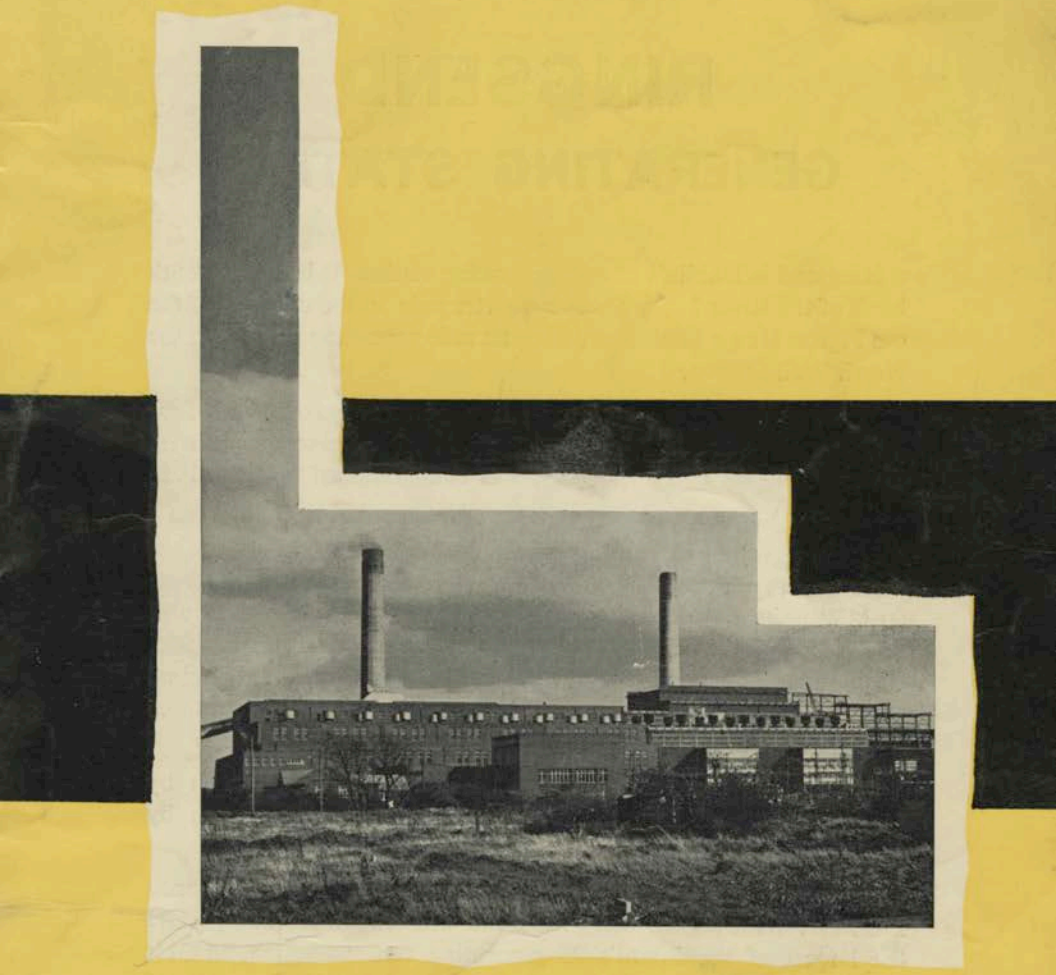


RINGSEND GENERATING STATION

ELECTRICITY SUPPLY BOARD
DUBLIN 2, IRELAND

REPRINTED MAY 1965

RINGSEND

GENERATING STATION

Ringsend is Dublin's newest generating station. It is on the south bank of the River Liffey about a quarter mile on the city side of the old Pigeon House Station and about a mile across the river from the North Wall Station.

