION

Station Road

NS 798936

**A**

Access: public place

Earlier station rebuilt 1913-15 with two island platforms, spacious concourse and gently curved stairs to bridge. Large Middle Signal Box and semaphore signals now designated under Railway Heritage Act.

### FN9 ROYAL GEORGE MILL, BANNOCKBURN

By A9 in village, 2 miles S of Stirling

NS 809950

Access: seen from road

Tall 3-storey, attic & basement rubblestone mill in deep valley with top floor at road level. Wheel-house on gable, 1822.

### FN10 ELMBANK MILLS, MENSTRIE

Off A91 3 1/2 miles W of Alloa

NS 846967

**B**

Access: seen from street

Established 1864 by G Drummond as a gas-powered mill, long 2-storey block with domestic style façade and ornate clock, now a Business Centre.

### FN11 CAMBUS CAST IRON BRIDGE

Off A907, 2 miles W of Alloa

NS 853940

**A SCH**

Access: seen from end of minor road

Early 19thC cast iron bridge with 5 cruciform-pattern ribs and diminishing-circle spandrel fillers. Adjacent distillery site founded 1806, part of still-house survived 1906 fire. Now a very large whisky bond.

right: FN13: Strude Mill,  
Alva

far right: FN14: Clock Mill,  
Tillicoultry



**FN12 GLENOCHIL DISTILLERY**

*S of A91, 3 miles NW of Alloa*

**NS 858968**

*Access: seen from street*

Two mid 19thC(?) stone buildings of former distillery survive in a United Distillers & Vintners whisky bond store.

**FN13 WOOLLEN MILLS, ALVA**

*3 miles N of Alloa*

**NS 891969, 886975, 878971**

*Access: mill shop/seen from street/visitor centre*

At Ochilvale Mills, 2-storey polychrome brick double range fronted by single-storey office and weaving shed, now Hodgson Knitware; Strude Mill (Listed B), imposing 6-storey & attic stone spinning mill with central pediment and bellcote, converted to flats. Glentana Mill, polychrome brick powerloom shed 1874 extended 1887,



now visitor centre. Small mill buildings survive, derelict, by Alva Burn, NS 885974.

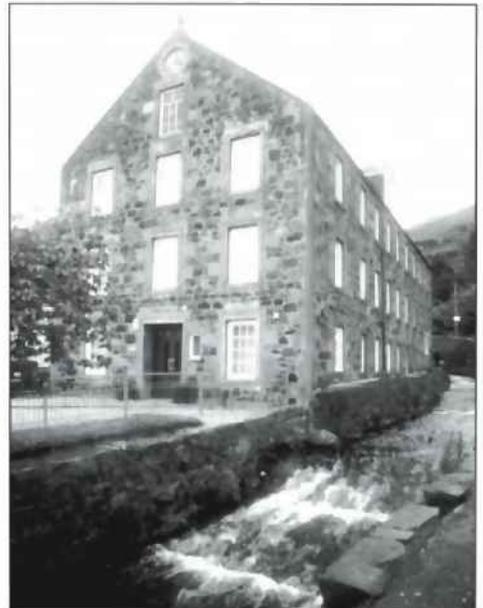
**FN14 WOOLLEN MILLS, TILlicOUNTRY**

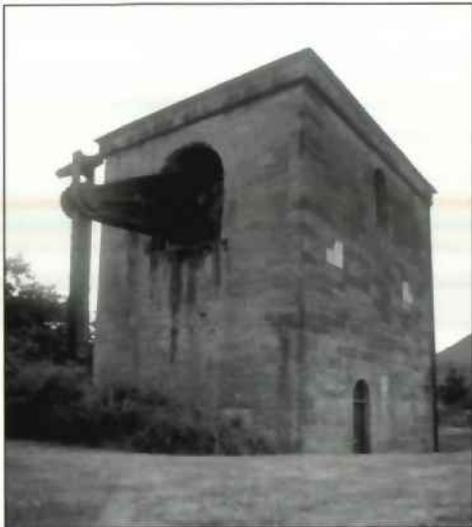
*3 miles NE of Alloa*

**NS 922964, 914968, 914974**

*Access: retail warehouse/seen from streets*

Of many mills in village, elements of three survive: Devondale Mills a mid to late-c.19th tweed mill including 3-storey triple-hipped roof mill, from 1920 a paper coating mill, now Sterling furniture store; J & D Patons (Listed B), a 34-





FN17: Glass Cone  
left: FN15: Devon Colliery engine house

bay 3-storey & attic block, 1836 and a 3-storey late-19th office both converted to housing; and Clock Mill, small 3 storey & attic water-powered mill, 1824, now a Business Centre. Upstream and downstream of Clock Mill, various fragments of other mills, all on leat supplied by wooden dam which survives in Mill Glen, 913980.

### FN15 DEVON COLLIERY ENGINE HOUSE

Off A908 and minor road, 2 miles N of Alloa  
NS 898958

**SCH**

Access: public place (country park)

Massive ashlar engine house containing heavy cast iron beam of a Cornish engine by Neilson & Co, Glasgow, 1865. Show pit of Alloa Coal Co, but nothing else remains. House restored c1995 as information and countryside ranger centre. Adjacent, Devon Ironworks was reputed to have two furnaces excavated in solid rock.

To W, large brick building on site of Crophill Pit (private).

### FN16 AUCHINBAIRD WINDMILL

Off A908 1 1/2 miles NE of Alloa town centre  
NS 897950

Access: seen from road

Small vaulted non-tapered tower mill for mine drainage, possibly early 18th, later a doocot and gaining castellated parapet.

### FN17 GLASS CONE

United Glass Co, Glasshouse Loan  
NS 881923

**A**

Access: top only seen from works entrance; permission required to visit

Round brick cone, 60ft high on octagonal stone base with eight arches, c1825. Site supposed to be the oldest glass-making site in Europe still in use; an older cone demolished 1972.

### FN18 WAGGONWAY

Mar St to Carron St, Alloa town centre  
NS 883921 to 886930

Access: parts form footpath through town

Lower section of Earl of Mar's 'waggon road', 1768, bringing coal from the New Sauchie area to Alloa Harbour. Overbridges survive at NS 884927 and 886929. Later extended to Devon Colliery (FN43) and Sheriffyards Colliery, NS 927946.

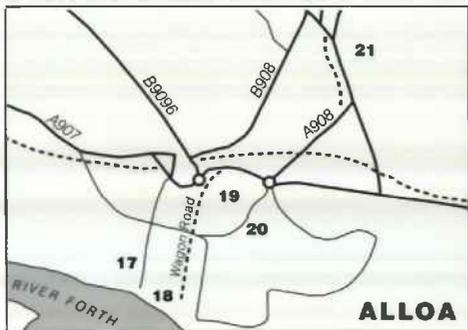
### FN19 MACLAYS THISTLE BREWERY

East Vennel, Alloa  
NS 888927

**B**

Access: seen from street

Prominent group of mainly polychrome brick



buildings on site established 1830. 6-storey brewery, 1870 with coppers and cast iron mash tun by Abercrombies, Alloa. Office 1897, coo- perage c1898, cask store and tun room 1902 or earlier. Brewing ceased 2001, site seeking new use in 2002. Alloa had 8 breweries in 1900.

### **FN20 KILNCRAIGS MILLS (PATON & BALDWIN)**

*Auld Brig Rd, SE Alloa*

NS 888926

*Access: seen from street*

Famous thread mills established by John Paton pre-1814, closed by Coats Vyella Group 1999; 1904 office block and 1936 warehouse under conversion for Fife College, all other buildings demolished 2001.

### **FN21 SITE OF PUMPING WHEEL, NEW SAUCHIE**

*Off A90B  $\frac{3}{4}$  mile NE of Alloa town centre*

NS 895937

*Access: public/private*

Round structure, c2ft high, a capped colliery pumping shaft. In an adjacent private garden, the outline of a waterwheel pit, 3ft wide which housed an overshot pumping wheel c26ft diameter, driving twin rocking beams supported on a stone column.

### **FN22 KENNETPANS**

*On shore, 2 miles NW of Kincardine*

NS 913889

*Access: minor roads S of Clackmannan*

Named from salt-panning, massive ruins of gin distillery established by Steins c1770 next to a small harbour excavated in the soft river bank. Close by, a row of 20 single-storey miners' cottages, c1800 for miners at Kennet Colliery, restored c1982.



NF27: Preston Island

### **FN23 KILBAGIE PAPER MILLS**

*Off A, 2 miles N of Kincardine*

NS 928898

*Access: seen from road; private*

Developed pre-1776 as a gin distillery by Steins (who ordered a rotative engine from Boulton & Watt in 1785), producing 3,000 tons pa of spirit, but killed by differential taxation by 1790. Linked by canal to Kennetpans, now Canal Burn; later by tramroad. Converted to paper mill by 1874, with tall brick water tower. Recently sold by Inveresk Group.

### **FN24 KINCARDINE ON FORTH BRIDGE**

*A876 over River Forth*

NS 921869 to NS 928873

*Access: pedestrian footpaths on either side of the bridge*  
Lattice steel multi-spanned viaduct on concrete piers, leading to 364ft swing bridge, Alexander Gibb & Ptnrs 1932-36. Control room above road and power room in central pier retain original fittings, hydraulic and electrical equipment; but bridge now fixed. Ferry slipways on N side.

### **FN25 LONGANNET MINE**

*By Longannet Power Station*

NS 945863

*Access: seen from roads*

Coal reached surface here from Scotland's last deep coal mine, working faces 4 miles north, accessed from Castlebridge (NS 940926) and Solsgirth (NS 983946) where surface installations remain. New driveage began 1999 under Forth, but mine closed after flooding in April 2002.

