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BANBURY HISTORICAL SOCIETY

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BANBURY HISTORICAL SOCIETY

The Banbury Historical Society was founded in 1957 to encourage interest in the history of the town of Banbury and neighbouring parts of Oxfordshire, Northamptonshire and Warwickshire.

The magazine *Cake and Cockhorse* is issued to members three times a year and includes illustrated articles based on original local historical research, as well as recording the Society's activities. Over one hundred and fifty issues and five hundred articles have been published. All but the most recent volumes have been digitised and are available on the Society's website (see inside front cover). Most back issues are also still available in their original form.

There are now over thirty volumes in the records series. Those still in print include:

Banbury Baptism and Burial Registers, 1813-1838 (vol. 22).
The earlier registers, *Marriages 1558-1837*, *Baptisms and Burials 1558-1812*, are now out-of-print, but are available on fiche and CD from Oxfordshire Family History Society, website at: www.ofhs.org.uk

Oxfordshire and North Berkshire Protestation Returns and Tax Assessments 1641-1642 (vol. 24, with Oxfordshire Record Society).

King's Sutton Churchwardens' Accounts 1636-1700, ed. Paul Hayter (vol. 27).

The Banbury Chapbooks, by Dr Leo John De Frietas (vol. 28).

Banbury Past through Artists' Eyes, compiled by Simon Townsend and Jeremy Gibson (vol. 30).

Early Victorian Squarson: The Diaries of William Cotton Risley, Vicar of Deddington, Part One, *1835-1848*, ed. Geoffrey Smedley-Stevenson (vol. 29).
Part 2. *Mid-Victorian Squarson, 1849-1869* (vol. 32).

Victorian Banburyshire: Three Memoirs, ed. Barrie Trinder (vol. 33).

Rusher's 'Banbury Trades and Occupations Directory' 1832-1906
(Alphabetical Digest and DVD facsimile) (vol. 34).

Current prices and availability of other back volumes, and of *Cake and Cockhorse*, from the Society, c/o Banbury Museum.

In preparation: *Georgian Banbury before 1800: Banbury Vestry Book, 1708-1797 and other contemporary records.*

The Society is always interested to receive suggestions of records suitable for publication, backed by offers of help with transcription, editing and indexing.

Meetings are held during the autumn and winter, normally at 7.30 p.m. on the second Thursday of each month, at Banbury Museum, Spiceball Park Road, Banbury. Talks are given by invited lecturers on general and local historical, archaeological and architectural subjects. Excursions are arranged in the spring and summer, and the A.G.M. is usually held at a local country house or location.

The annual subscription (since 2009) is **£13.00** which includes any records volumes published. Overseas membership, **£15.00**.

All members' names and addresses are held on the Society's computer database for subscription and mailing purposes only. Please advise if you object to this practice.

BANBURY HISTORICAL SOCIETY

Autumn 2015 Programme

Meetings are held at Banbury Museum at 7.30pm,
entrance from Spiceball Park Road.

Thursday 10th December 2015
A Cotswold wool merchant at the end of the middle ages: John Heritage
Professor Chris Dyer, Centre for English Local History, Leicester University.
Local details about the practice of the wool trade.

Thursday 14th January 2016
Food for the gods: recent excavations at Steane, Brackley
Dr. Susan Walker, Ashmolean Museum
Pewter platters at Steane: what can they tell us?

Thursday 11th February 2016
Local Clergy in the Middle Ages
Dr David Robinson. Former Surrey County Archivist

Thursday 10th March 2016
The Legacy of William of Wykeham to New College, Oxford
Jennifer Thorp, New College Archivist

Thursday 14th April 2016
The Historical Country House in the post-war years and now: its survival and future
Norman Hudson, Chairman, Country House Foundation

See the Society's website: www.banburyhistoricalsociety.org
for further information on the programme's subjects and speakers

Stocks of most back issues of *Cake & Cockhorse* are held by the Society,
c/o Banbury Museum, to whom enquiries should be sent.

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Cake and Cockhorse

The magazine of the Banbury Historical Society, issued three times a year

Volume 20 Autumn/Winter 2015 **Number One**

This issue of *Cake & Cock Horse* is devoted to the history of the Banbury Aluminium Works (the 'Ally'). Richard Hartree is perfectly placed to write its history, having worked for the company in a senior capacity from 1954 to 1990. The result is a significant contribution to Banbury's industrial, economic and social history. It will be of interest not only to those who worked there or who remember its important role in local life, but also to newcomers to the area and to the generation that is growing up ignorant or perhaps sketchily aware of its former existence. Those wanting to learn more can download as a pdf document a series of recollections from this site: www.banburyrecollections.co.uk/htm

Recollections provide important historical material. Banbury Museum runs a successful reminiscence group which is producing an oral history archive of the area. Anyone with reminiscences of Banburyshire is invited to participate: http://www.banburymuseum.org/Times-Gone-By

The Society's lecture programme has got off to a flying start, with bumper attendances. At this rate we might have to resurrect recent discussions about screening the meetings for an overflow audience in the cafeteria adjoining our meeting room. So, arrive early for our monthly meetings to avoid disappointment!

Finally, news of an article of Banburyshire interest in the latest issue of *Northamptonshire Past and Present* (No. 68, 2015): Bill Franklin writes on 'Three Tudor Churchwardens' Accounts'. Such accounts are rare, and one of the three is Culworth.

Cover: The gates to Northern Aluminium, erected in 1931 (see page 10)

Banbury Aluminium Works

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THE BANBURY ALUMINIUM WORKS 1929 - 2009

Richard Hartree[1]

'The Ally', the aluminium works on Southam Road, is central to every account of twentieth-century Banbury. The historian William Potts, who was involved with the negotiations that brought the works to the town, described its arrival as 'the greatest accession to industry and population in Banbury since the establishment of the Britannia Works'. He published a photograph of three lengthy ranks of bicycle sheds and seven buses waiting to take home workers coming off shift. *Country Planning*, published in 1944, showed how the factory drew in workers from Banbury's hinterland, and it appears in the associated film *Twenty-Four Square Miles*. Margaret Stacey, in the sociology classic *Tradition and Change*, based on a survey of 1948, argued that the works brought to Banbury unprecedented social and economic changes, observing that 'the huge white and green-roofed hangar-like building, with its strange-shaped chimneys and tubes and its unpredictable noises, seems like something from a different world, alien to the town'. The continuing influence of 'the Ally' was recognised when Stacey's study was replicated in 1966-68. The works helped to shape the development of the labour movement in Banbury, particularly through the strike of 1936, and the power of the Municipal and General Workers' Union in the post-war years. In a long perspective the establishment of the works can be seen as marking an end to fifty years of economic stagnation in Banbury, and the beginnings of the town's direct involvement in the global

[1] Richard Hartree joined Northern Aluminium in September 1954, spent most of the 1960s and '70s working in Banbury, and retired from Alcan in 1990, when he was working in Vancouver. This article is based on a paper delivered to the Banbury Historical Society, the Warwickshire Industrial Archaeology Society and other groups in 2009-13. The text has been edited by Dr Barrie Trinder, and the illustrations by the Editor of *Cake & Cockhorse*. Additional material has been contributed by John and Simon Townsend and Colin Trinder.

economy.[2] Earlier manufacturers had exported to distant overseas customers, but the company that moved to Banbury in 1931 had direct interests in mining, smelting, shaping and selling aluminium throughout the world.