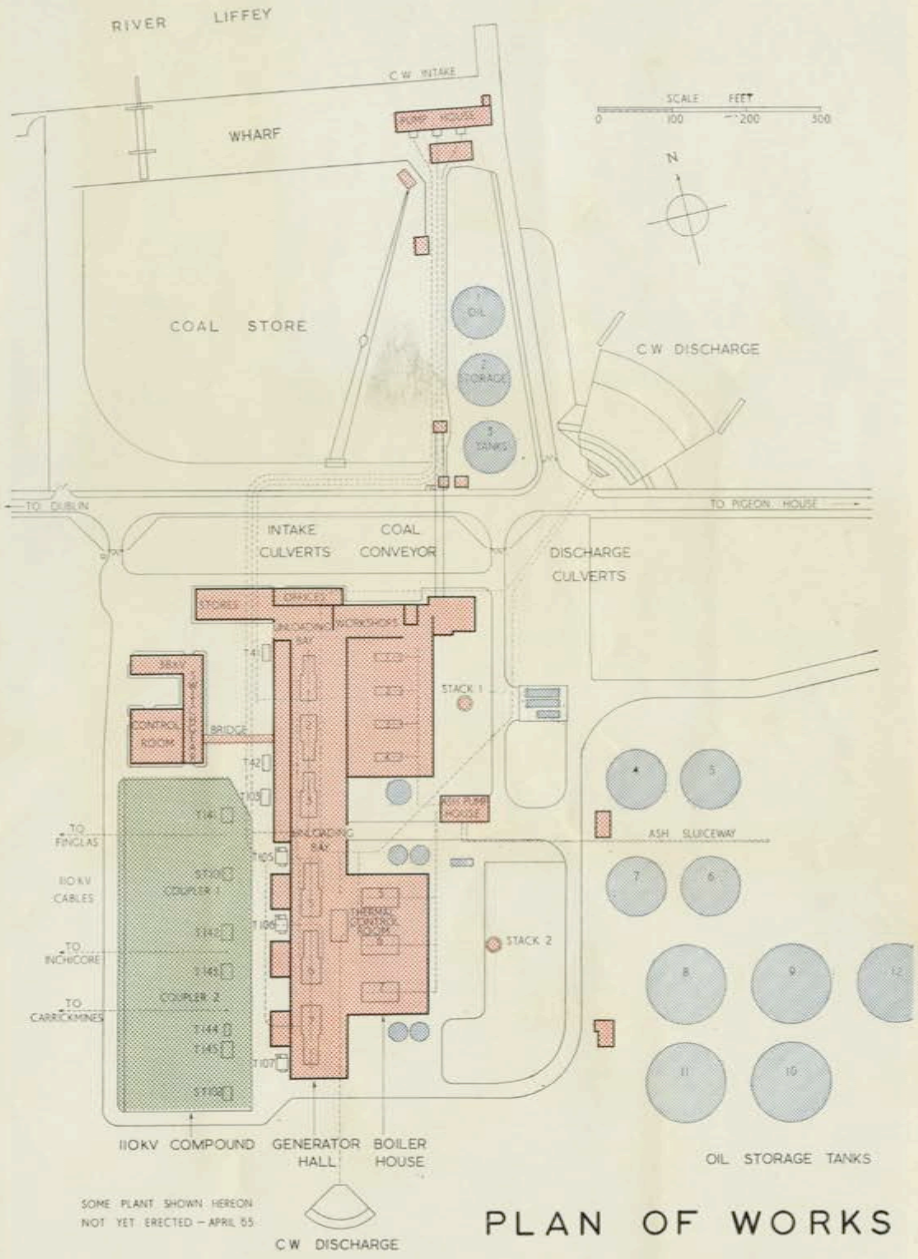
The first development of the Ringsend station comprised four boilers and three 30 MW turbo-alternators. This plant, along with the transformers and switchgear, was commissioned between 1955 and 1957.

Site work for the extension began in 1962. The extension comprises three boilers and three 60 MW turbo-alternators. The first of these 60 MW units was commissioned in January 1965, the second unit will be commissioned later this year, and the last unit during 1966. Then Ringsend will have a capacity of 270 MW. The four original boilers are arranged to burn either coal or oil; the subsequent three boilers burn oil.