### **FN26 LONGANNET POWER STATION**

*North shore of Forth, 2 miles SE of Kincardine*

NS 953853

*Access: visitor centre and tours by arrangement*

Giant 4-bay generating hall with 2,400MW capacity and massive 180m concrete stack, Robert Matthew, Johnson-Marshall & Partners, completed 1966. Requires low-sulphur coal.

### **FN27 PRESTON ISLAND**

*1 mile off (SE of) Culross*

NT 007852

*Access: by appointment with Scottish Power, Longannet.*  
Re-enactment of Sir James Bruce's early-17th scheme, artificial island once  $\frac{1}{2}$ -mile offshore with three mineshafts, ruins of two engine houses and salt pans, developed for Sir Robert Preston c 1800; now marooned in a sea of Longannet's fly ash.

**SCH**



FN28: Charlestown  
Limekilns

### FN28 CHARLESTOWN LIMEKILNS & HARBOUR

5 miles W of Forth bridges

NT 067836

**A SCH**

Access: *public place; local society provides tours.*

Bank of 14 tall kilns built against sea cliffs, begun 1777 and described as 'the most extensive in the country, perhaps in Europe', 1790s. Served by the Elgin Railway from 1794, itself re-routed c1810 to base of kilns. 1st harbour a curved pier, with rectangular quay for coal hoists on W side; the whole enclosed late-c19th by outer piers much damaged by later ship-breaking. Limeburning ceased 1937, salt extraction ceased 1946.

### FN29 CHARLESTOWN VILLAGE AND SCOTTISH LIME CENTRE

Off A985 4 miles W of Forth Bridge

NT065835

**A**

Access: *seen from street*

Scotland's earliest industrial village, established by 5th Earl of Elgin, 1756 to house miners and limeburners. Terraces houses laid out on plan of letters C E with central drying green, single-storey 2 rooms & kitchen, complete by 1770. Plan survives, though houses extended, some with extra storey. Granary with shop and school established 1770s. Scottish Lime Centre provides training in uses of lime mortars and researches lime burning in new kiln completed 2001.

### FN30 LINEN MILLS, DUNFERMLINE

Foundry St and Pilmuir St

NT 090878

Access: *seen from street*

Formerly 3 separate linen damask works, a complex including St Margaret's (Listed B, working - access by appointment); Pilmuir Works, Listed A, 1883-1901; incorporating earlier buildings of 1816 and 1847; and Victoria Works (Castleblair Ltd), Listed B, 1876; extended to N late 19th century. Complex of single-storey weaving, lapping, calendaring, sewing and embroidery sheds, 2-storey offices and warehouses.

### FN31 ST LEONARDS LINEN WORKS

Bothwell St, Dunfermline

NT 097867

**B**

Access: *seen from street*

Centre of linen weaving from at least 15thC, 3000 handlooms in 1845; Andrew Carnegie was born here into a handloom weaving family, 1835. St Leonard's Works established 1851 by Erskine Beveridge; 3-storey Italianate warehouse & offices, c1860, converted to housing 1984; damask-weaving ceased 1990.

### FN32 ROSYTH NAVAL BASE

2 miles W of Forth Bridges

NT 10 82

Access: *private, seen from road and shores*

Admiralty Dockyard developed from 1903, now Babcock contracting for naval work, other parts developed as industrial estate. Two giant cantilever cranes by Sir William Arrol dismantled 1990s, leaving smaller Stother & Pitt crane. Huge investment to service nuclear submarines, then work transferred to Plymouth Devonport in 1990s. Fast ferry to Zeebrugge opened June 2002.

### **FN33 ROSYTH GARDEN VILLAGE**

*Off A90 - M90 junction 1*

**NT 11 83**

*Access: public place*

Planned from 1903 on Ebenezer Howard principles to house naval workers, with cottage-style houses best seen along Queensferry Road (B981).

### **FN34 FERRY SLIPWAY, NORTH QUEENSFERRY**

*End of B981, below N end of Forth Bridges*

**NT 131803**

*Access: public place*

As name suggests, N end of the principal Forth ferry. At the Town Pier, by John Rennie 1810-18 extended 1828, a hexagonal stone lighthouse with copper-domed lantern. To W the Railway Pier, 1877, used by vehicle ferries to 1964.

### **FN35 RAIL APPROACHES TO FORTH BRIDGE**

*Inverkeithing to N Queensferry station*

**NT 131828 to 132808**

*Access: view from A90 and B981*

The railway, 1888-90, climbs steeply over huge truss viaducts and through a tunnel in dark basalt to reach the Admiralty-required height of the Forth Bridge. N Queensferry station, 1890, has wooden lap-boarded buildings and stands immediately at the end of the bridge approach viaduct.

### **FN36 HALBEATH TRAMWAY BRIDGE**

*Just S of Inverkeithing railway station*

**NT 132832**

*Access: seen from station*

Semicircular arch over the former Halbeath Railway (1783) which brought coal to Inverkeithing Harbour, surviving as part of the overbridge across the N Queensferry branch 1877 and the Forth Bridge approach 1890.



FN34: N Lighthouse, North Queensferry

### **FN37 FORDELL RAILWAY**

*Fordell Colliery to St David's harbour*

**NT 159889 to 147824**

*Access: part lanes and footpaths*

Colliery waggonway established c1752, relaid 1833 with iron rails to 4ft 4in gauge ensuring its independence to closure in 1944. Route mostly clear as earthworks and lanes, the pier submerged in a tasteless marina.

**C**



FN38: Mary Pit, Lochore  
Meadows

## **FN38 MARY PIT, LOCHORE MEADOWS**

*Lochore Meadows Country Park, N of Cowdenbeath*

NT 170965

Access: *public place*

Reinforced concrete pithead gear of Lochore Colliery, Mary Pit, opened 1904 by the Fife Coal Company, closed 1966. Adjacent, a former colliery locomotive with steel access steps welded on.

## **FN39 LEVEN CUT**

*R Leven from Loch Leven to Leven*

NT 170993 to Leven

Access: *seen from roads*

16-mile long water management scheme, 1828-32, with sluice house at Loch Leven (NT 170993) and 5 further sluices to control water feeding 40 waterwheels for flax, corn and sawmills and bleachfields. Still used by Tullis Russell DRG and Smith Anderson paper mills, Markinch and Rothes for turbines and process water.

## **FN40 WOODSIDE HOTEL, ABERDOUR**

*High St, A 921*

NT 186853

Access: *open to patrons*

Small hotel with chateau-style features and inside, panelled room rescued from the liner *Olympic*, broken at Ward's shipbreakers' yard, Inverkeithing, 1937.

## **FN41 NEWBIGGING LIMESTONE MINE**

*1 mile W of Burntisland, N of A921*

NT 211862

Access: *private*

Underground mines worked Burdiehouse Limestone from c1742, from 1760s supplying Carron Iron Co who bought the mine in 1808. Waggonway 1817 to Carron Harbour where a small pier survives. This waggonway replaced 1896 by new mine entrance and new incline to loading bank on Forth Bridge connecting line. Other quarries, Kilmundy and Grange, to E.

## **FN42 BURNTISLAND ALUMINIUM WORKS**

*West end of Burntisland*

NT 226863

Access: *seen from road*

British Aluminium Co, established 1917 to import and refine bauxite into alumina (aluminium oxide) prior to smelting at Foyers, Kinlochleven and Fort William. Nondescript brick buildings, but a notable wooden cooling tower. Only Fort William smelter operating, 2002.

## **FN43 BURNTISLAND DOCKS**

*W end of High St, Burntisland*

NT 232854

Access: *private (permission from Forth Ports), seen from road*

Long-established harbour before 1847 when it became the northern landing of the Edinburgh & Northern Railway's cross-estuary ferries; the world's first train ferry designed by Thomas Bouch operated hence to Granton, 1850-90. First wet dock built 1873-76 jointly by town Council and the North British Railway, with 3 Armstrong hydraulic hoists, 'the first in Scotland'. 2nd dock completed 1902. Trade continues in bauxite ore transferred by lighter from ships lying offshore.

## **FN44 BURNTISLAND RAILWAY STATION AND VIADUCT**

*Forth Place, off Harbour Place, Burntisland*

NT 233855

Access: *public place*

Former Edinburgh, Perth & Dundee Railway terminus, 1847 where ferry passengers joined trains to Tayport. 2-storey building with colonnade, train shed long demolished. Present platforms on new connection to Forth Bridge, 1890; line curves sharply over low lattice viaduct to avoid West Dock.

## **FN45 WEST BRIDGE MILL**

*Pratt St, 1 mile S of Kirkcaldy town centre*

NT 277902

Access: *seen from streets*

Founded 1806, rebuilt 1856 for J & W Hendry, flax spinners. 4-storey fireproof iron-framed mill with 'gothic' cast iron roof trusses and integral double beam engine house with tripartite windows. Converted 1995-6 to a Foyer, providing training and accommodation for young unemployed.



FN44: Burntisland Railway Station



FN45: West Bridge Mill

**FN46 COLLIERY ENGINE HOUSE, THORNTON**

*Immediately N of railway station*

NT 292973

*Access: by footpath from station car park*

Small stone-built beam engine house with buttressed bob wall and shadow of boiler house on south side.

**A**

**FN47 TRAMWAY ELECTRIC POWER STATION**

*Victoria Road,  $\frac{3}{4}$  miles NE of town centre*

NT 282924

*Access: seen from street*

Tall single storey power room and office, 1903 for Kirkcaldy Corporation Tramways which linked with Wemyss & District Tramway Co and served coastal villages as far as Leven.

**B**

**FN48 COAL WYND FLAX MILLS**

*N end of promenade, Kirkcaldy*

NT 283919

*Access: seen from streets*

Steeply sloping site with brass & iron foundry and three flax spinning mills: North Mill pre-1809, now the Zion Praise Centre, has Y-shaped columns and a bellcote; Old Mill (William Kirk's), 1828; and the fireproof Swan Bros Mill, 1862 with beam engine house where the entablature of a 150HP St Rollox engine survives. All depended on water pumped from a nearby colliery, the site now lock-up garages, and closed with the mine.