Aluminium: the background

The metal aluminium is obtained from the ore, bauxite, which is rich in aluminium oxide, usually called alumina. The modern process for smelting aluminium, by passing an electric current through a solution of alumina using cryolite as a flux, was discovered almost simultaneously about 1886 by Paul Hérault (1863-1914) in France and by Charles Hall (1863-1914) in the United States. In 1888, in partnership with the metallurgist Alfred E Hunt (1855-1899), Hall founded the Pittsburgh Reduction Company, which brought down the commercial cost of aluminium by a factor of 200. Aluminium became a metal with countless commercial applications rather than a curiosity occupying the interest only of metallurgists and chemists. In 1907 the Pittsburgh Reduction Co became Alcoa (the Aluminum Company of America). The smelting of aluminium requires huge quantities of electric current and the company established plants near hydro-electric power stations at Shawinigan Falls 100 miles (166 km) north-east of Montreal in 1900-01. The following year the company's Canadian operations were vested with a subsidiary corporation, the Northern Aluminium Company which from 1925 was known as Alcan.

In the United Kingdom Alcan operated through a subsidiary, the Northern Aluminium Company. The company sold imported products until 1927 when it purchased a newly-constructed building in Bromford Lane, West Bromwich. Three circle cutters and seven blanking presses were employed there to produce from sheets of aluminium imported

[2] W Potts, *Banbury through One Hundred Years* (Banbury Guardian, 1942), 42; W Potts, *A History of Banbury* (Banbury Guardian, 1958), 243-44; Margaret Stacey, *Tradition and Change: a study of Banbury* (Oxford University Press, 1960), 9-10, 33-34; M Stacy, E Batstone, C Bell & A Murcott, *Power, Persistence and Change: a second study of Banbury* (Routledge & Kegan Paul, 1975); Agricultural Economics Research Institute, *Country Planning: a study of rural problems* (Oxford University Press, 1944), 275-77; *Twenty-four Square Miles*, directed by Kay Mander (1945); J R Hodgkins, *Over the Hills to Glory: Radicalism in Banburyshire 1832-1945* (Southend-on-Sea: Clifton Books, 1978), 196-204; B Trinder, *Victorian Banbury* (BHS 19; Chichester: Phillimore, 1981), 159.

from North America some hundred tons per month of circles for sale to manufacturers of pots and pans. In 1928 the company installed a 750-ton extrusion press which produced sixty tons per months of extruded sections.[3]

The establishment of the works

In 1928 Alcan gave its British subsidiary authority to build a sheet rolling plant which was to be the largest in the group, a very substantial investment. Roy Dalliba Palmer travelled from Canada to the United Kingdom late in 1928 under instructions from Alcan to find a suitable site for the company's projected sheet rolling mill. It was he who proposed to build the plant at Banbury where 625 men were registered as out of work in the third week of December 1930. Although the new Great Western marshalling yard was opened on 27 July 1931, and the Britannia Works passed into new ownership with optimistic forecasts for its revival in January of that year, the Borough Council was understandably concerned about the town's economic future and welcomed Palmer's proposal. The contract for purchasing the plot for the aluminium works was signed on 15 February 1930 after some delay. Northern Aluminium refused to pay the asking price of £12,000 demanded by the landowners, the Lidsey family, offering only £10,000. The prospect of the company building elsewhere so alarmed local people that the difference was met by the Gilletts, the local banking family, and by contributions from members of the town council. Site preparation began on Monday 25 August 1930.[4]

The 39-acre (16 ha) site of the works, 1½ miles (2 km) north of Banbury on the east side of the Southam Road, had many advantages. It

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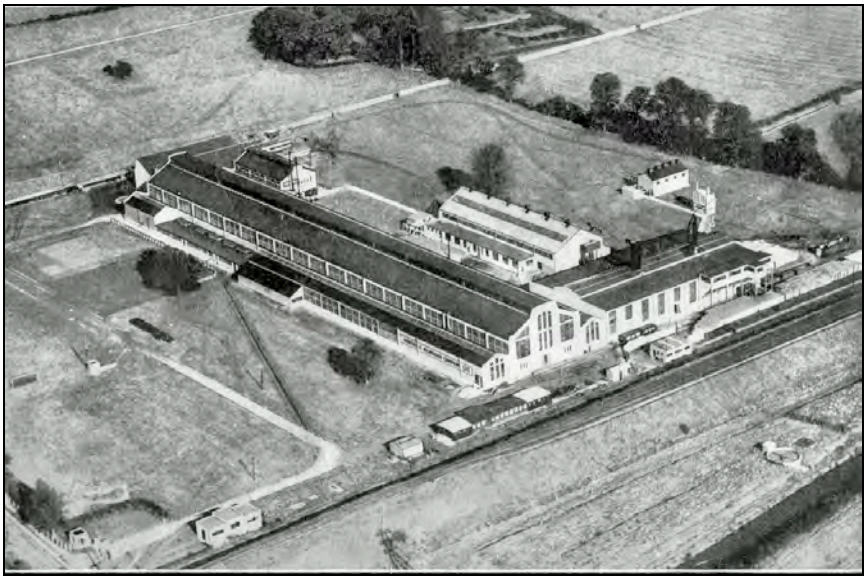
[3] The establishment of the works from the viewpoint of the company is explained in D C Campbell, *Global Mission: the story of Alcan* (Ottawa: Ontario Publishing Co, 1985), 69, 179-83; see also E L Ashley, 'A brief and approximate account' of the history of Northern Aluminium, mostly from memory, 18 December 1946', and H C Thomas, 'The History of Northern Aluminium Company Limited', typescripts in the Archives of the University of Glasgow, with copies in Banbury Museum, *File of Documents on the Banbury Aluminium Works*.

[4] The *Banbury Guardian* accounts of the key events in the opening of the works, which appeared on 1 January, 1 October, 5 November, 19 November and 31 December 1931, are reproduced in B Trinder, 'Fifty years on – Banbury in 1931', *Cake & Cockhorse*, vol **8**.5 (1981), 117-37.



