

QUARTERLY STATEMENT NO. 3
7 GeV PROTON SYNCHROTRON

1. This report is submitted in accordance with the decision made at the first meeting of the General Purposes Committee held on Friday 6th September, 1957.
2. The Statement shows the latest estimates compared with the approved estimates, and the expenditure and commitments up to 31st March, 1958.
3. In Appendix I the revised estimate of £7,206,000 is shown and a breakdown of this is:-
 1. The Plant Estimate is unchanged at £5,000,000.
 2. The revised Building Estimate is now £2,206,000. This amount does not include Industrial Group Fees, remaining contingencies or C.V.C. (2) which have not previously been quoted in Quarterly Statements but were referred to in paper NI (GP) (58) 7.
4. Appendix II shows actual expenditure compared with predicted expenditure to 31st March, 1958 and the revised estimated expenditure for the financial year 1958/59.
5. Appendix III shows the expenditure and commitments up to the end of the financial year 1957/58 ending 31st March, 1958.
6. Appendix IV shows the contract action likely to be taken during the next quarter, together with the action sought from the General Purposes Committee.
7. Appendix V shows the financial position in graphical form.

D. W. FRY
Chairman, Project Committee

A.E.R.E., Harwell.
14th May, 1958.

Appendix I

7 GeV Proton Synchrotron
Revised Cost Estimates 31st March 1958

		<u>£ Million</u>	
<u>Item</u>	<u>Statement No. 2</u>	<u>Revised</u>	
1. <u>Magnet</u>			
Yoke	1.5		
Pole Pieces	0.2		
Coils	0.6		
Special jigs and Fixtures	0.15		
Installation	<u>0.15</u>	2.6	2.6
2. <u>Injector</u>	0.3		0.3
3. <u>R.F. Equipment</u>	0.15		0.15
4. <u>Vacuum System</u>			
Vacuum Chamber, Pumps etc.	0.35		
Installation and Sundries	<u>0.05</u>	0.4	0.4
5. <u>Power Supply</u>			
Motor Alternator	0.6		
Ignitrons and firing circuits	0.2		
Flywheels, bearings, bedplates	0.1		
Cabling, installation etc.	0.2		
Saturating Choke	<u>0.2</u>	1.3	1.3
6. <u>Controls</u>	0.15		0.15
7. <u>Cooling System</u>	<u>0.1</u>		<u>0.1</u>
	5.0		5.0
8. <u>Buildings</u>			
Main and Ancillary Building Works	1.34		1.48
Engineering and Services	0.54		0.55
Fees	<u>0.15</u>	<u>2.03</u>	0.15
		7.03	
Furniture and Fittings		<u>0.03</u>	<u>2.21</u>
			7.21

Appendix II

Expenditure Statement

	<u>Financial Year</u>	<u>Expend. to 31/3/58</u>	<u>Predicted</u>	<u>Estimate</u>
Plant	1957/58	£68,586	£20,000	£200,000
Building	1957/58	£268,000	£200,000	£200,000
Plant	1958/59		£1,079,000	£1,425,000
Building	1958/59		£990,000	£990,000

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7 GeV Proton Synchrotron
Recorded Commitments and Expenditure up to 31st March 1958

Appendix III (1)

NO.	ITEM	CONTRACT NUMBER	£ VALUE	FIRM	£ EXPENDITURE	REMARKS
1.	<u>MAGNET</u> Magnet Yoke Power Supply for Magnet Block Testing Copper for Magnet Coils Transporter for Magnet Sector Blocks Miscellaneous	2A.12158 A.8986 2D.15390 2B.15001	1,394,000 10,629 49,575 1,700 155	Joseph Sankey Ltd. English Electric Co. Ltd. British Copper Refiners Ltd. Carrmore Sinterers Ltd.	11,486 49,575	Contract placed 26/9/57 " " 18/9/57 " " 11/3/58 " " 21/3/58
2.	<u>INJECTOR</u> Electro-Static Generator 650 kV Electro-Static Generator 300 kV Electro-Static Generators (3) 125 kV E.H.T. Platform	3B.12213 3B.14864 3B.15379 2B.15114	15,050 1,989 7,050 2,450	S.A.M.E.S. France S.A.M.E.S. France S.A.M.E.S. France Portsmouth Aviation Ltd.	7,525	" " 15/10/57 " " 5/2/58 " " 26/2/58 " " 27/3/58
3.	<u>R.F. EQUIPMENT</u> Ferrite Frames Miscellaneous	3B.12235	39,000 788	Phillips, Bindhoven, Holland		" " 17/1/58
4.	<u>VACUUM SYSTEM</u>					
5.	<u>POWER SUPPLY</u> Rotating Machinery Converter Equipment		450,866 552,500	The English Electric Co. Brown Boveri & Co.		) Tenders Accepted 5/3/58
6.	<u>CONTROLS</u>					
7.	<u>COOLING SYSTEM</u>					
			2,525,752		68,586	