FN50: Nairns South Linoleum Works, Kirkcaldy

**FN49 NAIRNS NORTH LINOLEUM WORKS, KIRKCALDY**

*Dens Rd, 1 mile NE of town centre*

NT 285928

*Access: seen from street*

Large 5-storey brick range c1890 with segmental and arched windows, drying tower and 8-storey reinforced concrete-framed mixing tower 1926-28, one of only 2 linoleum factories remaining in Europe.

**B**

**FN50 NAIRNS SOUTH LINOLEUM WORKS, KIRKCALDY**

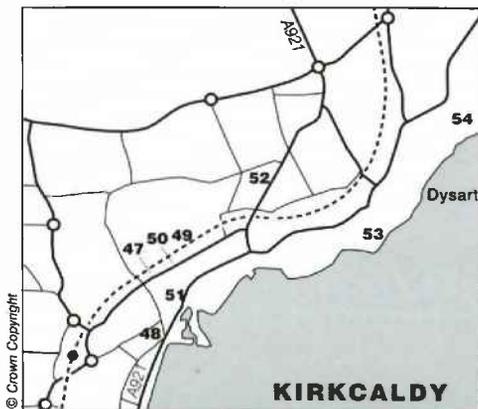
*Victoria Road, 1 mile NE of town centre*

NT 285926

*Access: seen from street*

Prominent stone-built 1870s mill and 1883 extension with very tall windows, where linoleum was initially block printed. Derelict and decayed. Michael Nairn began the manufacture of lino-

**A**



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FN52: Victoria Linen Works, Kirkcaldy

leum in 1877, giving Kirkcaldy its 'queer-like smell'.

### FN51 ST MARY'S CANVAS WORKS

*High St, by harbour*

NT 285922

*Access: seen from road*

Single storey ornate frontage of 1869 with prominent inscription M NAIRN hides a modern warehouse an extreme example of facadism. Adjacent 1914 block, now Fife Colleges. The site wove jute backing for linoleum.

### FN52 VICTORIA LINEN WORKS

*Sinclairtown, by A921/McKenzie St*

NT 292933

*Access: seen from street*

2-storey office block with attached cottages, fronting single storey weaving sheds, where Peter Greig & Co still produce various linen weaves on rapier looms.



FN53: Dysart Harbour



FN54: Francis Colliery headgear

### FN53 DYSART HARBOUR

*NE end of Kirkcaldy*

NT 302927

*Access: public place*

Harbour commenced c1615, present piers complete by 1703. Inner wet dock excavated from former sandstone quarry, c1824-31, with warehouse on E quay. Ships were built on the patent slip, installed c1841. Note coursing of stones laid with vertical axes. To E is Panhaa, site of salt pans.

**B**

### FN54 FRANCIS COLLIERY HEADGEAR

*Overlooking coast 3 miles NE of Kirkcaldy*

NT 310940

*Access: seen from road*

Lone headstock marks the site of Frances Colliery, established mid-19thC, one of the Wemyss pits named for members of the family, acquired by Fife Coal Co, 1925. Mined under Firth of Forth. Care and maintenance from 1984, buildings demolished 1999. Electric winder by Robeys of Lincoln stored at Scottish Mining Museum (EE35)

**B**

## **FN55 COALTOWN OF WEMYSS**

*On A955, 4 miles NE of Kirkcaldy*

**NT 325959**

*Access: public area*

Village established 1890s by Wemyss estate for its miners, with harled and slated single-storey rows, some with crow-step gables, others with romantic porches, now a conservation area.

## **FN56 WEST WEMYSS**

*On coast 4 miles NE of Kirkcaldy*

**NT 325947**

*Access minor road off A995*

Coastal village, but a burgh since 1511, a centre for salt-boiling and later a coal-exporting port. Pier built c1650, the inner harbour mid-19thC, mostly filled in late-1980s. Coal brought by tramway through a tunnel at the head of the small bay, where two mines were sunk from the shore.

## **FN57 MINER'S MONUMENT, EAST WEMYSS**

*By A965 at W end of village*

**NT 335965**

*Access: public place*

Miniature pit headgear commemorating the death of nine miners in the underground fire which closed Michael Pit, Scotland's largest mine, 1967. The fire led to introduction of self-rescuers in all NCB mines. Next to Randolph Place, two rows of single storey miners' cottages with semicircular ends.

## **FN58 KILMUX ENGINE HOUSE**

*By A916 2 miles NE of Kennoway*

**NO 363043**

*Access: view from road*

Substantial colliery pumping engine house with prominent arched beam opening in N gable, probably 1835.

## **FN59 RANDOLPH WEMYSS MEMORIAL HOSPITAL**

*Wellesley Road, Denbeath, Methil*

**NT 364987**

*Access: seen from street*

Provided by Wemyss family, 1909, for the treatment of miners, the central turret has a clock with hands in the form of miner's pick and shovel. Adjacent, rows of 2-storey colonies with outside stairs.

## **FN60 RIG YARD, BUCKHAVEN**

*E of Wellesley Road, 2 1/2 miles SW of Leven*

**NT 365985**

*Access: private, seen from street*

Area part-formed by mine spoil from Wellesley (Denbeath) Colliery (closed 1967), now Kvaerner's oil-rig construction and repair yard but not working in June 2002.

## **FN61 METHIL DOCKS**

*Lower Methil, 1 mile S of Leven*

**NT 377997**

*Access: private (permission from Forth Ports), seen from shore road*

Coal-exporting harbour recorded on this site 1660, but first of the present docks built 1883-87 by the Earl of Wemyss. Sold to the North British Railway 1889, which built a second dock 1897-1900 and a third 1908-13. In 1913 1,700 ships used the port. Eleven Armstrong hydraulic hoists loaded 2-3 million tons of coal per year to 1940. All dismantled 1970s and No 3 Dock part-filled, 1979.

## **FN62 LEVEN POWER STATION**

*On built-up land at mouth of R Leven,*

**NO 382003**

*Access: seen from A955 at Leven*

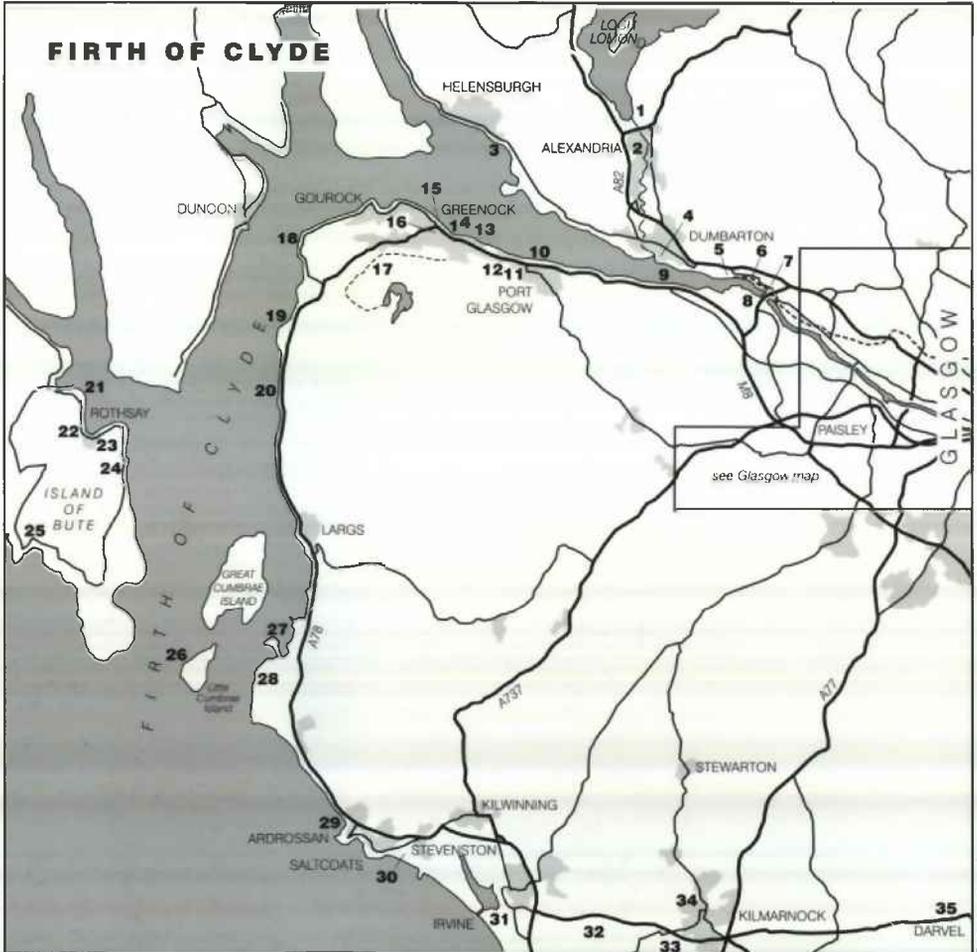
Built 1959, a striking reinforced concrete building with large coal gantries and prominent chimney, designed to burn washed slurry. Two 30MW generators. Maintained since 2000 in reserve.

*below: FN55: Coaltown of Wemyss*



## FIRTH OF CLYDE

Beyond the Glasgow conurbation the Clyde continues north-westward, still narrow until it passes beneath the Erskine Bridge, and even then the navigable channel is constrained by training banks as far as the precipitous Dumbarton Rock. Then the estuary widens, meeting the Gare Loch, Loch Long and the Holy Loch as it turns south to the lower Firth of Clyde. Greenock, Port Glasgow and Dumbarton vied to be the Clyde's chief port before the river was dredged and straightened to Glasgow from the late 18th century. Clyde shipbuilding developed here before the later yards established sites upriver, but access to deep, wide water was not a sufficient advantage in the mid-20th century and only two small yards survive. William Denny & Brothers of Dumbarton, founded 1844, were leading innovators (the first steel hull 1879, the first turbine-powered liner 1901, the first all-welded ship 1934), but closed in 1962. The Clyde also provided a highway for commuting and leisure, its fast paddle steamers linking seaside villas and resorts to Glasgow's suburban railway system; in 1892 it was possible to travel from the city centre to Brodick, Arran, in 80 minutes.