1933 view of site

The first phase of development of the Banbury works is shown in this image of 1933, before the construction of the office building and the expansion of production facilities in the years before the Second World War.

was spacious and flat, and the ground could carry heavy machinery. There was rail access through sidings leading off those of the Oxfordshire Ironstone Company and initially aluminium pig imported from Canada was carried from the docks to Banbury by train. Some of the coke used in the melting furnaces also arrived by rail. There was good road access, and most products were distributed by lorry. The adjacent Oxford Canal provided cooling water, but it was not used to any significant extent to supply materials nor to distribute products. Banbury gasworks was enlarged in 1933 with a new gasholder supplied by C & W Walker of Donnington, Shropshire, to meet the demands of the new factory,[5] although the producer gas used in the melting furnaces was made at a plant on site, which also provided some coke. The completion by the Shropshire, Worcestershire & Staffordshire Electric Supply Co of a direct line from its generating station at Stourport to a sub-station on the Southam Road gave an assured supply of electric

[5] G C Hartland, 'Gas-making in Banbury', *C&CH* vol **4**.4 (1969), 47-53.

power well beyond the anticipated needs of the works. The buildings were designed by Wallis Gilbert and Partners, who were responsible for some of the most iconic industrial buildings of the inter-war period including the Nestlé plant at Hayes, the Victoria coach station and many of the factories along the Great West Road.[6]

After fears in late September 1931 that the economic situation might cause the opening of the factory to be postponed, the machinery was gently run in from the beginning of October under the direction of R D Palmer, by which time a stack of some 450 tons of aluminium ingots had been accumulated. Initially some 125 employees were trained, sufficient to man an eight-hour shift, and the company had approximately 200 employees at Banbury by the beginning of 1932. It was always the intention to train sufficient workers from the start of production for a second shift, and in due course for a third shift, enabling 24-hour operation. The sheets made in the hot and cold rolling mills from ingots produced in the melting furnaces were sheared and circles blanked from some of them by machinery moved from the company's West Bromwich plant. The hot rolling mill began commercial operation on 17 November 1931 and two days later the *Banbury Guardian* announced that the first batch of finished sheets had passed through inspection and had been delivered to customers the previous day. A cargo of 2,500 tons of pig aluminium had been shipped from Arvida in Quebec to Manchester Docks, which was delivered to Banbury by rail.

The Banbury works did not smelt aluminium from its ores. Pigs of aluminium were imported from Canada (later they came from the smelter at Lynemouth, Northumberland) and in a carefully-controlled process alloyed in melting furnaces with manganese, magnesium, tin, copper or zinc to produce what were known as Noral[tm] alloys. Ingots were cast from the melting furnaces, initially by permanent mould casting, but later by semi-continuous direct chill casting, and were subsequently rolled into sheet, in hot or cold rolling mills, or used to make extrusions.

Growth during the 1930s

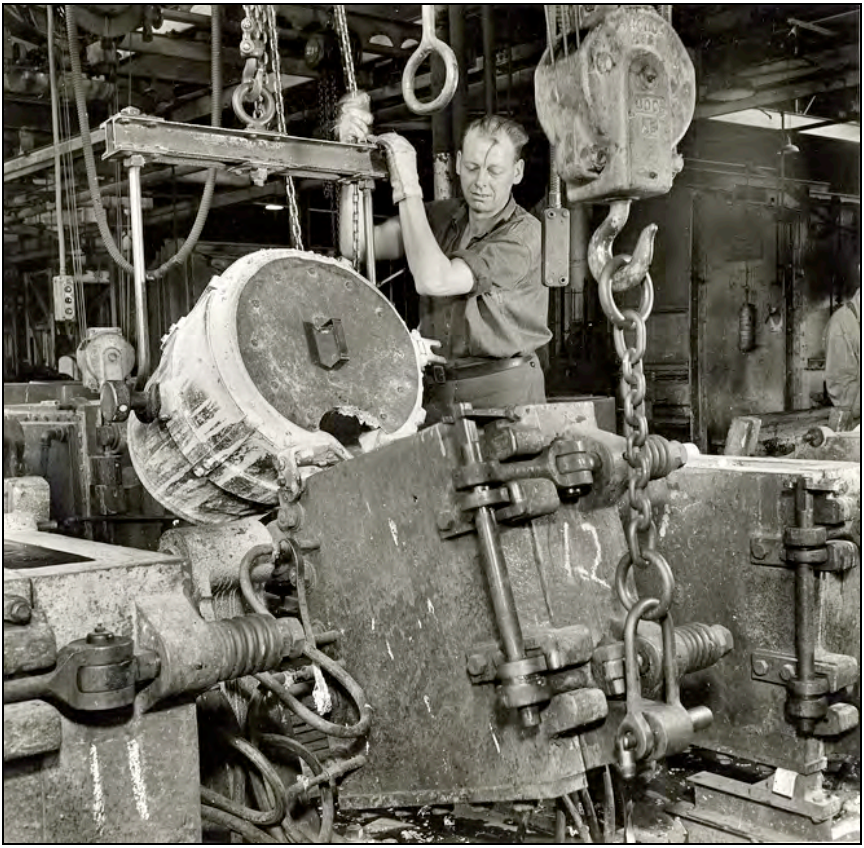
R D Palmer left Banbury for India in 1933, and when his work there was completed occupied several senior management positions with Alcan before he retired in 1950. In due course he settled at Clearwater,

[6] H C Thomas, *as fn. 3*; M Stratton & B Trinder, *Twentieth-Century Industrial Archaeology* (Spon, 2000), 155-58, 200, 206-07.

Florida, where he died at the age of 106, the company's oldest pensioner, in 1989. Palmer was succeeded by Eric Ashley, previously manager of the West Bromwich operation, who held the post of Works Manager until 1959 when he left to set up an aluminium plant, similar to that at Banbury, in New Zealand. He had a paternalistic management style, and was remembered for his long cigarette holder and his awareness of everything that went on in the factory.[7] Ashley was responsible for the steady expansion of the works in the following years. When the second shift began work during 1932 some three hundred people were employed. In 1935 the extrusion press from West Bromwich had been moved to Banbury, together with the tools used to make the dies used in the press. The manufacture of aluminium paste and powder commenced in 1936 when the workforce numbered more than seven hundred.

Aluminium is one of the few metals that can be extruded – that is forced through a mould which shapes it into a section which can be quite complex as in these examples. Extrusions were produced at the Banbury works throughout its history.

[7] British Alcan Extrusions Ltd, *Sixty Years at Banbury* (Banbury: British Alcan Extrusions Ltd, 1991), 3-8.



Ingot casting

Aluminium pigs were combined with other metals in re-melt furnaces to produce Noral[tm] alloys. A mould for a sheet ingot is being filled from a tilting ladle.

Growth was stimulated by the programme of rearmament initiated by the government from the mid-1930s, particularly by the expansion of the Royal Air Force. In 1930 most aircraft had wooden structures covered by fabric skins, but by the end of the decade most new designs were of all-metal construction, with skins of aluminium sheet, and aluminium extrusions extensively used in the frames. The consequent increased demand for aluminium led to further extensions to the Banbury works, the construction of two narrow strip mills, and of heat treatment facilities for components to be used in aircraft. In 1938 the company

began to install a reversing hot mill and larger strip and flat sheet rolling mills. Two extrusion presses supplied by the Germany company, Schloemann, were almost complete when war broke out in September 1939. The German technicians installing them were interned. At this time presses for extruding aluminium were powered by air-hydraulic systems, with pumps, high pressure air bottles and accumulators which were expended and took up a lot of space around the presses themselves.

Entrance to the works through gates erected in 1931

Many visitors commented on the clean, tidy and optimistic image created by the approach to the factory through ornamental gates and past beds of roses in the traditions of the Garden City movement.

The office block completed in 1938 was an eloquent statement of the possibilities of aluminium, incorporating windows, revolving doors, step edging, skirting boards made of the metal. In the traditions of the Garden City movement the entrance to the works was through elegant gates erected in 1931 and past well-tended flower beds. The Alcan group's first research laboratory was built in 1938 on the west side of the Southam Road. Its research activities were delayed during the war but it re-opened in 1946 and its buildings were extended in 1953.

