POWER STATION

Ferbane

Date Of Survey: 15th May 2001

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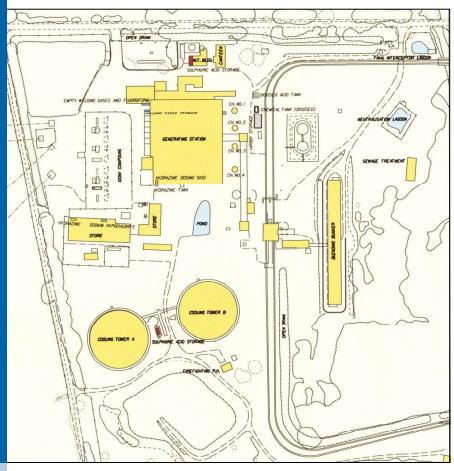
O.S. Ref: 23-5 1/ 23-9, 1909	ESB Ref: OY-PG- 23-5 1/ 23-9,1909

Architectural Heritage Evaluation:		Categories of Special Interest:	
Record Only		Archaeological (AG)	
Local		Architectural (A)	
District	✔	Artistic (AR)	
Regional		Cultural (C)	
National		Historical (H)	✔
International		Scientific (SC)	
		Social (SO)	✔
		Technical (T)	



Summary

Ferbane Power Station was a peat-fired generating station located on a flat rural site on the outskirts of the village of Ferbane, approximately 20km from the town of Tullamore in Co. Offaly.

In May 1953 ESB commenced construction of Ferbane Power Station on a site of 48 acres on the left bank of the Silver River at the centre of Boora Bog in Co. Offaly. The first generator went into service in March 1957. When a second development was completed in February 1964 the plant comprised four units with a combined capacity of 90MW and 180 staff were employed to operate and maintain the plant.

Following the plant's closure in March 2000, the demolition of the first cooling tower was completed on March 26th 1999. The demolition of the station commenced in November 2001 and the demolition of the second cooling tower was completed on February 23rd 2002.

Description & Materials

The site was dominated by the presence of the station building and three tall chimneys, with the control building and offices in the immediate foreground. There were 3 steel chimneys for first development and 1 reinforced (brick lined) concrete chimney for second development. The large station building housed the following functions: the generating hall, the boiler house and the engine room.

Generating Hall

The main walls to the generating hall, boiler house, bunker bay and engine room consisted of a patent glazed window system with slim sections containing obscure glass, and corrugated cladding sheets with the corrugations running vertically. The lower portion of the walls consisted of precast concrete block walls with external red/brown pebble dash render finish externally and painted finish internally.

The roofs to the generating hall, boiler house and engine room were all flat and consisted of patent metal deck roofing sheets with patent glazed lanterns and ventilators where appropriate.

Office Block & Control Room

The office building consisted of a three-storey asymmetrically composed building with a central main entrance. This space featured a main stairway as a central feature which accessed all three levels of office space and the working floors of the adjacent station.

The walls to the control building and office block consisted of precast concrete wall construction with red/brown pebble dash render finish externally and smooth rendered painted finish internally, and a painted grey plinth generally. Parapet copings to the edge of the roof were of in-situ concrete with asphalt upstands. Windows consisted of patent glazed units generally with precast concrete window cills and patent smooth 3/4" render reveals to the window openings.

Canteen & Stores

The walls to the canteen and stores consisted of precast concrete wall construction with red/brown pebble dash render finish externally, and smooth rendered painted finish internally, with a painted grey plinth generally. It had a flat concrete roof and the windows consisted of patent glazed units generally with precast concrete window cills.

Fuel Handling & Storage

The milled peat was delivered in wagons each holding about 6 tonnes. These wagons were uncoupled from wagon loco and pushed onto an automatic tippling device by electrically operated 'pushers' on tippler inlet and outlet and known as 'pulling-in' and 'pulling-out' devices. From the tipplers the milled peat was fed

1. View of Station from Ash Pond. **2.** Chimneys and Enclosed Peat Conveyor. **3.** Administration Block and Main Entrance.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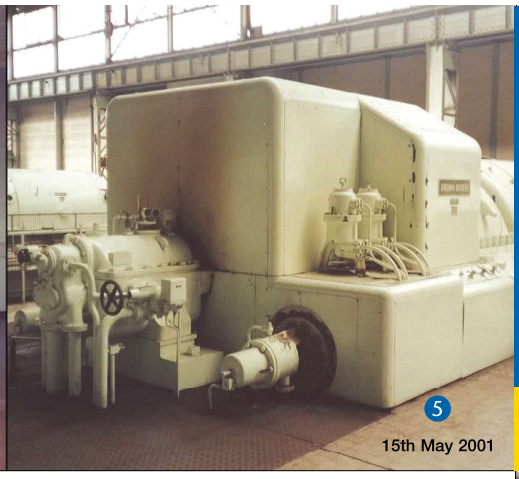
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directly by belt conveyors to the bunkers or to an adjacent stock pile.