Waverley, the world's last sea-going paddle steamer, operates from some of the Clyde's piers. On the north bank the five-mile river Leven drains Loch Lomond and once provided water for dye works specialising in 'Turkey Red'. Southwards the Renfrew Heights restricted industrial development to their coastal and inland fringes, but provided reservoirs for the supply of water to the industries on the coastal strip. Southwards again are the low lying valleys of the rivers Garnock and Irvine, mined for coal since the 16th century and centred on the important engineering town of Kilmarnock.



FC1: *Maid of the Loch* at Balloch Pier

### FC1 BALLOCH PIER AND SLIPWAY

Balloch, S end of Loch Lomond.

NS 386825

Access: public place

Stone pier, 1850, rail served until 1988, now a base for *Maid of the Loch*, Lomond's last paddle steamer built 1953, ceased sailings 1981 and now being restored by the Loch Lomond Steamship Co. Adjacent is the patent slip with much-modified timber carriage, on which the *Maid* was assembled, powered by a twin-cylinder horizontal steam engine, still operable by compressed air, in a characteristic railway building.



### FC2 ARGYLL MOTOR WORKS

Alexandria, North Main St

NS 390807

Access: public access to shops and car park

Imposing 'palace' built 1905 to expand the production of Argyll cars, built in Glasgow from 1899. Argyll Motors Ltd failed in 1914. Used as a torpedo factory, then long derelict, it was converted to a retail outlet in the late 1990s, the workshops at the rear demolished.

**A**



FC2: above right: Argyll Motor Works  
right: detail



FC4: William Froude plaque, Denny Tank

### FC3 CRAIGENDORAN PIER

*End of Helensburgh, 5 miles W of Dumbarton*

NS 308813

*Access: view from railway station*

Decaying wooden stumps of a rail-ferry interchange, 1882, the North British Railway's bid to compete with other railway companies for Clyde ferry traffic. Helensburgh Pier had shallow water and no direct rail access, making it difficult to coal the ships. Closed 1972.

### FC4 DENNY SHIP TEST TANK

*Dumbarton, Castle St*

NS 402748

*Access: Museum (Admission charge)*

Last surviving part of William Denny & Brothers shipyard, a long low brick structure with office frontage, 1882-3. Essentially a huge tank of water, it is now a Scottish Maritime Museum site, but still in regular use by Glasgow/Strathclyde Universities' Department of Marine Engineering. Outside, a side-lever marine engine by Robert Napier for the paddle steamer *Leven*, 1824.

### FC5 HENRY BELL MEMORIAL

*Off A82, 2 1/2 miles E of Dumbarton*

NS 437735

*Access: on private land; permission from Esso, Southampton*

Stone obelisk on a promontory, commemorating the establishment of the Clyde's first steamboat, *Comet*, by Helensburgh hotel proprietor Henry Bell in 1812. There are two other memorials, a polished red granite obelisk on the sea-front at Helensburgh, NS 293823, and a seated statue at Rhu churchyard, NS 267840, the latter placed by Robert Napier, shipbuilder.



FC4: Denny Ship Test Tank

### FC6 BOWLING CANAL BASIN

*Off A814, 3 miles E of Dumbarton*

NS 449734

**SCH**

*Access: minor road and footpaths from Bowling village*

Western end of the Forth & Clyde Canal, completed here 1790. The basin remained in use throughout the canal's closure from 1961 to 2001. Disused lattice girder swing bridge carried the Caledonian Railway's North Clyde line, 1896. The adjacent tidal basin was used to berth railway-owned paddle steamers in winter.



FC6: Bascule bridge at Bowling canal basin

FC8: Piggery,  
Erskine Hospital



### FC7 ERSKINE BRIDGE

A898, crossing R Clyde

NS 462724

Access: visible from wide area; walkway on E side.

Cable-stayed, box-girder bridge, by Freeman Fox & Partners 1967-71 replacing the Erskine Ferry, the lowest vehicle ferry on the river.

### FC8 PIGGERY, ERSKINE HOSPITAL

By hospital access road from sliproad to Erskine Bridge

NS 453723

Access: view from grounds - follow signs to MacEwen Conference Centre

Imposing farmstead with clock tower, 1850, with hexagonal piggery with turret, part of the hospital complex, recently restored as a Conference Centre. The hospital grounds contain groups of small cottages for war veterans, c1945.

### FC9 TIMBER PONDS

Langbank, south side of river

NS 395731 (area)

Access: seen from M8

Lines of stakes protrude from the water, marking discrete areas of shallow water where timber for shipbuilding was seasoned.

### FC10 FERGUSON 'CASTLE' SHIPYARD

Port Glasgow, by A8

NS 327746

Access: view from road

Founded c1870 by Blackwood & Gordon on a cramped site, still building Caledonian MacBrayne ferries and support ships for the offshore oil industry. Nearby, a Glen & Ross (Glasgow) steam hammer, No 872 of 1885, forms a monument.

### FC11 GOUROCK ROPE WORKS

Port Glasgow, by A8

NS 326744

Access: view from road

Large, derelict 7-storey brick building, built c1860 as a sugar refinery, later incorporated with the adjacent 1797 2-storey ropery which has now been demolished.



FC10: Glen & Ross steam hammer

A

B



FC12: Comet replica

### FC12 COMET REPLICA

Port Glasgow, by A8

NS 319747

Access: view from street (security fence)

Replica built 1962 and recently repaired, of Henry Bell's *Comet*, Europe's first commercially successful steamship, launched 1812 to ply between Glasgow and Helensburgh.

### FC13 SCOTT LITHGOW'S SHIPYARDS

By A8, 2 miles E of Greenock

NS 317748 (Kingston Yard)

Access: seen from road

Much-reduced group of shipyards stretching from Port Glasgow to Greenock, responsible for building a wide range of civilian and military vessels, latterly restricted to piecemeal offshore oil contract work, and largely derelict. Kingston yard was dominated by 225-ton-capacity 'Goliath' travelling crane (350ft span, 240ft high), by Sir William Arrol & Co, 1971, demolished 1997 by explosives.

### FC14 JAMES WATT DOCK

Greenock,

NS 298755

**A**

Access: view from car park next to dock entrance

Rectangular basin with single flap gate, 1879-86. On the N side, small hydraulic power station, accumulator tower and stump of chimney; beyond is Garvel Dry Dock, 1871. On S side a giant cantilever 150 ton crane by Sir William Arrol

& Co, 1917, and large 2 & 3-storey range of warehouses with cast iron framed interior, 700ft long, for raw sugar, 1886. Derelict, seeking a new use following closure of Scotland's last sugar-cane refinery nearby at Westburn (Tate & Lyle), 1997.

### FC15 GREENOCK DOCK BASINS

Off A8 near Greenock town centre

NS 283761

Custom House: **A**

Access: public area

Two basins open to the river, East India Harbour by John Rennie 1805, with two dry docks (one retaining its granite barrel runs) on W side. The classical Customs House, 1818, echoes Greenock's aspiration as a seaport, and in front a cast iron column outside supports a clock, lantern and bell. E of the harbour, Victoria Harbour by Joseph Locke, 1846-50.

### FC16 STATUE OF JAMES WATT

Greenock, by A8 close to town centre

NS 281762

Access: public place

Bronze statue of Watt on a red sandstone plinth in an angle of Greenock's Municipal Buildings, inscribed 'This memorial building is erected on the site of his birthplace'.



FC11: Gourock Rope Works



FC15: Dry Dock, Greenock

### FC17 GREENOCK CUT

From Loch Thom, along hillside south of Greenock; accessible from minor road off A78 to Cornalees Bridge and from Papermill Road, Overton, Greenock.

NS 247721 to NS 266748

**SCH**

Access: public park and footpath

A series of 'cuts' built 1825-28 by Robert Thom supplied water from Loch Thom and further south to the Long Dam at Overton, whence two channels fell 300ft and provided water power whose cost balanced horsepower and height above the harbour. A shorter parallel cut provided water for domestic use.

### FC18 THE CLOCH LIGHTHOUSE

On A770, 1 1/2 ml W of Gourock.

NS 2037

**B**

Access: view from road

Low circular tower with keepers' houses, designed by James Clarkson with lantern and oil light by Thomas Smith, 1797. It marked the N end of the standard speed trial course for ships built on the Clyde.

### FC19 INVERKIP POWER STATION

On A78, 6 1/2 miles SW of Greenock

NS 197710

Access: seen from road

Oil-fired power station with prominent concrete chimney, built early 1970s to exploit cheap oil,

but just prior to the oil crisis. Too expensive for routine generation, used for emergency back-up and as a source of spares for other power stations.

### FC20 WEMYSS BAY PIER AND RAILWAY STATION

On A78, 8 miles SW of Greenock

NS 193685

**A**

Access: public place

Ferry landing pier for Rothesay (Bute), the station was reconstructed in 1903-4 by the Caledonian Railway, with long curved platforms and a spectacular glass-roofed booking hall. Recent 'restoration' work has removed some of the canopies.

### FC21 TRAM DEPOT

Port Bannatyne, on A844 2 miles NNW of Rothesay, Bute

NS 080670

Access: seen from street

4-track brick shed, 1902 with attached offices of stone which served horse-drawn trams from Rothesay, then electric trams 1902 to 1936; now used by buses. The route of the 1905 reserved track extension to Ettrick Bay, NS 035664, parallels the A844.