Manipulating ingots

Ingots for extrusion being moved from the casting bay towards the presses.

The Workers

At a time of high unemployment the factory attracted workers from all over the British Isles, particularly from Lancashire and South Wales, who were grateful to find jobs. Nevertheless the shift system was an innovation in Banbury and was felt by many to be anti-social and unnatural. It remained a constant topic of conversation in the town into the post-war decades. A strike for higher wages in April 1936 gained national attention. While unions representing skilled workers were recognised from the opening of the works, the strike was also concerned with the recognition of the rights to representation of the unskilled. There were scuffles at the gate when non-employees hoping to get jobs tried to enter the site, and also at a mass meeting in the town. Within a week an agreement was negotiated for an increase in wages from 10½d per hour to 11d, for a 50-hour week, with a shift bonus of 12½ per cent, and management subsequently recognised the right of the National

Union of General & Municipal Workers to represent the production workers.[8]

Safety First was the title of the works newspaper and while the fabricating of aluminium was intrinsically no more dangerous than many other industrial processes, accidents did happen from time to time. Foot injuries were quite frequent, and while safety shoes were made available from 1938 their use was not compulsory. A man lost four fingers at a blanking press in 1937 and the following year there was a fatal electrocution during engineering work. The newspaper also aimed to explain how the Banbury factory fitted into the global pattern of aluminium production. In 1938 it published articles about 'our metals', showing how the process of producing sheets and extrusions stretched back to distant countries. In February 1939 *Safety First* included a piece on Air Raid Precautions, but made no reference to the re-armament related construction work in progress in the factory. Similarly in September 1939, in an edition that went to press before the outbreak of war, the newspaper made only a guarded comment about the camouflaging of the works buildings.[9]

The paternalistic style of management at 'The Ally' in the 1930s was reflected in the company's acquisition in 1937 of a sports field on Horton View in Easington, at the centre of new housing developments where many factory workers had their homes. A bowling green was opened there in June 1939. There were works teams in most local sports leagues, and the Horton View ground hosted the first of the family athletics days and horticultural shows that were to be a feature of the post-war period. At the factory itself a canteen was opened in September 1938, at the same times as a new first aid building.

The works fire brigade formed in 1930s was as important for social reasons as for practical purposes. It provided a rapid first response to any outbreak of fire, and did much to promote an awareness of the dangers of fire amongst the workforce generally. It was a voluntary activity which men undertook in addition to their usual shifts. The brigade entered teams in firefighting competitions and won several cups which helped to enhance morale at the factory.

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[8] Banbury Museum, *File of Documents on the Banbury Aluminium Works*, Letter to Employees on the Strike of April 1936, *Strike Bulletin*, April 1936; J R Hodgkins, *Over the Hills to Glory*, 191-203.

[9] *Safety First*, monthly works magazine. Bound copies of issues for 1938, 1939, 1940, 1941 in Banbury Library.

The Fire brigade

The fire brigade was made up of volunteers who provided a rapid response to emergencies, and also made other employees aware of risks. The brigade was successful in competitions, as were many of the factory's sports teams. The office building is in the background.

Second World War

When war broke out with Germany in September 1939 the Banbury plant was the largest aluminium sheet and extrusion works in the United Kingdom, and was to prove vital to the war effort. Northern Aluminium's first order worth more than one million pounds was placed by Short Bros in 1939 for aluminium for Sunderland flying boats. A company advertisement the previous year proclaimed that each Short four-engined flying boat (the earlier civilian version) used nine tons of aluminium alloys. The annual production of aircraft in the United Kingdom increased from 2,828 in 1938 to 15,049 in 1940 and had exceeded 26,000 by 1944, and the great majority of them were of all-metal construction, involving the extensive use of aluminium alloy

sheets and extrusions. Consumption of aluminium in the UK increased from 44,000 tonnes in 1938 to 293,000 tonnes in 1943. The Banbury works produced each month some 1,600 tons of strong alloy sheet and strip and 1,000 tons of strong alloy extrusions. Strong alloys which could be used in aircraft were more complex to manufacture than those supplied for most peacetime requirements. Until new plants came on stream in 1942 the factory met more than fifty per cent of the needs of the aircraft industry. The works ran almost continuously, 24 hours a day and seven days a week. The company was closely involved with the Ministry of Aircraft Production and other government departments, providing technical assistance to other companies operating non-ferrous tube and sheet mills to produce light alloys for the war effort. The factory was one of the first to be camouflaged against air attack. Eric Ashley became captain of a Territorial Army unit, the 300th L A A Troup Royal Artillery, which manned four anti-aircraft gun posts around the factory perimeter from October 1939 until early in 1944.[10]

The Pig park

This was the form in which aluminium from smelters in Canada (and later from Lynemouth) arrived at Banbury. During the Second World War a large strategic store of pigs was held at the factory on behalf of the government.

[10] H C Thomas, *as fn. 3*.

Sheet mill with women working it

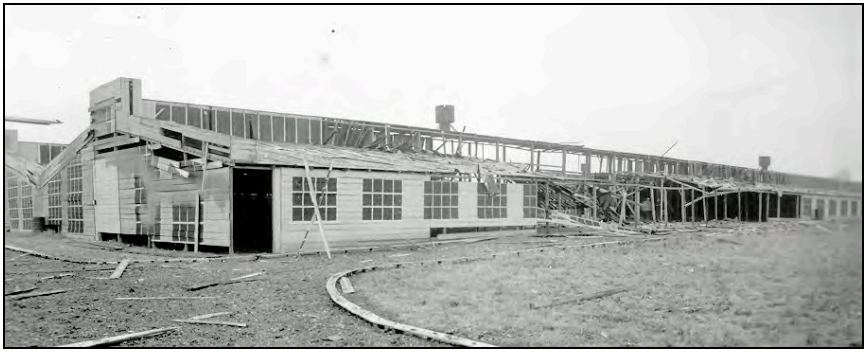
One of the cold flat sheet mills where ingots were rolled into sheets. 'The Ally' employed women workers from the time of its opening, and their numbers increased greatly during the Second World War.

Women had been employed at the factory since the beginning but during the war they took over many jobs formerly done exclusively by men, although they never worked regularly in the Remelt department.

The peak wartime labour force at Banbury was 3,540, 1,940 men and 1,600 women, while the company employed 300 men and 300 women at Adderbury.

The Banbury area did not suffer severely from German bombing. However, the wrecking of the large gasholder (installed at the gasworks in 1933) during a raid by a Dornier 215 on 3 October 1940 caused six deaths, though a regular supply was quickly restored.[11]

The British achieved a great deal in the latter phases of the war by deception – the apparent presence in Kent just after D-Day of an army commanded by General George Patton about to invade the Pas de Calais is perhaps the best known example. The Banbury factory was one of the first to be 'dummied'. A dummy factory was built on land acquired by compulsory purchase from the Townsend family two miles north just beyond the turn off the A423 to Great Bourton. The buildings, erected by craftsmen from Elstree film studios, were regularly 'manned' and fires were kept going so that smoke appeared to be coming from the chimneys. After attacking Banbury gasworks on 3 October 1940 the Luftwaffe Dornier 215 went on to bomb the dummy buildings causing considerable damage. Had the bombs hit the real factory they could have caused great loss of life.



