

GKN

The Making of a Business 1759-2009



1800

1900

2000

Andrew Lorenz

GKN

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GKN

*The Making of
a Business*

1759–2009

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For Helen, James and Harry

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Foreword by the Chairman

The year 1759 is known in British history as “The Year of Victories” because of the extraordinary spate of land and sea battles fought and won by the British in those 12 months. Horace Walpole, the English scholar, was moved to declare that the year was “the most glorious in the annals of our history”.

Considering the momentous events of that year – it was said that “the church bells never stopped ringing” – it is little wonder that the foundation of an ironworks in the Welsh Valleys passed without much notice. Today, 250 years later, we can deploy the wisdom of hindsight to recognise the significance of that enterprise.

From it sprang a company – our company, if I may for a moment address the many employees and former employees who might read this book – which has survived and grown to the global business it is today. As recounted vibrantly here by Andrew Lorenz, the chronicle of GKN’s progress is rich in character and action, but it also reflects

the patterns of history that led Sir Winston Churchill to note that no-one could understand the future without knowing the past.

What does GKN's past tell us about its future? Above all, that this is a company which time and again has successfully responded to change in order to stay ahead of the game. From iron to steel, from steel to fasteners, from fasteners to general engineering and industrial services and on to automotive, defence and, ultimately, aerospace – GKN has moved through the decades and up the value chain.

We have evolved geographically too. As the balance of economic growth has shifted – from Britain and its Commonwealth in the 18th and early 19th centuries to America, the rest of Western Europe and Japan in the 20th and on to the emerging powers of Asia, Latin America and Eastern Europe in the 21st century – GKN has moved with it and frequently ahead of it. Today, our people span the globe, from the West Coast of the USA to the eastern shores of Japan, from northern China through Europe to South Africa, Argentina and Australia. GKN is a truly global corporate citizen.

Every book is, to an extent, a child of its times. Therefore, at this most testing of times and with due recognition to the vast majority of GKN people who live and work beyond British shores, I would like to bring one message from the book back home.

From the earliest days of the industrial revolution, this company has done much to advance manufacturing industry. It has developed countless engineers in many lands and valued them in periods, particularly recent years, when

their contribution has been overlooked in favour of ostensibly more glamorous occupations.

Over the past quarter of a century, no country was more seduced by the vision of the financial service-led “post-industrial society” than Britain. Today, as this country reawakens to the importance of a balanced commercial and industrial base, GKN’s experience is more relevant than ever.

Roy Brown

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I would like to thank all those GKN directors and senior company officers, past and present, who helped with their time, experience and knowledge to bring to life the events since 1945.

For GKN's history pre-1945, I am indebted to Edgar Jones' two monumental and comprehensive studies of the company from its origins.

A further invaluable source were the interviews with Lord Brookes by John Cockcroft in 1972 and 1974, which are rich in describing his involvement with the group.

For all their assistance, I am grateful to Simon Hardaker, Judith Felton, Kristina Monaghan, Carole Mount and David Smith.

Finally, may I thank Peter Baillie, without whom I could not have written this book.

Andrew Lorenz

CHAPTER 1

Iron Men and an Iron Lady

The company that became GKN was forged in the first fires of the Industrial Revolution.

On 19 September 1759, nine Welsh and West Country merchants and businessmen established a partnership to build a pig iron works at a site high in the Welsh Valleys, near Merthyr Tydfil. They called the venture the Dowlais Iron Company, after its location. It was capitalised at £4000 (equivalent to about £240,000 in 2009). Its avowed purpose, according to its deeds of partnership, was to deal in “the Art, Mystery, Occupation and Business of an Iron Master and Iron Manufacturer”.

Early visitors were astonished by their achievement and those of peers who set up other ironworks nearby. Merthyr, said one observer, was “a mountain valley ... peopled in the teeth of every obstacle ... the triumph of fact over probability”.

Dowlais’s founders built a blast furnace into the hillside next to a stream. The blast was provided by bellows driven

by a waterwheel, fed from a pond which was created by damming the stream. The water supply was irregular – in times of water shortage, workers had to tread the inside of the waterwheel to maintain the blast furnace supply.

By the end of 1760, its first full year of operation, the furnace's average weekly output was 18 tons of iron. Its modest size and primitiveness were typical of the numerous similar iron works springing up round the country. Three other works were founded around the same time in the Merthyr area alone.

The Dowlais partners inherited leases, previously acquired by one of their number from the Dowager Viscountess Windsor, granting the holder mineral rights over her property for 99 years from 1 May 1749. The annual rental was fixed at £31 – a tiny sum even in those days, because it was based on the value of land in a pre-industrial economy. There was no conception of what the venture could become, and what the land it occupied might therefore be worth.