FC16: Statue of James Watt

## **FC22 CAST IRON ARCHITECTURAL FEATURES**

*Rothesay sea front and gardens, Bute*

NS 087647

*Access: public place*

1874 cabmen's shelter, and Winter Gardens with pagodas and a domed hall, 1923-4, both built from materials supplied by Walter Macfarlane's Saracen Foundry, Glasgow. Two promenade houses have elaborate bays with cast mullions, one with roof turret and iron coronet.

## **FC23 GENTLEMEN'S TOILET**

*Rothesay, Bute, by the pier*

NS 088648

*Access: public (admission charge for tour)*

Polychrome glazed brick by J & M Craig Ltd, Kilmarnock, the interior a splendid temple of Victorian sanitary art in glazed brick and polished pipework, sanitary ware by Doulton of Lambeth and Paisley.

## **FC24 SALT PAN, ASCOG**

*By A844, on small promontory behind Ascog church.*

NS 108634

*Access: track to N of church*

Semicircular end with chimney of a salt boiling house, probably mid-18thC, the seaward end of which has succumbed to coastal erosion. Remains of stone pier, 1832.

## **FC25 WATER SUPPLY CHANNELS**

*Bute, various locations from Scalpsie Bay via Loch Fad to Rothesay*

NS 053585, 092590, 099609

*Access: seen from roads and footpaths*

Robert Thom owned a cotton mill in Rothesay and developed an elaborate network of artificial channels, intercepting streams in many parts of the island to increase available water power. Mill demolished but some Cotton Mill Society cottages have been restored.

## **FC26 LITTLE CUMBRAE LIGHTHOUSE**

*W side of Little Cumbrae Island*

NS 137515

*Access: nature reserve; only visible from sea*

Built 1793 by Robert Stevenson, lit by oil, replacing 1757 tower built by trustees and lit by a coal fire at summit of island. Marked S end of Clyde tidal course.

## **FC27 HUNTERSTON ORE TERMINAL**

*By A78 7 miles N of Ardrossan*

NS 20 53

*Access: seen from private road to power stations*

Pier and quays with cranes and conveyors, built 1970s to import iron ores for Ravenscraig Steel

Works, now importing coal. Prominent enclosed conveyor links the storage areas to the Ardrossan-Largs railway.

## **FC28 HUNTERSTON NUCLEAR POWER STATIONS**

*Off A78 19 miles SW of Greenock*

NS 182512

*Access: private road to visitor centre (currently closed) at B station*

Hunterston A was Scotland's first civilian nuclear station, its two Magnox reactors (unique in that they were fuelled from below) commissioned 1964 and decommissioned 1990. Enclosed in a glass-screened building by Basil Spence. Adjacent the 'B' station, Scotland's first advanced gas-cooled reactor station, commissioned 1976.

## **FC29 ARDROSSAN HARBOUR**

*Ardrossan, off A78 at west end*

NS 225422

*Access: seen from streets, public access to Arran ferry.*

Harbour developed from 1806 by the Earls of Eglinton but the existing basin and dock 1886-91. Surviving features include a hydraulic power station, c1892, now a chandlery. Grid-planned town also developed from 1806.

## **FC30 AUCHENHARVIE COLLIERY ENGINE HOUSE**

*Stevenston, an open ground S of A738*

NS 257414

*Access: public open space*

Ruins of rubblestone building, supposed to have housed one of the first Newcomen engines in Scotland, 1719. Robert Reid Cunninghame's main Stevenston coal canal, cut 1770-72, ran close by.

## **FC31 LINTHOUSE ENGINE SHOP**

*Gottries Road, W of Irvine town centre*

NS 315384

*Access: public, Scottish Maritime Museum (admission charge)*

Originally built 1872 at Alexander Stephen &



Sons' Govan yard, two parallel machine halls and aisles with cast-iron webbed section stanchions supporting travelling crane gantries and timber roof spans; now an exhibition area and accessible store for the museum's collections.

### **FC32 LAIGH MILTON MILL VIADUCT**

*Nr Gatehead, off A759, 3 miles W of Kilmarnock town centre.*

NS 383369

**SCH**

*Access: public; footpath from Laigh Milton Mill*

Four span viaduct carrying the 1812 Kilmarnock & Troon Railway across the R Irvine, bypassed 1848. Restored late 1990s. The world's first railway viaduct?

### **FC33 BLACKSYKE ENGINE HOUSE**

*Off B7038 on Riccarton Golf Course, 2 miles SW of Kilmarnock.*

NS 416353

**SCH**

*Access: public place*

Ruined engine house, for an engine whose parts were supplied by the Carron Company in 1781 to drain Caprington Colliery's EII seam; the pumping shaft collapsed in 1828. Later architectural embellishments.

*below left: FC31: Linthouse Engine Shop*

*below: FC33: Blacksylke engine house*

*below right: FC34: Caledonia Engineering Works*

### **FC34 CALEDONIA ENGINEERING WORKS**

*Kilmarnock, West Langlands Street*

NS 424382

**B**

*Access: view from street*

General and railway engineering company founded 1847 by Andrew Barclay. Imposing range of offices and workshops, vacated 2001 when Hunslet-Barclay's remaining work was concentrated in modern buildings. Adjacent in N Hamilton St, a terrace of tenements in glazed white brick with curved outside stairs at the rear, 1883.

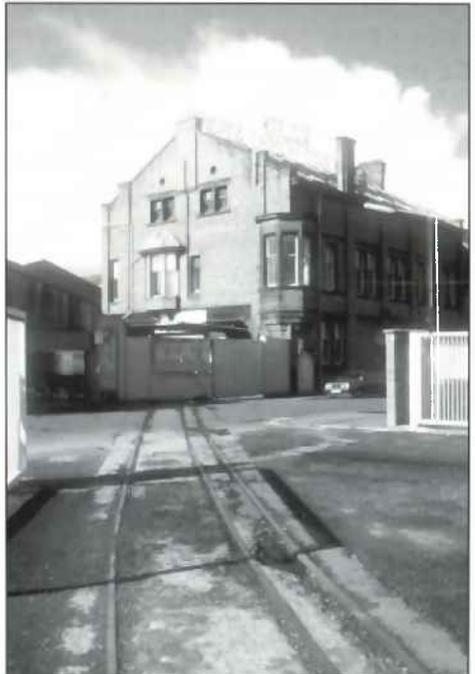
### **FC35 LACE FACTORY, DARVEL**

*West Donington Street, N of A71*

NS 565376

*Access: entry by arrangement*

Late 19th brick factory of no architectural merit, but with five 430 inch wide Jacquard lace looms making theatre scrims and baby blankets; a preparation room has wood batted beaming machine and two lace bobbin winders. Darvel and neighbouring Newmilns specialised in lace manufacture and several small factories survive. Europe's last press-cut jacquard card maker ceased work October 2001.



Glasgow, at the historic lowest bridging point of the Clyde, has no early claim to urban fame, but by the late 19th century it had become 'the second city of the British Empire'. Emerging from its sleepy medievalism, its merchants traded and grew rich on the products of the New World, first on tobacco and later on sugar and cotton. Until the late 18th century the limitations of a shallow and meandering Clyde stunted the town's growth to the advantage of Greenock, Port Glasgow and Dumbarton. The next key to growth was the straightening and training of the river, begun at the end of the 1700s, which allowed ships of increasing size to reach the Broomielaw, and upriver shipyards were established from 1818, by which time the first steam vessels were navigating the river. Soon the combination of trade, coal and iron and engineering innovation was driving the growth of one of the world's greatest industrial centres. For the next century Clyde-built ships carried Glasgow goods and Scottish engineers to every part of the world. But success sometimes breeds overconfidence, and in the 20th century the region's industrial might was sustained chiefly by the needs of war. When decline came in the 1950s and 60s it was sudden and catastrophic, and many scars remain to be healed.

**G1 JOHNSTON OLD MILL**

*Johnstone, foot of High St*

NS 423633

*Access: seen from street*

Six-storey rubblestone mill, the 'Old End' probably 1787, founded 1782 as a cotton spinning mill and later acquired by William Paton, rope and cord maker. Scotland's only Arkwright-type mill in use, making shoe and boot laces. Remains of the linked lades of six mills nearby.

**G2 INDIA TYRE FACTORY**

*By A8, 3 miles W of Renfrew*

NS 474686

*Access: seen from road*

Administration block of former airship construction factory, in flamboyant Art Deco style by Wallis Gilbert, 1930. 1950s extensions at both ends in similar style, adapted to new office use 2001, with rear extension reflecting historical links with Beardmore's airship manufacture from 1916. Close by are Beardmore Cottages,

housing erected for airship construction workers, 1916.

**G3 SAUCEL MILL, PAISLEY (NOW WATERMILL HOTEL)**

*Bladda Lane, next to A737 inner ring road*

NS 485 363

*Access: seen from street*

Former water-powered grain mill, rebuilt in 1968 and converted into a hotel

**G4 ANCHOR THREAD WORKS, PAISLEY**

NS 486636

major surviving components: **A**

*Access: seen from street*

Huge cotton thread mill complex belonging to Clark family (later merged with Coats, who owned equally large but now demolished Ferguslie Mills on W side of town), latterly Coats Viyella group closed early 1990s. Surviving components include Mile End Mill (1898), No.1 Embroidery Mill (1840, now Abbey Mills Busi-



G2: India Tyre Factory



G4: Anchor Thread Works, Paisley

ness Centre), and Domestic Finishing Mill, 1884 closed 1984, and possibly to be converted and refurbished with the assistance of the Phoenix Trust.

### G5 ROLLER BASCULE BRIDGE

Carrying A8, Inchinnan Rd, over White Cart River  
NS 493678

Access: public road

Scherzer roller bridge over navigable channel of the White Cart river, completed 1923 to increase the width to 90ft for access to shipyards upstream.