Dummy Ally after bombing

The 'Dummy Ally' at Great Bourton after it had been attacked by a German bomber on 3 October 1940.

The late George Townsend recalled that he was with a group of farm workers picking potatoes in a nearby field. Most of the pickers sensibly lay down between the rows of potatoes but one ran screaming back to

[11] G C Hartland, *as fn. 5.*

Great Bourton. The Luftwaffe had high quality aerial photographs of the works taken about a month previously. The 'Dummy Alley' was returned in 1946 to the Townsend family. Some small structures were demolished but the Townsends used the main building to accommodate cattle, pigs, machinery and potatoes and kept ducks on the replica ornamental pond until they sold their farm in the 1970s, after which they were demolished. There was also a leak-lighting and a decoy railway siding at Tadmarton, controlled from the Banbury factory.[12]

During 1940 the Ministry of Aircraft Production sought to utilise aluminium from German aircraft shot down over Britain. At the Ministry's instigation Northern Aluminium took over a site adjacent to Adderbury station that had been occupied by sidings for ironstone quarries and an experimental plant operated by Duffield Iron Corporation which closed in 1939. In May 1941 the Great Western Railway authorised the expenditure of £620 for reconditioning the sidings, the cost of which was to be met by the Ministry. The Adderbury operation began as a melting and casting operation making ingots for extrusion. Five furnaces designed by the NAC were installed, and by 16 May 1941 the company was breaking up wreckage of German aircraft and converting it into usable ingots and extrusion billets. Scrap from crashed aircraft was brought in by rail, and ingots and billets were despatched by road or rail to Birmetals in Birmingham, and later to Rogerstone in South Wales. In due course the Adderbury plant also re-melted scrap, pots and pans brought in by salvage drives. To meet an increasing demand for alloy sections for aircraft production two extrusion presses were installed at Adderbury and began production on 14 December 1942. During 1944 more than 9,000 tons of scrap and 10,000 tons of coal were delivered to Adderbury. At its peak the plant employed about six hundred people, half of them women, who produced 240 tons per month of strong alloy extruded sections. In 1946 the site was taken over by Twyford Seeds whose warehouse had been destroyed by fire in April of that year.[13]

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[12] H C Thomas, *as fn. 3*; [Grid Ref SP 452458] *Ex inf* John and Simon Townsend, Colin Trinder. For the background to deception tactics see C Dobinson, *Fields of Deception* (2nd edn, Methuen/English Heritage, 2013)

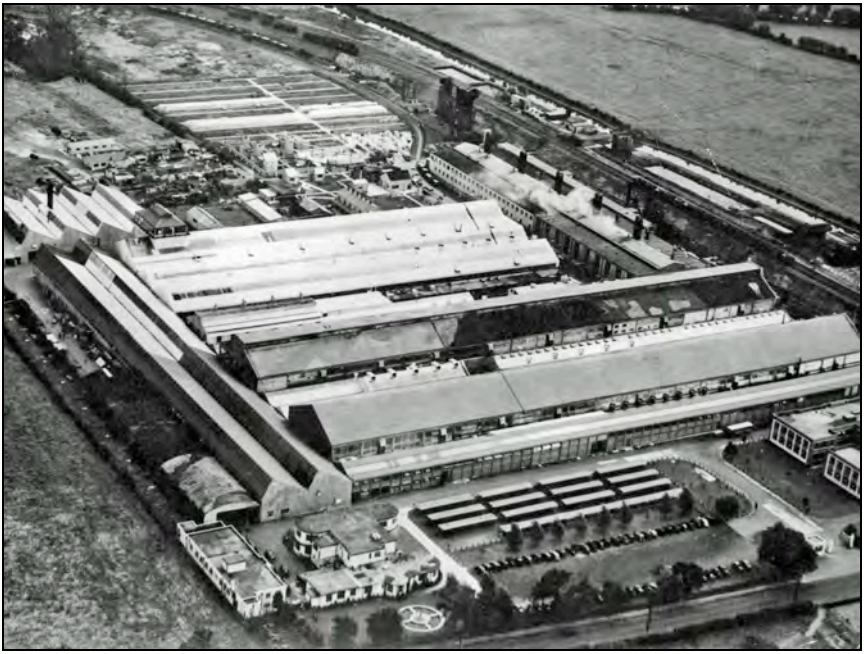
[13] H C Thomas, *as fn. 3*; W Hemmins, P Karau & C Turner, *The Banbury & Cheltenham Railway* (2004), vol 2, 252-59.

Throughout the war Northern Aluminium worked closely with the Ministry of Aircraft Production. A supply park accommodating some 25,000 tons of aluminium pig was established at the Banbury factory as part of the government's strategic reserve of raw materials. The company provided advice on several new aluminium plants set up with government backing including that at Rogerstone near Newport, Monmouthshire, construction of which was supervised by Barney Thornely who had been assistant works manager at Banbury. Others included a rolling mill at Falkirk completed in 1944, a foundry at Friar Park, West Bromwich making castings for aero engines, and several other works in South Wales. The parent company Alcan received financial assistance from the British government for expanding its smelting capacity in Canada.

The monthly magazine *Safety First* illustrates some but not all aspects of wartime activity at the factory. An article in October 1939 was entitled 'Action Stations' and much space in 1940 was given to the promotion of National Savings. In August 1940 there was a feature on the use of aluminium alloys in aircraft and in subsequent editions there were articles on particular types of aircraft, the Supermarine Spitfire, the Hawker Hurricane, the Short Sunderland flying boat and the Avro Blenheim bomber, and, in the following year on the Wellington, the Whitley and the Lysander. This was followed in January 1943 by an exhibition at the works showing the uses of NAC product in aircraft manufacturer. *Safety First* also featured stories about men from the factory who had gone into the forces and some government propaganda, including warnings about loose talk. Some quite serious accidents went unmentioned, including one on 23 April 1940 in which 25-year-old Charles Frost of Howard Road was killed at the start of the night shift when his hand was drawn into a rolling mill. A special victory edition of the magazine appeared in October 1945, and the following year a memorial garden was dedicated to 41 employees who died on active service during the war.[14]

When I worked in Banbury with some of the people who had been there during the Second World War neither I nor they fully appreciated what they did. With greater historical knowledge I now have deep admiration for their achievements.

[14] *Safety First*: bound copy of issues for 1938, 1939, 1940, 1941.



Air Photograph of site

An aerial view of the factory in 1946 after its wartime expansion. The Southam Road is at the bottom of the picture.

Post-war

The capacity of the aluminium industry was massively increased during the Second World War and peace in 1945 brought a collapse in demand with reduction in the pace of aircraft construction. In 1946 Northern Aluminium bought from the government the wartime plant at Rogerstone which was rebuilt for large volume orders for sheet products, while the Banbury mill concentrated on small order specialist products including all aircraft sheet. Devaluation of the pound in 1949 increased the price of aluminium from North America, while increased demand in the United States for metal caused by the Korean War led to a shortage of aluminium and for a time the Banbury factory went on to short time. While the labour force was smaller than in wartime 'the Ally' remained the largest employer in Banbury. The entrance was smart and tidy; it was a place where products and services were of a high quality.