Appendix III (2)

NO.	ITEM	CONTRACT NUMBER	2 VALUE	ITEM	3 EXPENDITURE	REMARKS
8.	<u>A. BUILDING WORKS</u> Opening up Contract Exploratory Boring Trial Bore Holes Reinforcing Rods	J.3073 J.3022 MW16/W 2A.13810) B.4871) B.8231) J.3017 J.3017/8	84,645 2,606 1,219 38,820	W. E. Chivers & Sons Ltd. The Cementation Co. W. E. Chivers & Sons Ltd. Whithead Iron & Steel Co.	60,000 2,606 1,219 38,820	
	Main Civil Contract Arco Building Miscellaneous	J.3017/8	1,082,739 42,000 14,074	W. E. Chivers & Sons Ltd. Taylor Woodrow	120,027 8,143	Includes 10 ft Extra Earthing
	<u>B. ENGINEERING AND SERVICES</u> Electric Cables E.H.T. Switchgear Transformers 25 Ton Crane Special Motion Cranes (3) Miscellaneous Cranes (5) Lift, Passenger & Goods-Main Building	A.3984 J.3020 A.8987 J.3076 J.3100 3A.3137 J.3129	3,728 7,283 2,934 9,055 33,692 38,051 3,790	Sterling Cable Co. Reynolds Ltd. Yorkshire Electric Co. Wharton Crane Co. " " " " Bryans Lifts	3,728 2,934	
	<u>C. MEES</u> Consultants Quantity Surveyors Industrial Group	J.3033 J.3074	106,000 40,000 85,000	<i>Henry & McKeown Galloway & Partners</i>	26,150 3,640	
			1,595,636		267,267	

No.	ITEM	CONTRACT NUMBER	\$ VALUE	FIRM LIKELY TO BE CONSIDERED	REMARKS	ACTION SOURCE FROM G.P.C.
1.	Magnet					
2.	Injector <i>Pulse</i> R.F. Drive Femtosecondulators E.H.T. Platform Mech. Equip. D.C. Gun Vacuum Equip. Vessel	38/15120	15,800 3,000 20,000	R.F.E. Co. Portsmouth Aviation Co. Nietro Vickers John Thompson Dentel, Adamsen Babcock & Wilcox Jenkins & Co. Competitive Tender <i>Tenders due on 25th July 20/23579/P5</i> <i>Fixed on dollar basis 38/15818</i>	Contract placed 18.4.58 Contract to be placed in May Contract likely to be placed by mid-July	None None None
	D.C. Gun Support Stand and Rails	38/15818	3,000 1900	Competitive Tender		None
3.	R.F. System Accelerator Unit Cavity Cavity Cooling System Bias Supply Drive Chain Primary Frequency Generator & Beam Control	20/23618 20/23524 20/23578	15,000 3,000 6,000 10,000 5,000	Competitive Tender Competitive Tender Competitive Tender - <i>Due 18th July 20/23579</i> Competitive Tender Competitive Tender	" during May - June	None None None None None
4.	Vacuum System Pumping Equipment Leak Detectors Roughing Pumps	28/212	15,297 7,000 20,000	Edwards High Vacuum Ltd. Metropolitan Vickers Ltd. Edwards High Vacuum Ltd. Laybold Vacuum Sales Ltd. Str J. H. Parson & Co. Ltd General Engineering Co. (Ruddiford)	Tenders received & examined Contract likely to be placed early in July Single tender action may be necessary depending on replies received from other firms.	None. Approval given by paper M.I.(G.P.) (58)6. None None at this stage. Approval for single tender action may be required later.