Dowlais's potential was not lost on John Guest when he arrived in Merthyr six years after the forming of the partnership. Guest was tall, well-built and keen to get on in business. He was also steeped in the young iron industry. He hailed from the village of Broseley in Shropshire – in the heart of Coalbrookdale, where in 1709 Abraham Darby had demonstrated that coke could be used to fuel a blast furnace rather than the traditional charcoal. One historian described Coalbrookdale as “the chief centre of dispersion for the new race of ironmasters”.

Darby's discovery dramatically reduced the industry's costs and therefore its barriers to entry. It liberated aspirant

iron makers from the need to site furnaces near woods and forests, sources of charcoal but far from the other raw materials required for their trade. The Merthyr area, rich in easily accessible reserves of coal, iron ore and limestone, was one of many localities which came into its own as a result.

The area attracted the young Guest, who had learned the skills of smelting and refining and used a small income from farming to diversify into brewing, coal-dealing and working a small forge. In the process, he earned a reputation for being able to command the loyalty and trust of his employees.

Not that he was an instant success. His first major ironworks venture in Merthyr soon began to struggle and he sold out of it in 1766, barely a year after it was started. However, Isaac Wilkinson, his partner in the venture, was one of the original Dowlais investors. Wilkinson introduced Guest to Dowlais's three executive partners and on 30 April 1767, they offered the 45-year-old Guest the post of works manager. He took the job.

Guest brought several members of his family from Shropshire to help him run the works. He took a direct interest for the first time in 1781 when he used savings from his wages to buy out one of the partners. That year, he built a second blast furnace. Guest retired in 1786, a year before his death, and his son Thomas and son-in-law William Taitt took over the management and became the principal partners, owning half the company.

Guest and Taitt divided the main jobs between them. Guest took over his father's post of works manager while Taitt became the company salesman and Dowlais's first accountant. Each man was paid £150 a year. Guest added

a refinery and foundry to the plant, which could now, for the first time, genuinely be described as a works.

By 1787, Dowlais's capital had increased to £38,000 and output reached 1800 tons. Like its peers, Dowlais benefited from the successive wars – the Seven Years' War which ended in 1763 and the American War of Independence from 1775 to 1783 – which created ready demand from the British Army and Navy for cannon and musket balls. The armaments business was highly lucrative – it enabled Dowlais's profits to reach almost £2500 in 1763 – not a bad return on the £4000 invested less than five years earlier. Not for the last time in the company's iron and steel history, war drove profitability.

Peace, on the other hand, repeatedly proved a depressant. A slump ensued in July 1763, within six months of the Peace of Paris that ended the Seven Years' War. Likewise, the iron industry suffered a severe downturn in the two years following the end of the War of Independence. The period was, however, noteworthy for one development: Dowlais began to export small amounts of iron to the new United States of America. The shipments were carried down the valleys to the port of Cardiff by mule train. Future exports to the USA followed a speedier route.

While it expanded in absolute terms, Dowlais was not a relative success. Its owners failed initially to invest to capitalise on technological advances, such as the puddling and rolling process invented by Henry Cort in 1784 which significantly speeded the manufacturing process by improving iron quality and removing intermediate stages such as preliminary refining. Puddling, which involved the heating, refining and stirring of a brick-lined bath of pig iron into

a molten ball of wrought iron, was highly labour-intensive but also highly skilled. The “gentleman puddler” was the aristocrat of the iron industry. As Dowlais lagged behind other works which were early adopters of the process, its owners lost confidence in the business. In 1792, the Guest family and Taitt even offered to sell their majority holding back to one of the original partners for £25,000, and when those negotiations fell through the partners offered the whole business to a larger rival for £60,000. The offer was declined.

In 1793, the French Revolutionary War triggered a surge in demand for iron armaments which both benefited Dowlais and stimulated further expansion in the local industry, including the construction of a blast furnace at Brymbo in Denbighshire.

Transportation was improved by the opening of the Glamorganshire Canal in 1794, the first major canal in Wales, which ran from Merthyr to Cardiff. All the Merthyr ironmasters contributed to its cost but the financing, and subsequent usage, was dominated by Richard Crawshay, owner of Cyfarthfa, the largest ironworks. Now there were no more mule trains.

But despite the local industry’s overall growth, there was no hiding the fact that Dowlais had fallen behind its local rivals.

That all changed during one week in November 1798, when Taitt and Guest installed a new steam engine made by (Matthew) Boulton and its inventor, (James) Watt. The steam engine revolutionised the industry by opening the way to large, integrated ironworks where the machinery was so heavy that it could no longer be driven

by waterwheels. The steam engine was not only much more powerful, but it was infinitely more reliable: it was not at the mercy of the elements.