Much of the time of those who worked in the offices and the prototype shop at the rear of the works, as well as at Aluminium Laboratories, was devoted to the development of new applications for aluminium, such as ladders, scaffolding, components for domestic appliances, windows and doors and bodies for buses and underground trains. Perhaps the most notable innovation, although not the most important commercially, was the aluminium version of the characteristic lifting bridge of the southern portion of the Oxford Canal which was erected near the factory at the Hardwick Wharf on the Oxford Canal in the mid-1950s. When the rough track that crossed the bridge was superseded by Hennef Way the bridge was moved and reinstated to span the restored section of the Somerset Coal Canal at the point where it joins the Kennet & Avon Canal adjacent to the Dundas Aqueduct east of Bath.

Lift bridge, now on the Kennet & Avon Canal (Barrie Trinder)
The aluminium version of the tradition lifting bridge of the Southern Oxford Canal constructed at the factory in the mid-1950s and originally installed at the nearby Hardwick Wharf. It now spans the Somerset Coal Canal at its junction with the Kennet & Avon Canal near Bath.

One of the most unfortunate incidents in the history of the works was an explosion at the Paste Plant on Thursday 18 May 1950 which resulted in the death of Joseph Bell of Ruscote Avenue and Albert Payler of

Broughton. An experiment was being carried out in a ball mill used for grinding aluminium in which non-inflammable carbon tetrachloride was used as a flux instead of white spirit which was flammable. The company's investigations had found no reference to any risk of explosion from employing carbon tetrachloride, nor was the Home Office Factories Department aware of any risk, although a subsequent expert report located an American pamphlet which suggested that heating aluminium powder with certain chlorinated hydrocarbons might cause explosions. Debris was scattered up to 200 ft, and an iron shaft weighing several hundredweight from the ball mill was flung 50 ft. Next to the building housing the ball mills was a lean-to shed where aluminium paint pigment drums were washed. Its end wall was blown down and its roof blown off and the explosion fired the white spirit used in the cleaning process, causing the two fatalities. The works fire brigade tackled the blazing white spirit with foam and had brought the fire under control before the prompt arrival of a unit of the Banbury Fire Service. The coroner recorded verdicts of accidental death, and the use of carbon tetrachloride in ball mills grinding aluminium was abandoned. Production in the paste department was held up for five days.[15]

In 1955 the company took soundings with NUGMW stewards about the possibility of recruiting black workers. One such man was taken on, but a quarterly union meeting voted by a small majority for a colour bar. Ian Mackay recalled that the man was asked not to report for work and paid four weeks' wages. NAC employed many West Indians at its Birmingham plant, and Alcan had extensive operations in Jamaica, Guyana and Trinidad. The Banbury colour bar was very embarrassing for the company. In 1962 there were further objections when a Pakistani worker was recruited, and an unofficial vote amongst union members favoured the colour bar by a three-to-one majority. The man stayed on, but no other black production workers were recruited for several years afterwards.[16]

In 1953 a five-year modernisation plan was drawn up for the factory which was implemented in the following years. The re-melting furnaces, previously coke-fired, were converted to oil firing, and four of the five were entirely rebuilt, and charged with 'Ski-wracker' cranes designed by

[15] *BA* 24 May 1950 and *BG* 25 May 1950 for report; *BA* 21 June 1950 and *BG* 22 June 1950 for inquest. H C Thomas, as fn. 3.
[16] *BG* 17 Feb 1955; *BA* 15/23 May, 13/20 June, 4 July 1962; *BG* 5 July 1962.

the company. The furnaces produced, by a semi-continuous casting process, ingots weighing 2000 lbs, 72 in long, 36 in wide, and 8 in thick. A new machine by the British manufacturers John Holroyd & Co Ltd was installed to 'scalp' the ingots, removing the rough surface left by casting, a job previously done with lathes. Other machines for handling ingots made the process of scalping entirely automatic. A new electrically-heated pit type furnace for preheating ingots before they went to the hot mill replaced two tunnel furnaces fired by gas. Two other tunnel furnaces were retained for the smaller hot mill installed in 1938. An 84 in wide electrically driven hot mill previously used at Rogerstone replaced that installed in 1931. The installation of the new plant, and particularly the installation of a much longer run-out table for the rolling mill, required the relocation of much other machinery, notably of the circle mill, and even some alterations to the structure of the building. Production at the 1938 mill continued without interruption while the new machinery was installed. There were also changes in the extrusion department and in the paste plant, and maintenance was re-organised. Work on the new rolling mill was approaching completion in May 1958. The production-related bonus paid to workers was guaranteed at the pre-modernisation level while the new plant was being installed.[17]

Eric Ashley left in 1959 to establish an Alcan plant in New Zealand. He was replaced by C I F (Ian) Mackay who had joined Northern Aluminium at Banbury in 1931 to supervise the installation of electrical equipment. He continued as works manager until he retired in 1970.[18]

In 1961 a new man-hour productivity-based bonus scheme based on work study was introduced, and was finally implemented in the production department by 1966. Increased productivity avoided the need for new recruitment. Skilled workers were not involved in the scheme but they received a 'partial bonus'. A further joint study by management and unions produced a new pay agreement and productivity scheme which was introduced in August 1970. The scheme was successful and by 1975 productivity had doubled and hourly wages had increased by 20 per cent.