**A**

### G6 JOHN BROWN SHIPYARD,

Glasgow Rd. Clydebank

NS 497697

crane: **A**

Access: seen from footpath S side of river

Founded 1870 by J & G Thomson, acquired by John Brown 1899. Some of the largest, most famous ships built here including *Queen Mary* 1936, *Queen Elizabeth* 1938, *Queen Elizabeth II* 1967, launched across river into mouth of R Cart. Latterly an oil rig construction yard, now disused. Earliest Arrol giant cantilever crane, 1907, survives but most of the remaining cranes and some buildings demolished in 2002.

### G7 RENFREW FERRY

Across R Clyde, end of A741

NS 511665

Access: public (charge for use)

Last of the cross-river ferries, now pedestrian except that small emergency vehicles can be



G5: Roller bascule bridge

carried. Adjacent to W, the twin-cylinder side-lever condensing engine of the Clyde Navigation Trust's 1854 tug *Clyde* is preserved on the river bank.

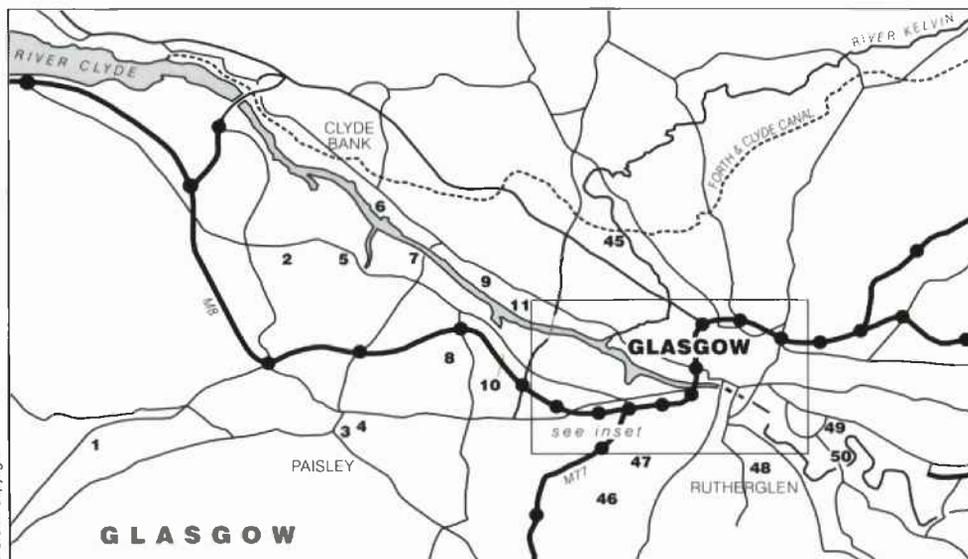
### G8 HILLINGTON INDUSTRIAL ESTATE

South of M8, 5 miles W of city centre

NS 515655

Access: seen from roads

Trading estate, established 1937 with well-laid out geometrical road pattern named after prominent Scots, and generally small industrial build-





G7: Engine of the 1854 tug *Clyde*

ings, many with front offices to a standard modernist style. A flagpole commemorates the visit of King George VI to 'The Scottish Industrial Estate' in September 1938. Some buildings cleared, others refurbished but many original features remain.



G8: Hillington Industrial Estate

### **G9 YARROW SHIPBUILDING YARD**

*South Street, Scotstoun*

**NS 523677**

*Access: seen from SW side of river*

NE river bank was lined with shipyards. Alfred Yarrow & Co yard built 1906, continues in much rebuilt form as BAE Systems, with modern covered slips building to Admiralty contracts.

### **G10 BRITISH LUMA LIGHTBULB FACTORY**

*Shieldhall Rd, N of M8/A8, 4 1/2 miles of city centre.*

**NS 532654**

*Access: seen from street*

Last remaining building of the Scottish Co-operative Wholesale Society's 12 acre Shieldhall manufacturing estate. Art deco building by Corneilius Armour, built 1938. Electric light bulbs were tested in the glazed tower, open to view. Converted to dwellings 1995-6 with inserted floor and new matching blocks to rear. **B**



G10: British Luma Lightbulb Factory

G11: North British Diesel Engine Works and the giant cantilever crane of 1920



**G11 NORTH BRITISH DIESEL ENGINE WORKS**

739 South St, Whiteinch, 4 miles W of city centre  
 NS 533668 both crane and works: **A**

Access: seen from street

Very large steel-framed brick building, built 1913-14 for Barclay, Curle & Co. Shipbuilders. The flattened mansard roof resembles Behrens AEG factory in Berlin, but is structurally different. Adjacent a giant cantilever crane, Arrol 1920.

**G12 FAIRFIELD (BAE SYSTEMS) SHIPYARD**

Glasgow, Govan Rd, 1/2 mile E of S approach to Clyde  
 NS 548660 crane and former engine works: **A**

Access: seen from street

Established 1863 by Randolph & Elder, with tall engine building works with tiers of galleries, 1874, giant cantilever crane by Sir William Arrol & Co 1917, and ornate red sandstone offices, 1889, with entrance flanked by statues of a mariner and a shipwright.

**G13 BISHOP MILLS**

206 Old Dumbarton Rd, by R Kelvin

NS 562662 **B**

Access: seen from street

4-storey rubble stone building with sculpted wheat sheaves on the gables, rebuilt c1853 for William Wilson. Converted to private housing.

**G14 PARTICK SEWAGE PUMPING STATION**

35 Dumbarton Rd, by Kelvin Hall

NS 564664 **B**

Access: seen from street

Red sandstone building in baronial style, 1904, originally with three vertical triple expansion steam pumping engines by Duncan Stewart and Co., Glasgow, replaced c1960 by electric pumps. Still in use.

**G15 KELVIN HALL (GLASGOW TRANSPORT MUSEUM)**

Bunhouse Lane, 2 miles W of city centre

NS 565663 **B**

Access: public place (no charge for admission)

Glasgow's transport collections housed in part of Kelvin Halls, with important collections of



G12: Fairfield shipyard office, 1889



left: G17: SS *Glenlee*

Scottish-built motor vehicles, representative locomotives of Scottish railways and many models of Clyde-built ships.

### G16 GOVAN GRAVING DOCKS

*Stag St, off Govan Rd, W of Princes Dock*

NS 561655

Access: *seen from street*

Three graving docks built for the Clyde Navigation Trust by James Deas, 1869-75, 1883-6 and 1894-8 (N to S). Ruinous line of pump-houses, hydraulic accumulator towers and mechanics' workshops by the R Clyde.

### G17 SS GLENLEE

*Yorkhill Quay, 1 mile W of Kingston Bridge*

NS 563657

Access: *open to visitors (admission charge)*

Steel-hulled sailing 3-masted barque built Anderson Roger & Co, Port Glasgow, launched 1896. Became training vessel with Spanish Navy, 1920, and acquired for restoration 1992 by Clyde Maritime Trust. Visitor reception and exhibition in former hydraulic pumping station of now filled Queens Dock, 1877-8.

### G18 CLYDE HARBOUR TUNNELS

*Tunnel St, by Finnieston crane*

NS 571 651

Access: *public area*

North Rotunda, entrance to the Harbour Tun-

nels (two vehicular, one pedestrian) completed 1896; S Rotunda visible across the river. The circular brick, iron framed, domed structures housed hydraulic lifts.

### G19 FINNIESTON CRANE (STOBCROSS NO.7)

*Glasgow, Stobcross Rd at entrance to SECC*

NS 571651

175 ton giant cantilever electric crane not built by Sir William Arrol & Co, but by Cowans Sheldon, 1931. Famous for lifting export locomotives aboard ship, now a cherished landmark.

### G20 KINNING PARK SEWAGE WORKS

*100 Seaward St, S of Kingston Bridge*

NS 575645

Access: *seen from street*

Tall single-storey brick-built steam pumping station, built 1909-10 for Glasgow Corporation by the engineers A & A Home Morton.

### G21 GLASGOW & DISTRICT SUBWAY DEPOT

*175 Scotland St, S of Kingston Bridge*

NS 580642

Access: *seen from street*

Arts & Crafts style facade of power station for world's only cable-hauled underground passenger railway, 1896 to 1935 when the railway was electrified.

### G22 TOBACCO WAREHOUSE

*Nos 41-45 James Watt St, off Broomielaw W of Central Station*

NS 583652

Access: *seen from street*

2-storey stone warehouse with 3-storey central pediment, by John Baird 1854, 3 further storeys added 1910-11, reinforced concrete internal structure. Across road, 4-storey stone warehouses with recessed openings linking windows of middle floors. Nos 68-72 built 1847-8 and 44-54 in 1861. James Watt's house was in this street.

### G23 PAINT WAREHOUSE

*106 Tradeston St, S of R Clyde*

NS 583645

Access: *seen from street*

4-storey sandstone block of 1886 by H & D Barclay, with a 4-storey Venetian gothic corner block added 1900 by W J McGibbon, for Blacklock, McArthur & Co, paint manufacturers.

### **G24 PARK'S BODY WORKS**

44 Kilbirnie St, S of Kingston Bridge

NS 582639

Access: seen from street

3-storey reinforced concrete factory designed by R Henderson and built 1913 for William Park, vehicle body builder. A vehicle lift took vehicles to storage on the roof. Now a vehicle repairer's workshop.

**B**

### **G25 PRINTING WORKS**

50 Darnley St, Pollockshields

NS 580634

Access: seen from street

Elaborately decorated inside and out 3-storey building in Glasgow Art-Nouveau style with gesticulating statues and dragon swallowing water from gutters, 1901 by Gordon & Dobson for Miller & Lang, Art Publishers.