Taitt, the driving force of the business, followed this critical investment by switching to Cort's puddling and rolling process, enabling Dowlais to enter the growing market for bar iron. As a result, Taitt was able to extend his product and, therefore, his customer base.

Dowlais now began its rise to pre-eminence. To weaken Crawshay's hold on the transport system, Taitt and two fellow ironmasters agreed to build a private tram-road from Merthyr to Abercynon, near Cardiff, a distance of nine-and-a-half miles. When it was completed in 1802, one horse would pull five loaded trams with a total payload of 10 tons of iron. On 21 February 1804, the Merthyr Tram-road earned a place in industrial history when it was used by the first steam locomotive designed and built by Richard Trevithick. It took 4 hours 5 minutes to make the journey.

By then, more than 25 blast furnaces studded the Valleys and their annual iron output of at least 35,000 tons accounted for more than a quarter of the iron made in Great Britain. If Britain was fast becoming the workshop of the world, then GKN's home town was one of the largest workshops in Britain. "At night," wrote a contemporary still struggling to acclimatise to the new industrial landscape, "the view of the town is strikingly singular. Numbers of furnaces and truly volcanic accumulations of blazing cinders illuminate the vale, which combining with the incessant roar of the blasts, the clangour of ponderous hammers, the whirl of wheels, and the scarcely human

aspect of the tall gaunt workmen seem to realise, without too much aid from fancy, many of our early fears.”

By the time Wellington defeated Napoleon at Waterloo in 1815, Dowlais had four blast furnaces and could produce 15,600 tons of pig iron a year. Thanks to the steam engine and the technique of coke smelting, the later furnaces were larger and more efficient.

Taitt died in November that year, eight years after Thomas Guest. Josiah John Guest, Thomas’s 30-year-old son, became the company’s leader and controlling shareholder.

Josiah Guest had had a difficult childhood. His mother died when he was a small boy, and he was brought up in Dowlais by an elderly nanny. He went to Bridgnorth Grammar School in Shropshire and then joined the company, where he was trained by its general manager, John Evans. His father’s death pitched him into a leading management role at the age of 22. He remained in Taitt’s shadow for eight years, but with Taitt’s death there was no question on whose skills and judgment the future of Dowlais depended.

Fortunately for the business, Josiah Guest proved more than equal to the challenge. When he died in 1852, one obituary writer paid fulsome tribute to his talents – his “extraordinary capacity for business, his mechanical ingenuity and his judgement in mercantile transactions”. Hyperbole aside, Guest proved to be an exceptional industrialist.

Like his father and grandfather – and, indeed, many of the South Wales ironmasters – he was a Methodist, although he did not take his Wesleyan faith to quite the

extent of Thomas Guest senior and his brother, also named Thomas, who both became local preachers. And he could be hard. In 1810, when iron industry prices dropped by more than 10% while a bad harvest pushed up wheat prices, Guest decided that he had to maintain operating margins as far as possible. So he cut the wages of the Dowlais workers. They promptly walked out in what was the first ever strike at the plant.

Dowlais was shut down for two weeks. Then some of the men, effectively starved into submission, accepted the lower wage rate and the drift back to work began. To encourage the others, Guest allowed the first men back to choose their place of work. After five weeks, the strike was over.

Guest suffered a personal tragedy in 1817 when his wife Maria died at the age of 23, only nine months after the couple had married. For the following 16 years, he put his personal life aside to focus on building the business.

Dowlais needed all Guest's single-minded determination and his business acumen, because the ending of the Napoleonic Wars also marked a sea-change in Britain's iron industry. Post-1815, output from the vastly-expanded capacity which was a legacy of the good times generally increased faster than demand and prices gradually declined. The ironmasters could no longer rely on being carried along by a favourable tide. They had to out-perform their rivals in order to survive, never mind prosper.

Dowlais's profitability fluctuated widely and wildly. In 1815, the company made £15,021. Over the ensuing 25 years to 1840, profits fell as low as £4711 in 1829 and rose as high as £129,160 in 1837. But at least the business

remained profitable – unlike many of its competitors. And while the 1837 peak was exceptional, it also reflected the generally higher level of profit achieved by Dowlais in the mid-to-late 1830s as Josiah Guest led the company to the forefront of the industry.

This was the first age of the train – at the root of Dowlais’s success lay the explosion in railway construction. By 1821, Dowlais had made a name for itself as a maker of rails. In May that year, the chairman of Britain’s first railway, the Stockton & Darlington – famous for the runs of George Stephenson’s Rocket – wrote to Guest seeking his views on “Tram-roads and Rail-roads”.

In 1830, the year in which Britain’s railway boom really began, Guest laid down the so-called Big Mill, a specialised piece of machinery designed to roll bar iron into rails. The railway boom continued for two decades. Activity peaked with the “Railway Mania” of 1836–37, when Parliament authorised the construction of almost 1500 miles of track. Dowlais made 20,000 tons of rails a year in this period, and demand continued at a high level until 1850.

