

30th June, 1961

NI/GP/61/34

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GENERAL PURPOSES COMMITTEE

Nimrod Project Quarterly Statement No.14

Covering note by the Secretary

The enclosed statement is circulated for information

Rutherford High Energy Laboratory,
Harwell

Circulation: to Members of the General Purposes Committee.
to Members of the Governing Board for information.

NIMROD PROJECT

QUARTERLY STATEMENT No.14

1. This report shows in Appendix I the Nimrod Capital Estimates to 31st March, 1961, compared with the original estimates and the present Treasury approval.
2. The Plant estimate has been reduced from £8.128M to £7.970M as a result of a transfer from the contingency.
3. The Building Estimate remains unchanged at £3.101M.
4. The total estimate now stands at £11.071M excluding C.V.C.2
(Since the end of the period covered by this statement the Capital Sum approved by the Treasury has been increased to £11.052M excluding C.V.C.2.
5. Appendix II shows the actual and predicted rate of expenditure to the end of the Project.
6. Appendix III shows the expenditure and commitments up to 31st March, 1961, which is the end of the financial year.
7. Appendix IV shows the known and anticipated contract action up to 30th June, 1961.
8. Appendix V shows the rate of expenditure and commitments in graphical form.

F.A. Vick
Chairman, Project Committee

APPENDIX I

NIMROD PROJECT

Revised Cost Estimates - 31st March, 1961.

Item	£ Million		
	Original Estimate Approved by Treasury	Present Treasury Approval	Revised Cost Estimates at 31.3.61
1. <u>Magnet</u>	2.60	3.224	3.224
2. <u>Injector</u>	0.30	0.485	0.485
3. <u>R.F. Equipment</u>	0.15	0.164	0.164
4. <u>Vacuum Equipment</u>	0.40	1.249	1.942
5. <u>Power Supply</u>	1.30	1.394	1.394
6. <u>Controls</u>	0.15	0.150	0.150
<u>Cooling System</u>	0.10	-	-
<u>Contingency on Plant Items</u>	-	0.769	0.611
	<u>5.00</u>	<u>7.435*</u>	<u>7.970</u>
7. <u>Buildings</u>			
Building works	1.40	1.888	1.888
M & E Services	0.40	0.701	0.701
Fees	0.10	0.303	0.303
Furniture and fittings	-	0.030	0.030
<u>Contingency on Building Items</u>	-	0.179	0.179
	<u>1.90</u>	<u>3.101*</u>	<u>3.101*</u>
TOTAL	6.90	10.536	11.071

* These figures do not include the estimated effect of the cost variation clauses (CVC.2).

Allowances for CVC.2 are - Plant £100,000
Buildings £ 35,000

NIMROD PROJECTActual and Predicted Rate of Expenditure as at 31.3.61

Item	1957-8 Actual £	1958-59 Actual £	1959-60 Actual £	1960-61 Predicted £	1961-62 Predicted £	1962-63 Predicted £	1963-64 Predicted £	Total Predicted £
Plant	68,575	387,000	1,969,667	1,772,177	1,850,000	1,800,000	222,581	8,070,000
Buildings	267,864	886,195	984,742	700,000	250,000	47,199	-	3,136,000
TOTAL	336,439	1,273,195	2,954,409	2,472,177	2,100,000	1,847,199	222,581	11,206,000

The predicted expenditure figures for 1962-63 and the totals now include the sums allowed for CVC.2 on both Plant and Buildings.