**A**

### **G26 TRAM DEPOT & WORKSHOPS**

Albert Drive, Pollockshields

NS 581633

Access: accessible (closed Mondays)

Built 1894-1912 for Glasgow Corporation Tramways Dept. Ramp led to 1st floor stables. Was Transport Museum, now an Exhibition and Performing Arts Centre, with meeting rooms upstairs.

**B**

### **G27 ST ANDREW'S POWER STATION**

245 Pollokshaws Rd, nr St Andrew's Cross

NS 585635

Access: seen from street

Built 1899 for Glasgow Corporation Electricity Dept., single-storey brick building now a printing works.

**B**

### **G28 GLASGOW CENTRAL RAILWAY STATION**

Gordon St, city centre

NS 587653

Access: public; entrances in Hope St, Union St

Established 1879 when the Caledonian Railway extended its line from Bridge St over the Clyde. Enlarged 1899-1905 with elliptical roof trusses. Concourse renovated 1980s, losing its famous destination boards. Iron vehicle entrance porch in Gordon St (c1879), and Argyle St bridge with its iron and glass screen (1899-1906), still impressive.

**A**

### **G29 GARDNER'S WAREHOUSE**

36 Jamaica St, by Central Station

NS 588652

Access: public house, 'The Crystal Palace'

4-storey sales warehouse with wrought and cast prefabricated frame designed by R McConnel, with cast iron and glass elevations to street.. 1855-6. Close by No 60-66 has a cast iron and glass façade. 1856-7.

**A**

### **G30 DAILY RECORD PRINTING WORKS**

St Vincent Lane, city centre

NS 588654

Access: Seen from street

Notable 'modern movement' glazed brick buildings of 1900, designed by Charles Rennie Mackintosh

**A**



G29: Gardner's Warehouse

### G31 GLASGOW SUBWAY STATION

St Enoch Square, city centre

NS 589650

A

Access: public place

St Enoch Station, red sandstone in Jacobean style, 1895, is the most ornate feature of the double-track underground railway forming a continuous loop under the western part of the city and including Govan south of the river, opened 1896. 4ft gauge in narrow circular tunnels, at first cable hauled, then electrified in 1935.

### G32 STATUE OF JAMES WATT

Glasgow, George Square, city centre

NS 591653

A

Access: public square

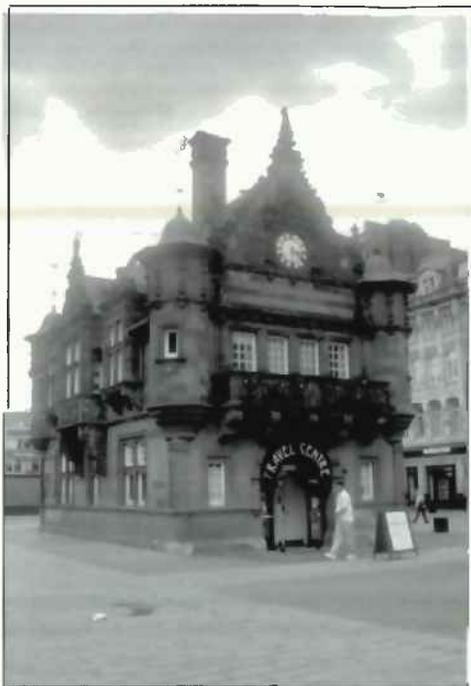
Designed by Sir Francis Chantrey, erected 1832.

### G33 CLYDE BRIDGES

By Central Station eastwards

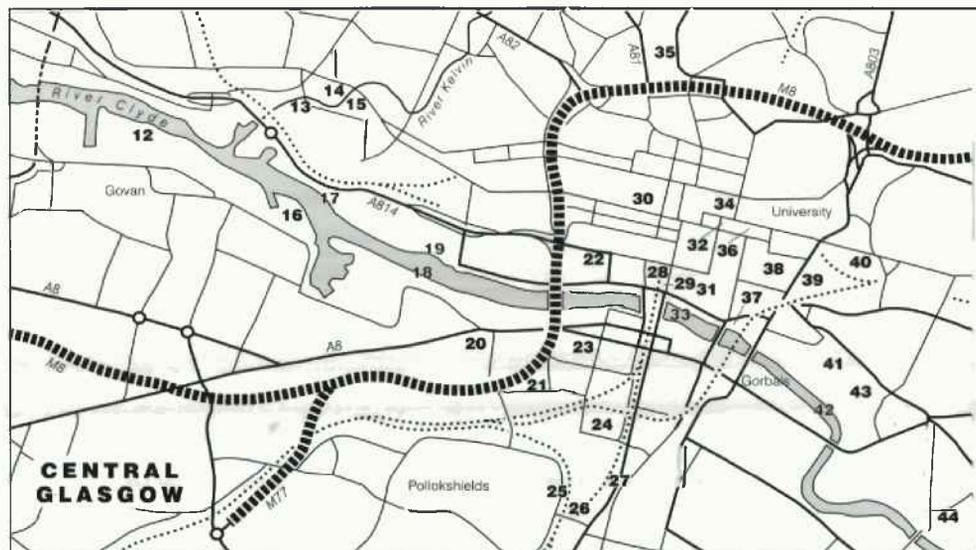
Access: public places

King George V Bridge (NS 586648) Listed B, 3-span reinforced concrete continuous beam bridge, with mock arch faces of Dalbeattie granite, built 1924-8; Caledonian Railway Bridge (NS 585649) Listed B, first bridge of 1878 demolished but granite piers remain. Present bridge 1905 by D Matheson & Sir J W Barry, long steel lattice girders on granite piers, carrying 13 tracks; Glasgow Bridge (NS 587647) Listed B, 7-arch granite-faced bridge by Blyth & Westland, 1898-99, using facings and balustrades from Telford's 1833 bridge, widened by 20ft and founded on



G31: Glasgow Subway Station

steel caissons 100ft below water level; Portland Street Suspension Bridge (NS 589647) Listed A, classical masonry pylons support flat link chains and a light lattice deck spanning 126m. Original pylons split and were rebuilt; deck lowered





G33: City Union Railway Bridge

in 1871 rebuild; Victoria Bridge (NS 592645) Listed B, built on site of Glasgow's first bridge, 5-arch sandstone bridge encased in granite with balustraded parapets, by James Walker 1851-54; City Union Railway Bridge (NS 594648) Listed B, carried Glasgow & South Western Railway's tracks to St Enoch Station (demolished). Five spandrel-braced arches of riveted steel, by Sir William Arrol & Co, on crenellated sandstone piers and abutments, 1897-99; Albert Bridge (NS 594644) Listed B, 3-arch bridge with 6 wrought iron and 2 cast iron ribs per span, cast iron spandrels and parapets with gothic tracery and coats of arms, 1870-71.



### G34 QUEEN STREET STATION

Off George Square, city centre

NS 592655

**A**

Access: public place

Terminus of Edinburgh & Glasgow Railway, 1842, with overall wrought iron roof, 1878-80, but much rebuilt. Trains arrive and depart via a tunnel with 1 in 42 gradient to Cowairs, cable-assisted until 1908.

### G35 PORT DUNDAS/NORTH SPEIRS WHARF

N of junction 16 on M8

NS 597666

mostly: **A**, canal: **SCH**

Access: seen from street and canal side

Final terminus of a branch canal from the Forth & Clyde, 1791; the Monkland Canal also extended here 1790, but infilled 1960s. Fine ranges of warehouses, mills and sugar refineries converted to housing.

### G36 GLASGOW CITY CHAMBERS

George Square, city centre

NS 595654

**A**

Access: seen from street and on official business

Grandiose municipal chambers with rich marble & mosaic interiors, external friezes depicting various trades of the city, by William Young, 1883-8

### G37 BRIGGAIT FISH MARKET

Clyde St/Bridge Gate, S of city centre

NS 593647

**A**

Access: seen from streets

Former fishmarket with wrought iron galleries and roof, Clarke & Bell 1873, envelops steeple of old Merchants' Hall, 1665. Entrances with columns surmounted by sea-horses. Restored 1988 but since disused.

left: G35: Port Dundas/North Speirs Wharf

below: G37: Briggait Fish Market





G41: The Peoples' Palace

### G38 FRUITMARKET

*Candleriggs/Abnion St, SE of city centre*

NS 596652

*Access: seen from street*

'Bazaar' established as covered market, 1817, becoming exclusively a fruitmarket, 1883. The Old Fruitmarket, N of City Hall, by Robertson & Lister, Victoria Foundry, with cast iron arched roof and side galleries, probably 1852-54 and inspired by Crystal Palace. Used as jazz venue.

**A**

closed 2001. S of City hall rebuilt 1907 with steel roof, now 'Merchant Square'.

### G39 RAILWAY WAREHOUSES

*105-169 Bell St, nr Glasgow Cross*

NS 598650

*Access: seen from street*

Massive 6-storey warehouse built 1882-3 for the Glasgow & South Western Railway on sweep-

**A**



G41: Granite boulder commemorating Watt's separate condenser

ing curve, interior with cast iron columns and beams supporting concrete jack arches. Adapted for private housing.

### **G40 DUKE ST COTTON MILL**

100 Duke St, E side of city centre

NS 603651

**B**

Access: seen from street

Six-storey, 22-bay fireproof mill in Italian renaissance style, designed 1849 by Charles Wilson for R F & J Alexander, thread manufacturers. Upper floors mass concrete on corrugated iron shuttering. Converted to workmens' hostel 1909, with new central entrance. Closed 2001.

### **G41 THE PEOPLES' PALACE**

Glasgow Green, 1 mile SE of city centre

NS 600643

**A**

Access: museum and tearooms

Red sandstone civic building with exhibitions and 'winter gardens' at rear, a superb airy iron and glass conservatory, recently restored. Across the Green, an inscribed granite boulder commemorates Watt's conception of the separate condenser whilst walking there one Sunday morning in May 1765.