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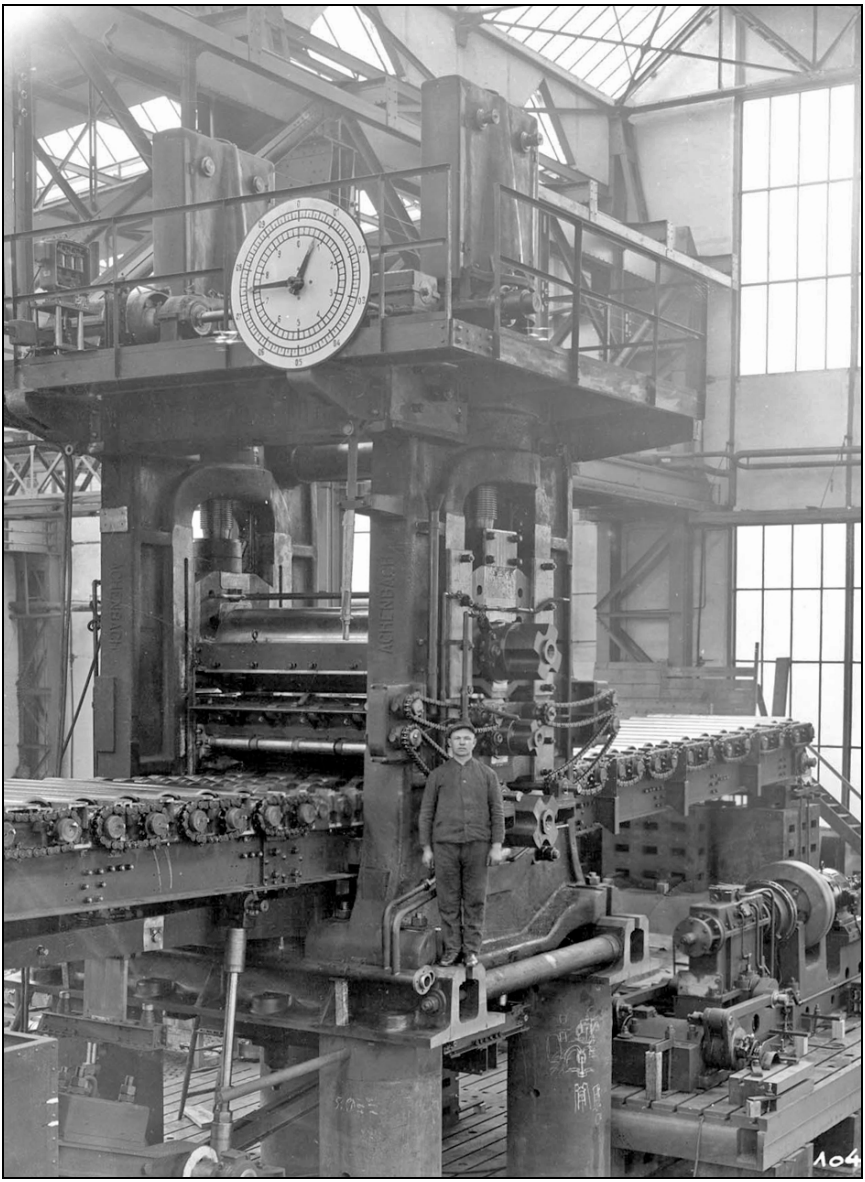
[17] *Metal Industry*, 9/16 May 1958, 'Works Visits: Northern Aluminium Company, Banbury'.

[18] British Alcan Extrusions Ltd, *Sixty Years at Banbury* (Banbury: British Alcan Extrusions Ltd, 1991), 8.



A man for scale

The scale of mills at the factory is illustrated by the size of the man in this view of a similar installation at the Achenbach works in Germany,

Modernisation continued in the early 1960s. The hot mill originally installed in 1931, dismantled in the modernisation plan, had been sent to an Alcan plant in Mexico. The hot mill of 1938 was sent to New Zealand in the early 1960s and re-assembled in the factory managed by Eric Ashley. I saw both mills in operation in the 1980s during my international management work for the company. Three of the old extrusion presses were removed, and two modern examples, one from the Birmingham factory, were installed in their place. The modern presses were self-contained, with oil-hydraulic direct drive pumps, better die support and quicker die changing. They were less expensive than the pre-war presses, more efficient, and gave higher quality, and were essential to meet the challenge posed by new 'independent extruder' companies who were competing for work in architectural and motor industry markets.

Sporting and social activities continued to prosper during the 1950s. Sports team remained active and many employees with their families came together at special events at the Horton View sports ground where a new pavilion was opened in 1952. By 1956 some of the original workers had worked at the factory for 25 years, and it became customary to mark that milestone with the presentation of a watch or a clock. Eric Ashley is said to have remarked that that he spent a large part of his time presenting cups, trophies and certificates.

By 1966 when the replication commenced of Margaret Stacey's study of 1948, the aluminium works was regarded as an essential part of the fabric of Banbury. It seemed to belong to the town as new companies moved in. The proportion of incomers amongst the workers at the factory was much the same as that of the total labour force in the town. After more than thirty years of operation, the average age of workers at the factory was high compared with that in other industries.[19]

Rationalising the aluminium industry

During the late 1960s a government-funded study of the aluminium sheet and extrusion industry in the UK concluded that there was excess capacity, and that rationalisation was desirable. I participated to some extent in this study as Industrial Engineering Manager at the Banbury plant. The result of the study was a series of government-backed takeovers.

[19] M Stacey, E Batstone, C Bell & A Murcott, *Power, Persistence and Change: a Second Study of Banbury* (Routledge & Kegan Paul, 1975), 21.

In 1968 Alcan Industries bought from Delta Metals its 50 per cent share of the Birmingham-based firm James Booth Aluminium whose other half was owned by the United States company Kaiser Aluminium, a competitor of Alcan. The outcome was a new company called Alcan Booth Industries of which 75 per cent was owned by Alcan and 25 per cent by Kaiser. This development enabled the rationalisation of sheet and extrusion plants, two, at Skelmersdale, Lancashire, and Kitts Green, Birmingham, owned by James Booth and three by Alcan, at Banbury, Rogerstone, and Handsworth, Birmingham, for which purpose a study group was established. The outcome of rationalisation for the Banbury plant was that the sheet mill was scheduled to close by mid-1971, while the extrusion plant was extended with a modern press re-located from Rogerstone. There were redundancies at all five plants.[20] I was involved with the study group from my post in Montreal, but by September 1970 I was Works Manager at Banbury where I had to announce that 900 hourly-paid workers and 300 staff would lose their jobs. Just a thousand hour-paid employees would remain. Redundancy terms were above the statutory requirements, and, for older workers who were enabled to retire early, quite attractive. There were relatively few compulsory 'last in, first out' redundancies at Banbury. In 1973 an anodising plant was installed and in 1974 two new extrusion presses, named after well-known 'characters' at the works were placed in buildings previously used for sheet production. Further space previously used for sheet ingot preparation and preheating was utilised to locate a Properzi continuous rod mill used for making rod for electrical conductors which was moved from the plant in Birmingham. The die shop and re-melt plants were expanded in 1978-79, and an electrophoretic paint plant was installed for extrusions. The years following rationalisation were difficult, in consequence of wage and price controls, and of the 'three day week' which imposed restrictions on the amount of electricity that could be used at the plant. In 1979 the workforce totalled 790. By this time 'The Ally' was no longer the largest employer in Banbury, and it had been joined in the town by other global corporations.

During 1972 I was succeeded as works manager by Frank J Davies and moved across the Southam Road to take charge of Aluminium Laboratories. The redundancies of 1970 saw the departure of many long-serving workers, and factory-based social activities diminished. The use

[20] These changes in ownership are discussed in Campbell, *see fn. 3*, 941.

of the Horton View sports field by employees had declined through the 1960s and it was sold to Oxfordshire County Council in 1971 for use by Banbury School.

Further changes and the departure of Alcan

In 1982 Alcan took over the British Aluminium Company, the oldest in Britain, which brought further rationalisation in the industry. These changes hardly effected Banbury, but in 1986 the anodising plant was closed since customers were coming to prefer painting. The same year there was a serious explosion in a melting furnace, probably caused by a load of scrap not being fully dry, but no one was hurt. In 1987 there was a three-day strike by maintenance workers after the performance of a man promoted to foreman was judged unsatisfactory, but the issue was resolved by conciliation.

In 1991 a small Minalex press, acquired in 1973, was relocated to Banbury and the electrophoretic paint plant was closed. In the same year a booklet was published to mark the sixtieth anniversary of the works, and a party from the Newcomen Society, the leading learned body in the history of engineering, paid a visit to the plant. The canteen and some offices were closed and demolished. By 1993 downsizing had reduced the size of the workforce to no more than 528. It was by now clear that the factory was unlikely ever to be expanded and Alcan began to dispose of land. A plot at the east end of the site was sold for the construction of a factory by Hella, a German manufacturer of auto electrical equipment. In order to obtain planning permission Alcan purchased a strip of land along the north boundary of the plant to provide an access road, now Noral Way, for the new works.