NIMROD PROJECTRecorded Commitments and Expenditure up to 31st March, 1961

Item	Commitment £	Expenditure £	Remarks
<u>Plant</u>			
<u>Magnet</u>			
Sectors	1,649,113	1,582,353	
Coils	651,939	461,565	
Pole Pieces	301,001	56,567	
Pole Face Windings	65,606	5,286	
Installation	109,389	22,931	
	2,777,048	2,128,702	
<u>Injector</u>			
D.C. Gun Supplies	37,087	29,309	
D.C. Gun	20,111	20,129	
Low Energy Drift Space	13,830	4,188	
Linear Accelerator	184,277	135,437	
R.F. Drive Power	43,192	40,777	
High Energy Drift Space	22,494	7,201	
Inflector	17,450	2,322	
Local Control System	7,129	6,979	
Miscellaneous Equipment and Installation	36,000	19,936	
	381,570	266,278	
<u>R.F. System</u>			
Accelerator Unit	73,718	39,553	
Bias Supply	4,463	3,754	
Drive Chain	22,000	2	
Primary Frequency Generator	3,461	3,376	
Beam Control Unit	11,775	5,855	
Local Controls	-	-	
Installation	165	9	
	115,582	52,549	
<u>Vacuum System</u>			
Curved Sections	656,977	553,870	
Straight Sections	6,982	-	
Pumping Units	197,520	137,453	
Connections	36,115	238	
Ancillaries	2,022	2,021	
Installation	3,410	636	
	903,026	694,218	
<u>Power Supplies</u>			
Rotating Machinery	599,689	414,136	
Convertor Equipment	612,849	398,332	
Miscellaneous	516	516	
Ripple Filter Equipment	53,731	-	
Installation	690	9	
	1,267,475	812,993	

Appendix III

Continued:- Recorded Commitments and Expenditure up to 31st March, 1961

Item	Commitment £	Expenditure £	Remarks
<u>Control System</u>			
Control Equipment	14,358	3,642	
Control Cabling	12,002	819	
Remote Control Panels	24,981	7,097	
Components for Advance Ordering	5,756	5,102	
Installation	6,705	25	
	63,802	16,685	
Charges for reallocation	37,869	31,867	
PLANT TOTAL	5,546,372*	4,003,292	
<u>Buildings</u>			
Building Works	1,858,038	1,835,262	
M & E Services	776,724	704,346	
Fees	303,000	172,807	
Furniture & Fittings	11,627	11,627	
BUILDINGS TOTAL	2,949,389*	2,724,042	

* These figures include the commitment against both the plant and building contingencies.

Contingencies	Approved	Commitment	Remarks
Plant	611,000	21,256	
Buildings	174,440	73,142	

New Commitments entered into since previous Quarterly Statement
(i.e. between 8.1.61 - 31.3.61) valued at £500 and over

Item	Value £	Firm	Remarks
<u>Buildings</u>			
Magnet Room Cranes	3,053	Wharton Crane & Hoist Co.	Variation to exist- ing contract
Pipework services	42,500	Z.D. Berry and sons	" "
<u>Plant</u>			
<u>Magnet</u>			
Polythene strip	680	Insulating Components & Mat.	
End Pole Pieces	3,708	J. Sankey & Sons	
End Pole Piece Seals	1,202	J.G. Meakes Ltd.	
<u>Injector</u>			
H.E.Drift Space Quadrupoles	1,515	J & P Engineering Ltd.	
Steel for straight section			
Vacuum box	2,179	English Steel	
<u>R.F. System</u>			
Modifications to R.F.Cavity	5,000	Speedy & Eynon Ltd	
Steel for straight section			
Vacuum Box	1,416	English Steel	
<u>Vacuum system</u>			
Roughing Pump Units	8,481	Pulsometer Eng.Co.Ltd.	
Steel for Straight Section			
Vacuum Boxes	7,080	English Steel	
Refrigerated Oil Traps	8,640	Pulsometer Eng. Co.Ltd.	
Vacuum Roughing Lines	3,036	Western Detail Mfg.	
Butterfly Valves	808	Edwards High Vacuum Ltd.	
Aluminium Alloy Forgings	717	High Duty Alloys Ltd.	
Aluminium Alloy Tube	1,128	James Booth Ltd.	
Pump Headers	26,864	Hall Engineering Ltd.	
Valve Body Assemblies & withdrawal housings	9,070	Vacuum Research Ltd.	
<u>Power Supply</u>			
Control Desk & Equipment	3,990	Brown Boveri	Amendment to Contract
Electronic Valves	1,181	Mullard Ltd.	