A special 'tippler' unit turned each wagon upside down individually. This transferred the peat from the wagon to an underground conveyor belt, which was transported from low level to high level entry into the boiler house via an enclosed conveyor housing ramp and tower.

Boiler House

Following the second development in 1964 there were four boilers each being connected directly by steam main to a turbine. Each boiler was supplied with fuel from a bunker by four scraper conveyors which feed it to the four pulverising mills. These mills had dual role of drying (using recirculated gas from the furnace) and pulverising the fuel into a very fine powder for better combustion.

Turbine House Plant

After second development there were four steam turbine. The first three were each rated at 20MW and each coupled to a generator rated 25,000,kVA; unit 4 was rated at 30MW coupled to a generator rated 35,000kVA. The turbines were complete with the standard condensing and feed water heating plant from which the condensed steam is returned to the boilers.

Cooling Towers

The local River Silver could not supply a sufficient quantity of water for cooling purposes. It was necessary, therefore, to construct two towers to cool the condenser circulating water. Each tower was of reinforced concrete shell construction. They were a reinforced concrete hyperbolic type, standing 80m high and 59m in diameter at the base.

Original designs for the station included three cooling towers, however only two were ever built.

Adjacent to the station building were the bunker bay, a canteen, an assortment of smaller buildings, ash ponds, and the Bord na Móna railway which brought in milled peat from the bog.

Other Features

Walther & CIE, Babcock Werke & Vereinigte Kesselwerke metal nameplates in bunker/boiler areas and Brown Boveri and Parsons metal nameplates in the engine/turbines room.

Milled Peat

Boora Bog was developed by Bord na Móna to produce milled peat and deliver it to the station over a narrow gauge railway network. This was mainly done in 5-tonne wagon loads and 14 wagons to a rake, although some milled peat was delivered by road.

Transmission

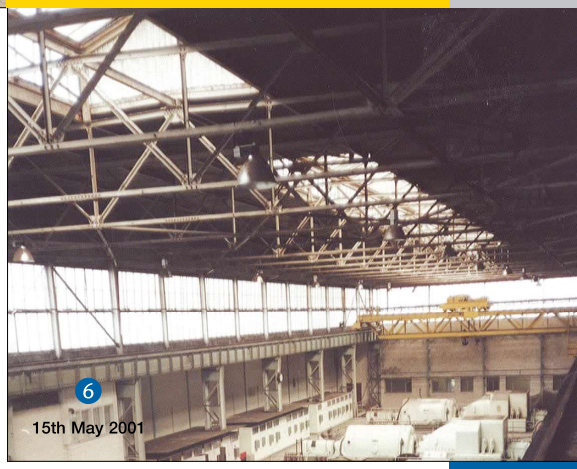
In a typical year the station burned 650,000 tonnes of milled peat to produce 400 million units of electricity. Electricity was generated and stepped up by transformers to 110kV for transmission to Shannonbridge, Portlaoise and Thurles to join the National Grid.

Special Interest - Historical

The Ferbane Generating Station pioneered the utilisation of milled peat in Ireland. At the time of erection, it was the biggest peat burning power station in the world outside of the USSR. Following the success of Ferbane, four further stations were built in the Midlands.

Special Interest - Social

The station encouraged a new local economy and community with the influx of new workers and their families. This established a series of new housing developments for the area.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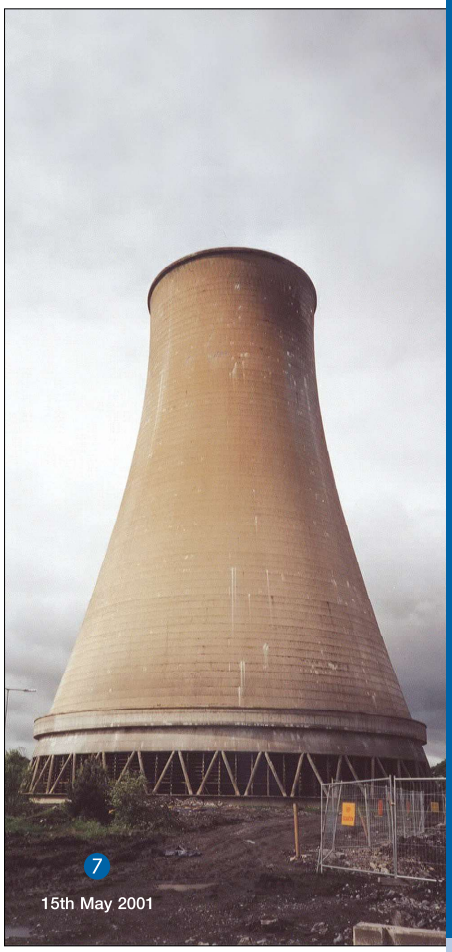
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4. Control Room. **5.** Parsons Turbine. **6.** The Engine/Generating Hall. **7.** Cooling Tower.