

# **Carrickfergus Gasworks: a Phoenix from the Flames**

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Carrickfergus lies on the county Antrim side of Belfast Lough, 15km north of Belfast. Its gasworks was established in the 1850s and is typical of the many public gasworks established during the 1800s in the six counties that were eventually to become the state of Northern Ireland. It is now the sole preserved coal gasworks in Ireland and is one of only three such sites in the United Kingdom.

## **Coal gas production**

The first gasworks in the north of Ireland was established in Belfast in 1822. By the turn of the century, every sizeable town had its own gasworks. Many of them were set up in the 1850s, a decade of rapid urbanization immediately after the great famine.

One such gasworks to appear at this time was at Carrickfergus. In 1854, a group of local businessmen came together to form the Carrickfergus Gas Company. £3000 was raised by private subscription to acquire land in Irish Quarter West in the town and to build a gasworks. A contract was signed with the Town Commissioners to supply 42 street lights with gas for a period of 31 years at £60 per year. These were lit for the first time on 17 September 1855.

The superiority of gas lighting over oil lamps encouraged many of the town's shopkeepers and wealthier residents to adopt it. During its first year of operation, the company signed up 171 customers. Over the next 50 years steady progress was made and by 1905, 242 customers were being supplied. During this period, the average amount of gas used by each consumer tripled. This increase was due to the introduction of gas cookers and heaters, incandescent mantles and slot meters, accompanied by a steady fall in the price of gas.

Although most the Northern Ireland's gasworks eventually came to be operated by their respective town councils, Carrickfergus remained in private hands for most of its working life. However, returns were unspectacular and the number of industrial users remained low. Reliant largely on domestic consumers and without any public subsidy, the gasworks' development was severely curtailed. Consequently, the early Victorian process of producing gas using horizontal retorts persisted for well over a century, long after other gasworks had switched to more efficient vertical retorts. Second-hand equipment from other undertakings was pressed into service. Even as late as 1949, horizontal retorts were still being installed when the works expanded to meet the demands of Sunnylands, a new housing estate on the outskirts of the town.

## **Reformed gas**

From the 1950s onwards, coal gas production became increasingly expensive due to the rising cost of coal and labour. Faced with certain closure as profits declined, the Carrickfergus Gas Company sold out to Belfast Corporation in 1962. The reason for this acquisition was to become clear in 1964 when the Corporation began constructing a new gasworks at Sydenham, in the Belfast Harbour Estate. The chosen site was beside the newly-opened BP oil refinery. One of its by-products was naphtha, from which gas could be made by subjecting it to superheated steam in the presence of a nickel catalyst. Reformed gas, as it was called, was much cheaper to produce than coal gas as the feedstock was inexpensive and required fewer operatives due to the automated and non-polluting production process.

In order to secure the long-term future of the Sydenham Works, Belfast Corporation acquired all the coal gas undertakings in the Greater Belfast Area so that they could be

supplied with reformed gas piped from Sydenham. The old coal gas plants became redundant with the exception of the gasholders, which were now used to store the reformed gas. When coal gas production finally ceased at Carrickfergus in 1967, its manager, Marshall Waddell, took the farsighted decision to mothball the entire plant (including its 36 horizontal retorts) in case it might be of historical interest at some future date. The gasholder continued to be used to supply upwards of 2000 consumers throughout the town.

Elsewhere in Northern Ireland, most of the surviving coal gasworks closed. Some of the larger ones installed their own reformed gas plants or else imported liquefied gas for mixing with air prior to onward distribution.

By the mid 1980s, the price of oil and its by-products had rocketed. Reformed gas was now so expensive that it required a public subsidy to keep it affordable. The government of the day decreed that this was no longer economically viable. With the withdrawal of public subsidies, all the province's gas undertakings were forced to cease production. Carrickfergus closed in 1987 and Sydenham the following year. Ulster's 165-year old gas industry had come to an end.

### **A phoenix from the flames**

In 1987, the author was commissioned by the Historic Monuments & Buildings Branch of the Department of the Environment (DOE) to record all the province's gasworks before they were demolished and their sites sold for redevelopment. During the course of this work, Carrickfergus was visited and its heritage significance as the last surviving Victorian gasworks in Ireland recognized.

Thanks to the efforts of Sam Gault (manager at Carrickfergus at that time) and the townsfolk of Carrickfergus, the Carrickfergus Gasworks Preservation Society Ltd was established in 1988 as a charitable body dedicated to saving this unique site for posterity. Richard Needham, Minister of State at the DOE, was persuaded to purchase the site on behalf of the nation and lease it to the Society.

The Society carried out holding repairs to arrest the site's physical deterioration and opened it regularly to raise its public profile. These efforts were eventually rewarded in 2000 when the Heritage Lottery Fund granted £750,000 to restore the site to a manageable state. With additional funding from the European Regional Development Fund, DOE Environment & Heritage Service, and the voluntary input of Society members, the site was restored over a two-year period at a cost of £1 million. It re-opened to the public in 2002 as "Flame, the Gasworks Museum of Ireland".

The mission statement of Flame is *'to collect, conserve, interpret and display all material, buildings, machinery and documents associated with Carrickfergus Gasworks and the Irish gas industry.'* Because the site no longer produces gas, a major challenge is to bring it alive, particularly for schoolchildren who have no first-hand knowledge of either coal- or reformed gas. To this end, interpretative panels, videos, recreated sounds and smells are deployed throughout the site; the gasholder is raised and lowered using compressed air and guided tours are also given. The site also houses an extensive collection of gas appliances and a comprehensive research library of gas-related material.

Flame is still run on a voluntary basis by members of the Preservation Society and is open to the public throughout the year. It is funded by income from ticket sales and generous grants from Carrickfergus Borough Council and the Environment & Heritage Service.

With the recent arrival of natural gas in Northern Ireland, a new episode in the province's gas industry is unfolding. Manufactured gas is becoming a distant memory, now kept alive only at Flame. For further information, visit the Flame website, [www.gasworksflame.com](http://www.gasworksflame.com).