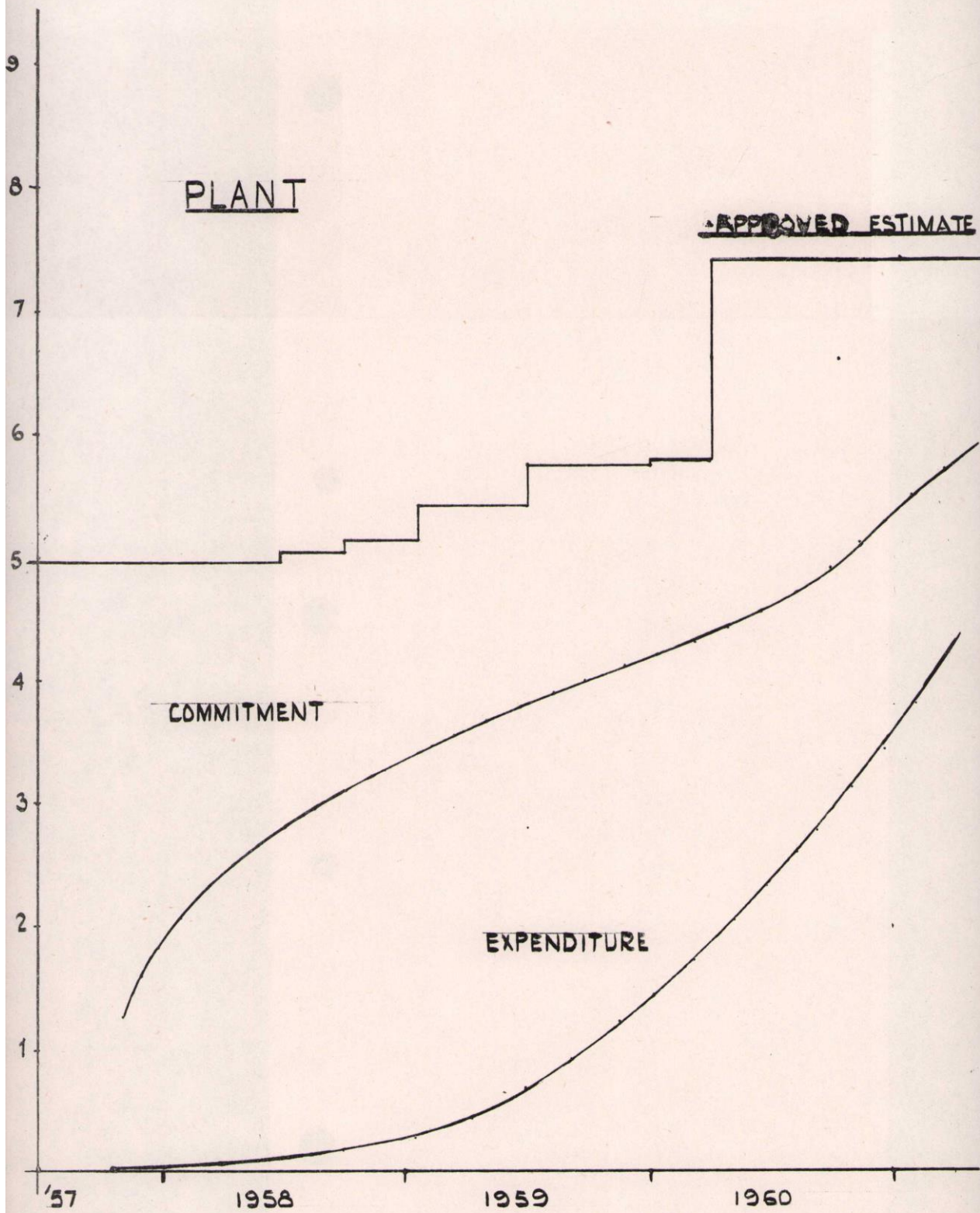
These commitments are included in the commitments shown on previous pages