In 1995 as Alcan made radical changes worldwide, British Alcan announced its intention to sell the Banbury business, which passed the following year to a merchant banking group and operated under the name British Aluminium Limited. The change resulted in the loss of 60 jobs and changes in shift working patterns. The new owners embarked on the first phase of modernising the re-melt department which continued after 2000 when, with other ex-Alcan operations, the business was purchased by Alcoa (the Aluminium Company of America). After the change an extrusion press was re-located to Banbury from a former British Aluminium Company plant at St Helens, Lancashire. In 2007 the factory passed into the ownership of SAPA Profiles, a major international manufacturer of architectural and building systems.

The long process of modernising the Re-melt was completed, but in October 2007 SAPA announced that the factory would be closed at the end of 2008.

A poster for 'Celebrating The Ally' on 12 July 2008

An 'Ally Celebration' Day was held at the end of 2008 when the active workforce numbered only 337, a total similar to that of 1932. All current and 30-year service employees and their families were invited, and about seven hundred attended.

Demolition of the factory buildings commenced in August 2009 and was completed by the end of the year, but the office building of 1938 and the research and development building opposite, the gates of 1931 and the memorial garden to those who died in the Second World War will remain.

Entrance to the works through gates erected in 1931

The gates at the entrance to the factory show the initials of the company who built it – the Northern Aluminium Company

Conclusion

The Banbury works reached its zenith during the Second World War when it was focused on the production of strong alloy sheets and extrusions for use in aircraft, the demand for which fell dramatically after 1945. It was neither ideally equipped nor ideally laid out for producing peacetime products, and, moreover, the total capacity of the British aluminium industry had been substantially enlarged with the aid of government money during the war. Nevertheless post-war modernisation kept the works viable for many years. The closure of the sheet mill in 1970 was an inevitable consequence of market changes and of its history. It could not, for example, produce stock for making beverage cans which had become the major civilian use of aluminium.

During the 1960s new extrusion presses that were simple to install and to operate were introduced, and makers of windows and other manufacturers installed their own presses. This had a substantial effect on the market and left less scope for the Banbury factory. Furthermore as part of Alcan the plant's overheads were high. Alcan is a global company quoted on the New York Stock Exchange whose accounting practices it has to follow, which put the Banbury factory at a disadvantage against smaller independent extruding companies whose finances were less complex. As an international corporation it also had to conform with occupational health and safety regimes and environmental legislation in all the countries in which it operated.

Northern Aluminium was the first global company to play an influential role in the town. It exercised a commanding presence in Banbury's life in the 1940s, 50s and 60s. It is most unlikely that there will ever again be a factory in the town employing more than three thousand workers. Neither the factory nor those who worked there should be forgotten.

Abbreviations:

BA: *Banbury Advertiser*
BG: *Banbury Guardian*
C&CH: *Cake & Cockhorse*
NAC: Northern Aluminium Company
NUGMW: National Union of General and Municipal Workers.

The American spelling 'aluminum' is used where appropriate in names of companies.

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OBITUARY

TREVOR PARRY

It is with regret that we record the death on 13 June 2015 after a short illness of our member Trevor Parry who in recent years published several useful works of local history. Trevor was born in Banbury on 27 June 1937, the son of parents who were members of the diaspora of people from Oldham who in the 1930s settled in the Ruscote Avenue area of Banbury. His father, Vincent (Vic) spent much of the Second World War with the Royal Army Medical Corps, and Trevor was proud to have an item of German propaganda from the Anzio beaches which his father retained, in defiance of regulations. After his father returned from the war Trevor's family attended the Marlborough Road Methodist Church where Vic Parry became Group Scoutmaster of the Second Banbury (Methodist) Scout Troop. Trevor joined the troop about 1948, and went on as boy and man to gain almost every distinction possible in Scouting. The movement in the second half of the twentieth century is vividly re-captured in his book *Scouting for Banbury's Boys* (Witney: Robert Boyd, 2008). In 2013 he published privately *A View from the Pew*, his recollections of Marlborough Road Church between 1948 and 1958, and with Alan Vincent wrote a new history of the church which is about to appear. Trevor was educated at Banbury Grammar School and was selected while still in his fourth year for the school's first cricket eleven. Trevor made his career as a chartered accountant, was involved with many businesses in the Banbury area, and lectured nationally and internationally on accountancy topics. He was also an active member of the Bygones Group at Banbury Museum. Trevor was a past president of Banbury Cricket Club, for many years was a useful medium paced bowler, and played a key role in the move of the club's ground from Grange Road to White Post Road. He joined the Banbury Historical Society in 2004 and was a regular attender at lecture meetings. He was delighted to win the prize for the most interesting exhibit at our Historical Artefacts Quiz in April with a trophy that he acquired at a Scout Jamboree in 1957. We extend our sympathy to Janet, his widow, and to his family.

Barrie Trinder

Lecture Reports

Brian Little

Thursday 8th October 2015
Banburyshire's Victorian Boatpeople
Dr Barrie Trinder

A large audience turned out to hear our Vice-President and founder member Dr Barrie Trinder share with us new research into the boat people of the Oxford Canal. In a well-organised lecture Barrie began by explaining how his use of census material for studying the topic was encouraged by initial attention to the River Trent and canals such as the Bridgewater where there was early movement of coal to town markets. It was this same commodity that dominated transit along the Oxford Canal from the Warwickshire coal fields; that is until 1847, after which date the railways captured increasing amounts of business.

He noted that at this point firstly individuals and latterly families undertook coal movement. In 1851 there were significant listings in respect of Napton and Warwickshire pits. Ten years later a good example was Thomas Cauldicott in his boat the *Sarah.* However, total reliance on the records of enumerators was not possible. Barrie could not believe that there were no boats in the Banbury area in the early 1860s. Records of certain people at the *Royal Oak* pub in Calthorpe Street suggested otherwise: George Prickett and Richard Beesley were boatmen.

The physical structure of canals and especially key junctions pointed to the ease of movement of coal. Local boats went even farther than the Warwickshire pits and moved Moira coal from Leicestershire. A further point was that boating families were linked to specific places: this is true of the landlord's family at the *Struggler* pub in Mill Lane. Further confirmation came courtesy of writer George Smith (1831-95) and his book 'Our Canal Population' in which there are good descriptions of people and their living conditions. Amongst the names recorded are William and Hannah Wilkins living in Castle Square, Banbury.

Barrie went on to reveal that census information pointed to the fact that family dynasties were important on the canal. They had smallholdings, kept pubs and above all were not bottom of the economic scale; instead many were people with resources. Indeed, many of the boats were operated by their children until the last quarter of the nineteenth century, when boats were declining in number anyway.

In conclusion he listed several questions to which he hoped to discover answers. Notably these included: were boat people a distinctive tribe? How did they relate to the broader range of cargoes? Did boatpeople from distant parts pass through Banbury? His thinking pointed to long term patterns of movement but more study of censuses was required.