Almost from the outset, Guest also looked overseas for rail business. In 1832, the company won its first orders from the US – the Baltimore & Susquehanna Railway and the Harlaam Railroad in New York were early customers. In 1836, Guest broke into the Russian market with a contract to supply the St Petersburg-Pauloffsky Railway. Russia was an important source of business for some years. Guest also supplied the East India Company.

Guest drove Dowlais through this boom with a top management team strengthened by the addition of one

crucial new member: his second wife, Charlotte – Lady Charlotte Elizabeth Bertie, only daughter of the ninth Earl of Lindsey. Charlotte Guest proved to be not only a most loving and supportive wife to Guest and a mother of 10 children but, as Edgar Jones wrote in the first volume of his encyclopaedic history of GKN, “a remarkable business-woman of courage, application and insight”.

Like Guest, she had endured a lonely childhood – in her case, at Uffington, near Stamford on the Lincolnshire/Rutland border. Her father was aged 68 when she was born and died when she was six years old. Her mother’s second husband was a vicar who had no love for young Charlotte. In the remarkable Journal that she kept from the age of 10 until she was 79, she wrote: “I have been brought up alone and never have associated with children or young persons of my own age, nor had I ever anyone with whom to share my early joys and griefs ... Though I know many whom I love and esteem, I have never found a kindred soul to whom the whole of my heart may be opened.”

She might have found that soul in the shape of Benjamin Disraeli, the future Tory prime minister, with whom she had a brief romance in early 1833. He described her as “very clever, [worth] £25,000 and domestic”. She thought him “wild, enthusiastic and very poetical”.

Within days of parting from Disraeli, Charlotte met Josiah Guest at the London home of one of the Dowlais shareholders. Guest did not share Disraeli’s politics – he had been Liberal Member of Parliament (MP) for Honiton for five years from 1826. But politics was immaterial to Charlotte.

The couple embarked on a whirlwind romance. They married on 29 July 1833, honeymooned on the South coast and at Brighton, and then travelled to Dowlais House in Merthyr. It was a far cry from rural Lincolnshire. “By the time we reached the house, it was quite dark, and the prevailing gloom gave full effect to the light of the blazing furnaces which was quite unlike all I had ever before seen or even imagined”, Charlotte wrote. Her husband was worried that the sight might frighten his new bride. But she was made of sterner stuff. “I am iron now,” she wrote. “And my life is altered into one of action, not sentiment.”

Charlotte learned Welsh, immersed herself in the business – including going down the company’s coal mines – and took on the roles of company secretary and accountant. She did not turn her back on metropolitan high society, but she kept a strict sense of priorities. Jones recounts one scene when Charlotte was attending a social event in London and a messenger from Dowlais delivered a long tin case containing the year’s accounts. Amid the crinoline dresses and the small talk of the chattering class, Charlotte sat down to check the Dowlais figures and calculate its profits.

Thanks to Dowlais, her own conversational partners came from a more interesting background than the average London aristocratic crowd. Charles Babbage, the scientist and inventor of the punching machine, the first calculator, was one who gave her sound advice: “He placed strongly before me the necessity of looking at great leading points and not allowing myself to be discouraged and perplexed by comparatively insignificant details ...”. She retained a firm grasp of the big picture.

Charlotte called her husband “Merthyr” – a nickname which affectionately and accurately embodied the fact that man and place were synonymous. Guest provided the township of Dowlais with houses, churches, schools, a library and educational facilities for the employees. He was chairman of the local railway company and of the first Merthyr Board of Health.

When the Great Reform Bill of 1832 was enacted to widen the electoral franchise and reflect the rise of new towns and cities, it created a parliamentary constituency of Merthyr Tydfil. Guest became the town’s first MP. He defended the seat in 1837 and was subsequently re-elected, unopposed, at four general elections. In 1838, he became a Baronet and was known thereafter as Sir John Guest. Charlotte was upset – she thought that he deserved a peerage.

If Guest’s lesser ennoblement reflected an establishment prejudice against industry which existed even in early Victorian days, his combination of business and politics made a useful connection which was lost in Britain during the 20th century, to the country’s cost.

Politically, Guest was for cheap and efficient government, free trade, the abolition of the Corn Laws which artificially inflated corn and food prices, and further Parliamentary reform. He was, however, opposed to the radicals who advocated the establishment of trade unions and who endorsed the Chartist movement’s calls for universal male suffrage and other, more radical, reforms.

South Wales in general, and Merthyr in particular, was a hotbed of Chartism in the 1830s, and the movement there reached its peak in 1839 with a spate of peaceful protests followed by riots in Ebbw Vale and Newport. Fear