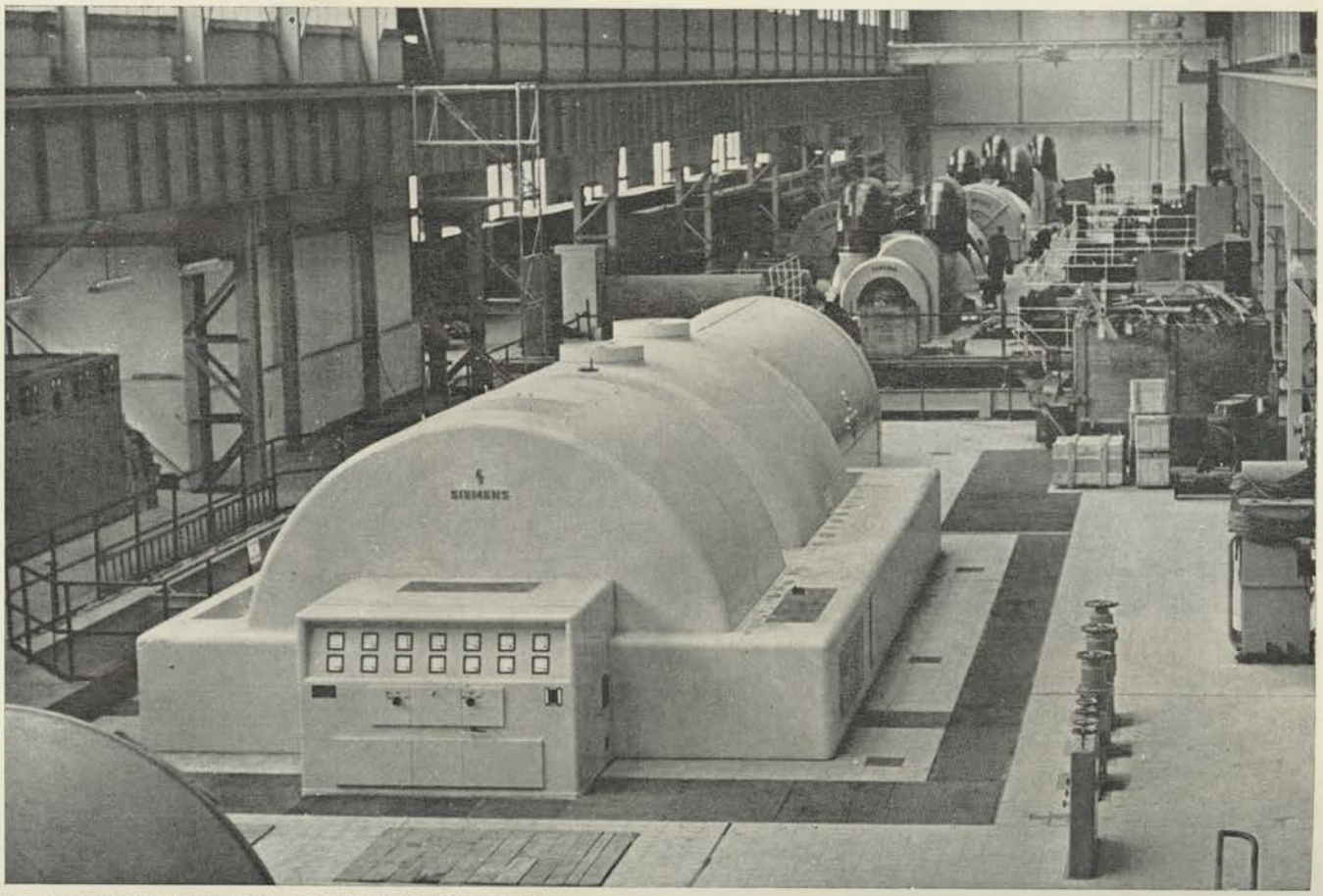
Ringsend is connected into the main transmission system by 110kV cables and into the Dublin City distribution system by 38kV cables.

It is not planned to extend Ringsend beyond the above mentioned 270 MW. With this capacity Ringsend will remain for many years the largest of the Board's 25 generating stations which, at 31st March 1965 (including Ringsend), had a total installed capacity of 1,010 MW; this included 90 MW at Pigeon House and also the four 5 MW peat stations. Pigeon House is at present used only as a standby and is being gradually de-rated. Ultimately it will be replaced by a new station—" Pigeon House B "—initially with 120 MW sets and finally with sets about 250 MW; its final capacity will be around 1,000 MW.