### **G42 ST ANDREW'S SUSPENSION BRIDGE**

Glasgow Green

NS 600640

**A**

Access: public footbridge

Flat link chains between fluted, Corinthian cast iron pylons support a light truss deck. Built 1853-55 by Neil Robson to replace ferry used by workers; restored 1997.

### **G43 TEMPLETON'S CARPET FACTORY**

The Green, 1 mile E of city centre

NS 603641

**A**

Access: seen from Glasgow green

Polychrome brick building, four storey plus attic block in Venetian style by William Leiper, known locally as the 'Doge's Palace' completed 1892. Buildings of various dates formerly occupied by James Templeton and Co.; now a business centre.

### **G44 BARROWFIELD WEAVING FACTORY**

105 French St, Dalmarnock

NS 608632

**B**

Access: seen from street

Two-storey polychrome brick block and two further blocks, built from 1889 for John Brown & Son, power loom muslin manufacturers.



G42: St Andrew's Suspension Bridge

### **G45 LOCKS AND AQUEDUCT, MARYHILL**

Bantaskine Street, off A81 Maryhill Rd

NS 563690

**SCH**

Access: walk along towpath

Flight of five locks by Robert Whitworth, 1787-90, leading down to the Kelvin Aqueduct, four 50ft spans with spandrels arched in plan across the R Kelvin, the largest in Britain when completed 1790, 400ft long and 70ft high. Restored 2000.



G43: Templeton's Carpet Factory

### **G46 POLLOCKSHAWS VIADUCT**

*By Pollockshaws Rd near Pollock Park*

NS 560613

*Access: seen from street*

Stone-built viaduct with five segmental arches, two skewed over White Cart R, built c1847 by Neil Robson for the Glasgow, Barrhead and Neilston Direct Railway. Adjacent station at Pollockshaws West, with 2-storey brick and sandstone building on the up platform, is now the oldest in Glasgow.

**B**

### **G47 MAXWELL PARK RAILWAY STATION**

*Terregles Ave/Fothergingay Rd,*

NS 567628

*Access: public place*

Wooden construction, built c1894 for Cathcart District Railway. Booking hall approached by footbridges from street level, with other offices at platform level below.

**B**

### **G48 SENTINEL WORKS**

*Jessie St, Polmadie, 2 miles S of city centre*

NS 597625

*Access: seen from street*

Built 1903-14 for Alley & McLellan, engineers

**A**

and the original builders of the Sentinel steam lorry. Includes a 4-storey early reinforced concrete block of pattern shop and offices by Archibald Leitch, 1903.

### **G49 STEAM HAMMER**

*85 Dunn St, Dalmarnock*

NS 613636

*Access: public place*

A large steam hammer marks the site of Sir William Arrol's Dalmarnock Ironworks, built 1889-1911 and now mostly demolished.

### **G50 CARSTAIRS ST MILL**

*Carstairs St, Dalmarnock*

NS 611628

*Access: seen from street*

Massive brick 5-storey, 11 by 28-bay mill designed by Joseph Stott, Oldham and built 1884-89 for Glasgow Cotton Spinners Co Ltd. Now used as storage. A second huge mill has been demolished.

## **THE SCOTTISH INDUSTRIAL HERITAGE SOCIETY**

The Scottish Industrial Heritage Society was formed in 1984 by the amalgamation of the Scottish Society for Industrial Archaeology and the Scottish Society for the Preservation of Historic Machinery. SSIA was founded in 1973.

SSPHM was founded in 1971 and its members ranged across Scotland, keeping records of a wide range of machinery and equipment as it reached the end of economic life, and when necessary providing the expertise to dismantle and transport it into safe storage. By their labours many irreplaceable historic items were rescued and transferred, in 1984, to the collections of the industrial museums and the Royal Scottish Museum.

SIHS has members throughout Scotland, and organises a programme of visits, events and conferences which are publicised through regular Bulletins. The Scottish Industrial Heritage Review, appearing once or twice per year, provides opportunities for members to publish original work in a series of short articles. Further details may be obtained from the Hon. Secretary, Dr E C Salthouse, 'Shieldaig', Hume, KELSO, TD5 7TR

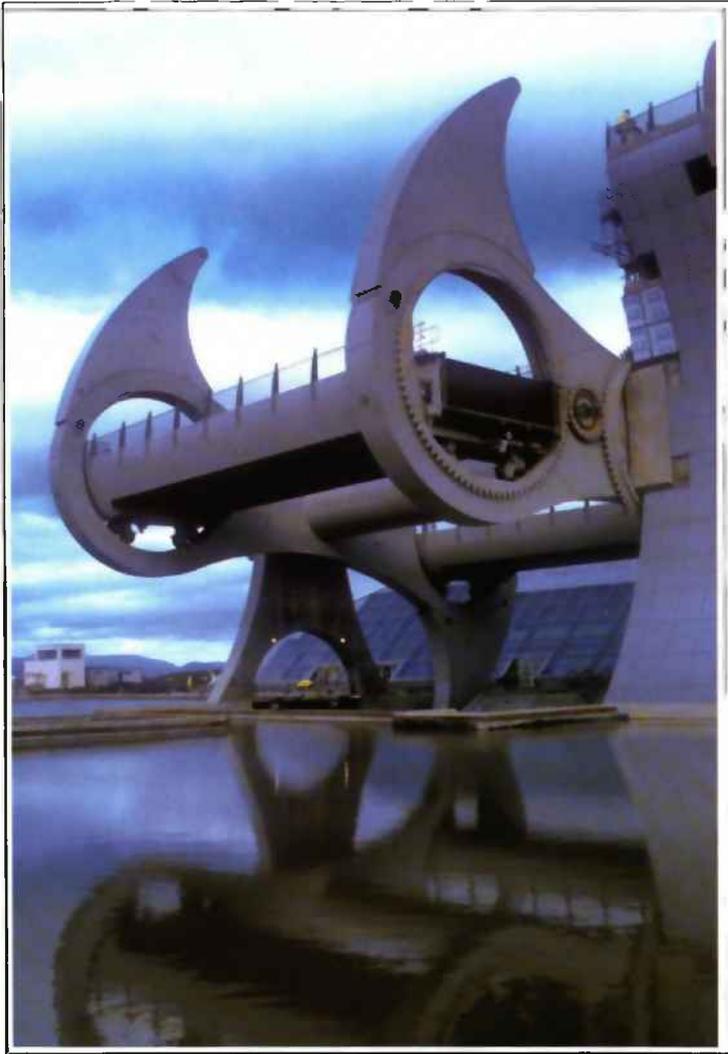
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Canals:	EE1, EE12, EE14, C1, C2, C21, C22, C24, C31, C34, C35, C45, FC6, G35, G45
Road transport:	EE9, EE46, B1, B2, B16, B17, B20, C8, C14, C47, FN7, FN11, FN24, FC7, G5, G18, G33
Rail transport:	EE7, EE10, EE20, EE30, EE33, EE34, EE44, B13, B15, B18, C18, C20, C36, C39, C46, C48, FN7, FN8, FN18, FN35, FN36, FN37, FN44, FC1, FC20, FC32, FC34, G21, G28, G31, G33, G34, G39, G46, G47,
Bridges:	EE9, EE12, EE46, B1, B2, B14, B15, B16, B17, B18, B20, C8, C31, C32, C36, C45, C46, C47, C48, FN7, FN11, FN24, FC7, G5, G33, G42
Coastal:	EE6, EE7, EE16, EE23, EE25, EE26, EE42, EE43, C28, FN28, FN32, FN34, FN43, FN53, FN56, FN60, FN61, FC3, FC14, FC15, FC18, FC20, FC26, FC27, FC29, G16, G17, G19
Wind and water power:	EE32, EE55, B3, B7, B9, C7, C9, C10, C11, C40, C43, FN16, FN21, FN39, FC17, FC25, G3, G13
Steam engines:	EE21, EE40, C37, FN1, FN15, FC4, G7
Textile mills:	B3, B6, B7, B8, B10, B11, B19, B21, C9, FN3, FN5, FN9, FN10, FN13, FN14, FN20, FN30, FN31, FN45, FN48, FN51, FN52, FC25, FC35, G1, G4, G40, G43, G44, G50,
Coal mining:	EE35, EE37, EE40, EE45, C6, C17, FN15, FN16, FN21, FN25, FN27, FN38, FN46, FN54, FN55, FN56, FN57, FN58, FN59, FC30, FC33
Lime industry:	EE29, EE36, EE47, EE49, EE52, FN4, FN28, FN29, FN41
Oil:	C15, C29, C42, FN60
Brick making:	EE39, C3, C32, C33, FC23
Public utilities:	EE4, EE18, EE19, EE32, EE41, C10, C15, FN1, FN26, FN47, FN59, FN62, FC19, FC21, FC28, G14, G20, G26, G27, G36, G37, G38, G41,
Iron making:	EE17, EE31, EE38, B7, C5, C6, C12, C13, C25, C26, C27, C38, FC22, FC27, G29, G41
Engineering:	EE5, EE27, EE28, EE38, FN17, FN23, FN42, FN49, FN50, FC2, FC11, FC34, G2, G8, G10, G11, G24, G48, G49,
Shipbuilding:	FN60, FC1, FC4, FC9, FC10, FC12, FC13, FC31, G6, G9, G11, G12, G16, G17
Food processing:	EE8, EE13, EE31, EE51, EE55, C11, C43, FN6, FN27, FC24, G3, G13,
Brewing/distilling:	EE2, EE3, EE22, EE50, EE56, B4, C23, FN12, FN19, FN22, FN23
Warehousing:	EE8, EE22, EE24, G22, G23, G39
Workers' housing:	EE11, EE15, B7, C9, C19, C44, FN22, FN29, FN33, FN55, FN57, FC34, G40
Museums:	EE21, EE40, EE54, C4, FC4, FC31, G15
Memorials:	C41, FC5, FC16, G32





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