APPENDIX IV (2)

NO.	ITEM	CONTRACT NUMBER	£ VALUE	FIRMS LIKELY TO BE CONSIDERED	REMARKS	ACTION SOUGHT FROM G.P.C.
8	<u>BUILDINGS</u>					
	A. <u>BUILDING WORKS</u>					
	Additional 10 ft. earth shield		25,000	W. E. Chivers	Addition to Main Civil Contract (<i>Varian Order</i>)	None - Paper III(GP)(58)4 refers.
	B. <u>ENGINEERING AND SERVICES</u>					
	Lighting and Power - control, assembly and Test Bldgs.	3A-3227	6,800	N. G. Bailey & Co. Ltd.	Contract placed 18.4.58.	None
	2½ ton hand operated crane for testing of R.F. unit		1,980	Various	Competitive tender	None
	120 ton crane - Alternator Building		30,000	Babcock & Wilcox Ltd. Cowans, Sheldon & Co. Ltd. Thurston Crane & Hoist Co. Clyde Crane & Booth Ltd. Strain, Arrol & Co. Ltd. Stothert & Pitt Ltd.	Tenders invited from 6 firms. Tender closing date 6.6.58. Contract likely to be placed on 1.7.58.	Approval sought to place contract by normal competitive tender procedure at a final price not exceeding £30,000 by more than 10%.
	Main Electrical Services - Lighting and small power in Magnet Room, Alternator Bldg. and Offices and Labs.		55,000	Troughton & Young Ltd. Southern Electricity Board J. J. Cash & Co. Ltd. H. G. Bailey & Co. Ltd. Read & Partners W. J. Purse & Co. Ltd. B. French Ltd. F. H. Wheeler & Co. Electrical Installations Christy Bros.	Tenders invited from 10 firms and received on 28.4.58. Contract to be placed in May.	Approval sought to place contract by normal competitive tender procedure at a final price not exceeding £55,000 by more than 10%.

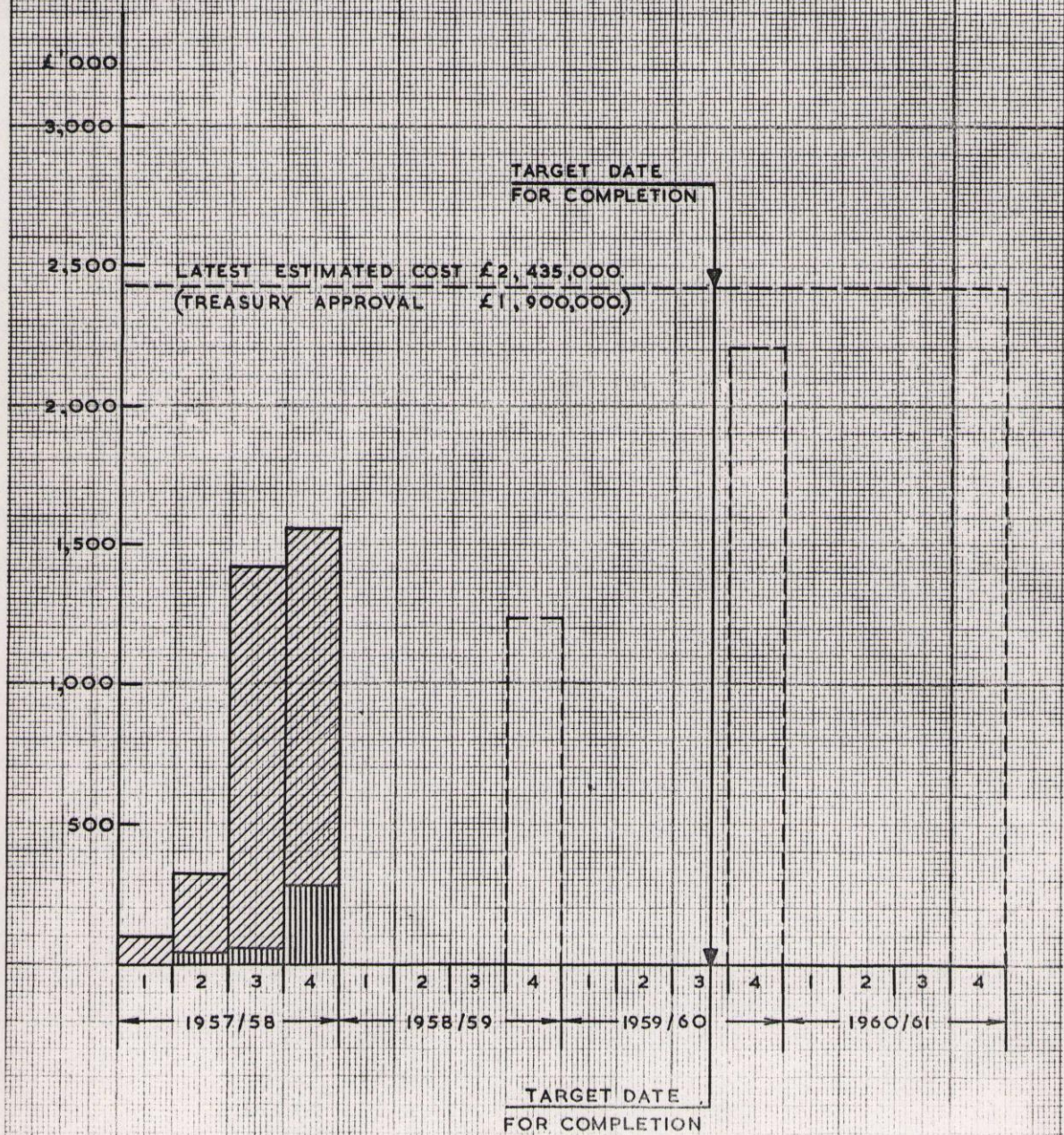
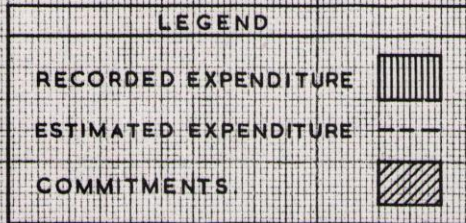
APPENDIX IV (3)