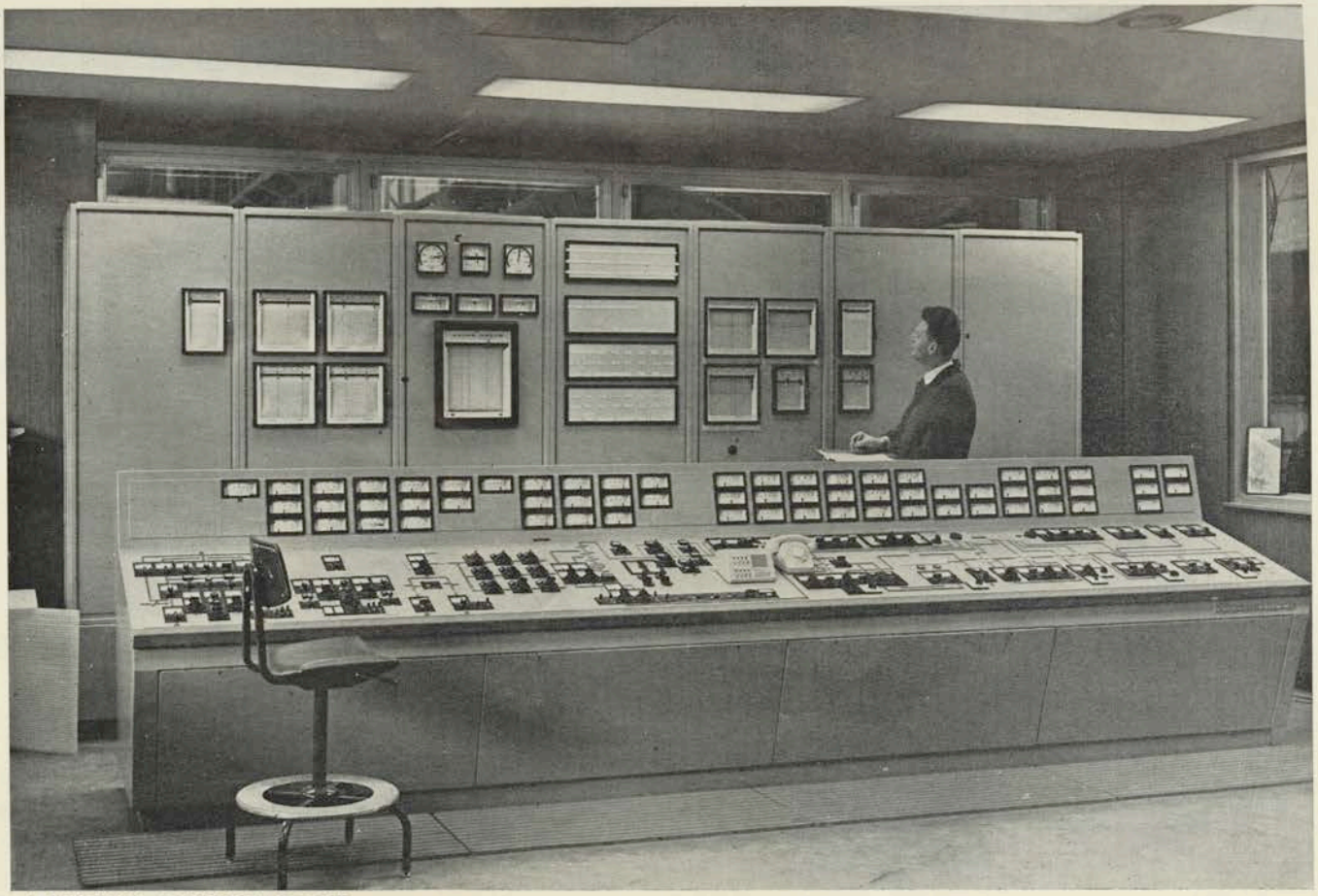
Before then, other generating stations at present in hand will be completed; these comprise the extension of the Lanesborough peat-fired station by a 40 MW set, and the construction of two new generating stations, each of 120 MW capacity, one at Great Island, Co. Wexford, and the other at Tarbert, Co. Kerry.



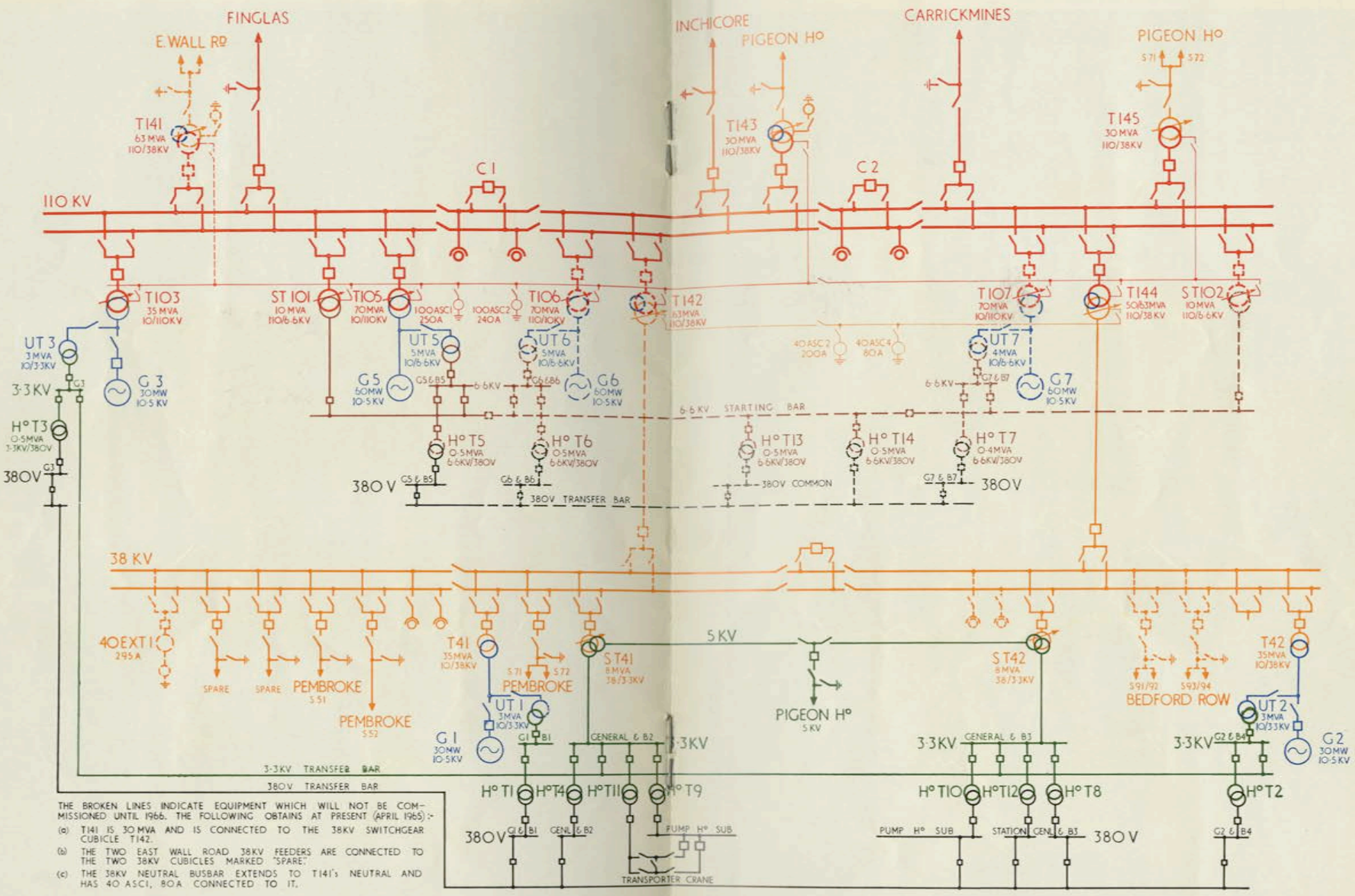
PLAN OF WORKS



NO. 5 TURBO-ALTERNATOR IN FOREGROUND



THERMAL CONTROL ROOM



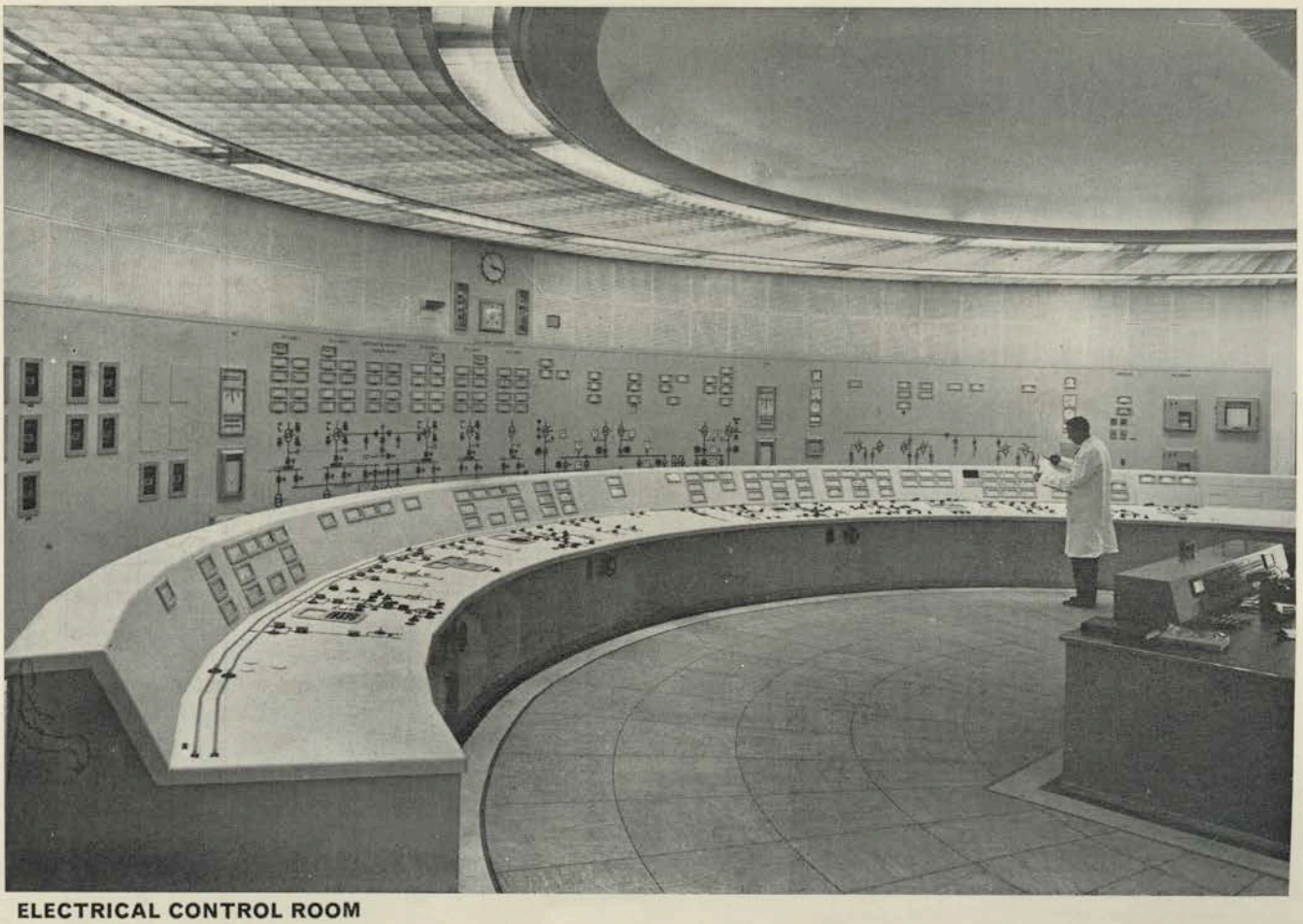
THE BROKEN LINES INDICATE EQUIPMENT WHICH WILL NOT BE COMMISSIONED UNTIL 1966. THE FOLLOWING OBTAINS AT PRESENT (APRIL 1965) :-

(a) T141 IS 30 MVA AND IS CONNECTED TO THE 38KV SWITCHGEAR CUBICLE T142.

(b) THE TWO EAST WALL ROAD 38KV FEEDERS ARE CONNECTED TO THE TWO 38KV CUBICLES MARKED "SPARE."