NO.	ITEM	CONTRACT NUMBER	£ VALUE	FIRMS LIKELY TO BE CONSIDERED	REMARKS	ACTION SOUGHT FROM G.P.C.
8	<u>B. ENGINEERING AND SERVICES (CONTD.)</u>					
	Main pipework for heating, Hot Water and Ventilation services in all buildings.		69,000	Z. D. Berry Brightside Heating & Eng. Co. J. J. Jeffries Ltd. G. H. Hayden & Son. Latham Hall & Co. Arthur Soull & Son. Sulzer Bros. (London) Carny Ching & Co. Rossier & Russell Ltd. Young Austin & Young, Ltd.	Tenders invited from 10 firms. Tender closing date 21.5.58. Contract to be placed mid-June.	Approval sought to place contract by normal competitive tender procedure at a final price not exceeding £69,000 by more than 10%.
	Water Treatment Plant		14,000	Permutit Co.	Contract to be placed early in June.	None
	Ventilation Plant - magnet and injector rooms.		52,000	Andrew Machine Construct Co. Ltd. R. B. Stirling & Co. Ltd. Methven Hall & Sons Ltd. Brightside Heating & Eng. Co. Ltd. Therwobank Ltd. Keth Blackman Ltd.	Tenders invited from 6 firms and received on 23.4.58. Contract to be placed 1.6.58.	None - Approval already given of paper III (GP) (57) 8.
	Shielding block Trolleys and Traction Unit.		23,000	Robert Hudson Ltd. Chetwood Kilner Ltd. Strachan & Henshaw Ltd. Rieckro Hydraulics Birtley Engineering Ltd. New Conveyor Co. Ltd.	Tenders invited from 6 firms. Contract to be placed in May.	None

U.K.A.E.A. (R.G.)

BUILDING EXPENDITURE.
QUARTER ENDING:- 31st. MAR. 1958.

7 GEV PROTON.
SYNCHROTRON PROJECT



U.K.A.E.A. (R.G.)

PLANT EXPENDITURE
QUARTER ENDING 31st. MAR. 1958

7 GEV PROTON
SYNCHROTRON PROJECT