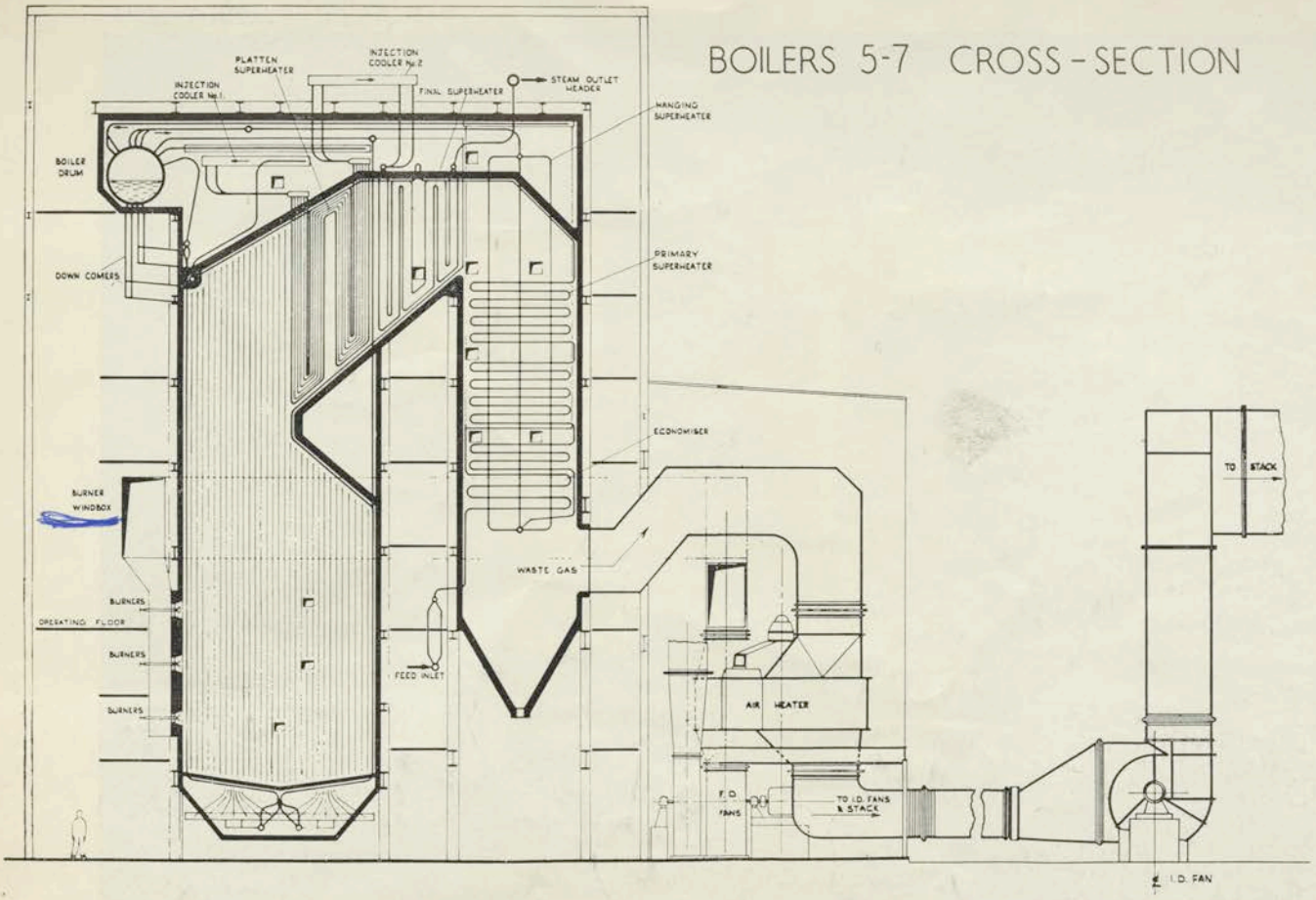
(c) THE 38KV NEUTRAL BUSBAR EXTENDS TO T141's NEUTRAL AND HAS 40 ASC1, 80A CONNECTED TO IT.

LINE DIAGRAM

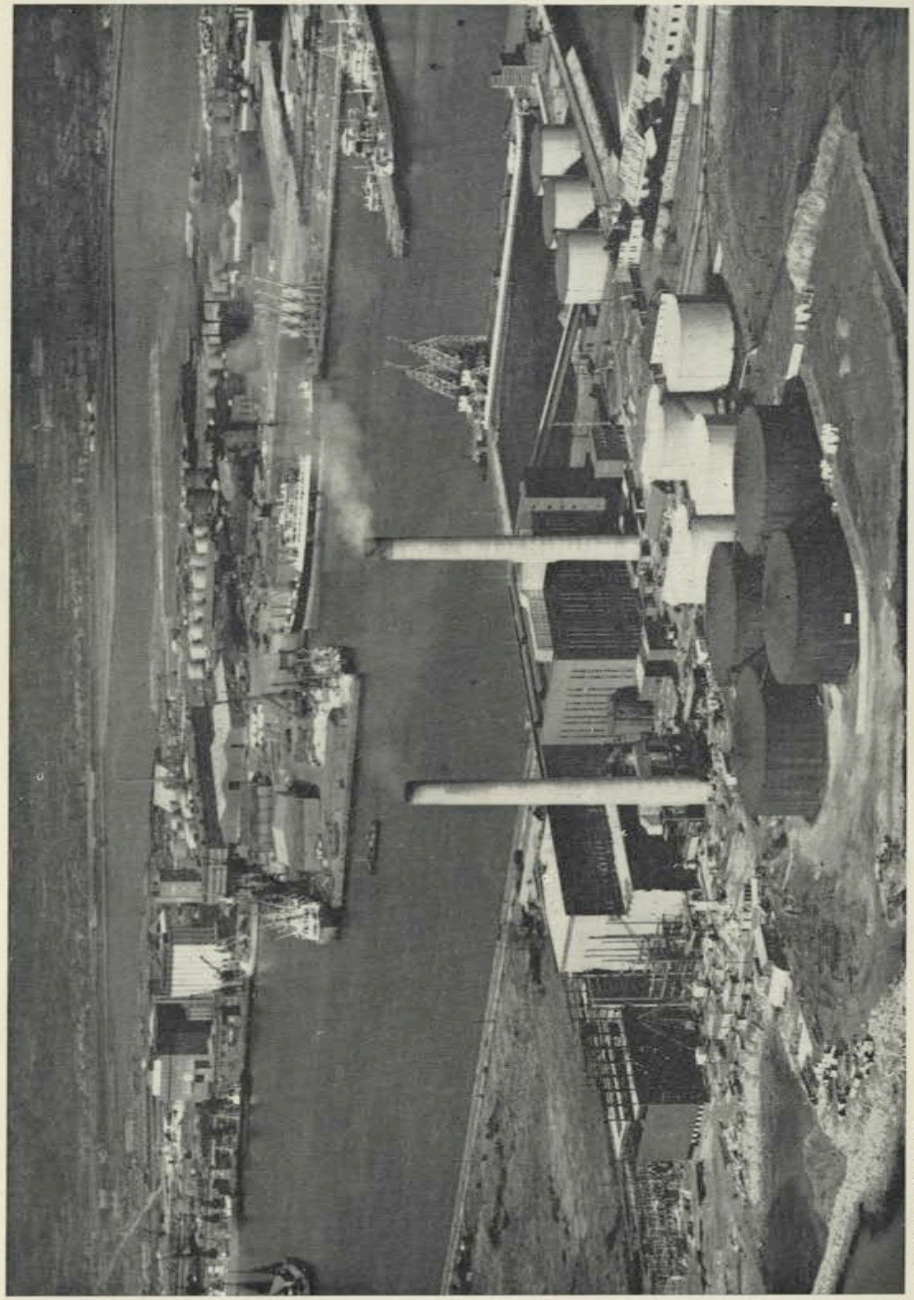


ELECTRICAL CONTROL ROOM

BOILERS 5-7 CROSS-SECTION



(RINGSEND)



AERIAL VIEW

TECHNICAL PARTICULARS

FUEL

Coal; nett calorific value 10,900 Btu/lb
Oil; nett calorific value 17,400 Btu/lb
Fuel storage capacity:—
At present (May 1965): Coal 30,000 tons; Oil 72,000 tons
Projected (1966) Coal 30,000 tons; Oil 82,000 tons

BOILERS

		1, 2, 3 and 4	5, 6 and 7
Maker		B & W	V.K.W.
Firing		Coal or Oil	Oil
Economic rating	k lb/hr	160	410
M.C.R.	k lb/hr	200	550
Pressure	psi	625	1,175
Temperature	°F	865	960

TURBO-ALTERNATORS (There is no turbo-alternator No. 4)

		1, 2 and 3	5 and 6	7
Maker		Parsons	S.S.W.	Parsons
Type		Reaction, twin cylinder	Impulse reaction, twin cylinder	Impulse reaction, twin cylinder
Economic rating	MW	24	50	50
M.C.R.	MW	30	60	60
Speed	rpm	3,000	3,000	3,000
Pressure	psi	600	1,150	1,150
Temperature	°F	850	950	950
Voltage	kV	10.5	10.5	10.5
Power factor		0.8	0.8	0.8

ELECTRICAL EQUIPMENT (Ratings, etc. given in Line Diagram)

10/110kV and 38/110kV transformers	A.C.E.C.
10/38kV and 38/5/3.3kV	Parsons
110/6.6kV	A.E.G.
10, 6.6 and 3.3kV transformers	A.C.E.C. and Parsons
110 and 38kV arc suppression plant	A.E.G., A.S.E.A. and Brown-Boveri
110, 38, 10 and 5kV switchgear	Brown-Boveri
6.6kV switchgear	Laur Knudsen
3.3kV switchgear	Cook and Ferguson
380V switchgear	G.E.C. and Voigt & Haeffner
Electrical control room equipment	Charles Maier
Thermal control room equipment	Hartmann & Braun