NIMROD PROJECT

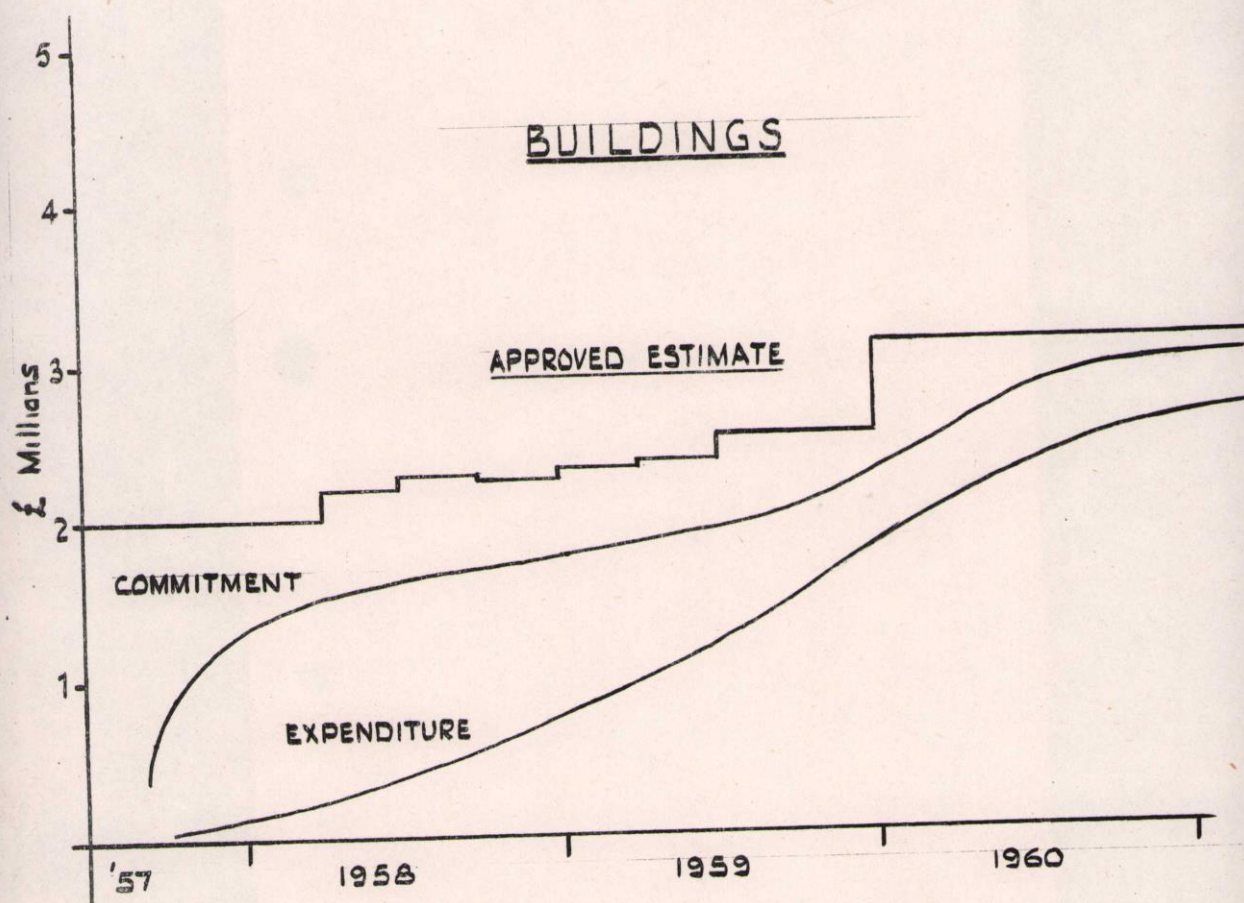
Known and Anticipated Contract Action from 1.4.61 to 30.6.61

Item	Estimated Value £	Firm	Remarks
Flexible Bellows	20,000	Palatine (Surbiton) Ltd	Contract action in abeyance pending development of a prototype
Rectifier equipment for ripple filtering.	7,318	English Electric Ltd.	Contract to be placed in June 1961
Radiation Monitors	10,000	Plessey Ltd	Contract action held pending further development work
Pole face winding chilling units	9,516	Thames Valley Refrigeration Ltd.	Contract to be placed in May 1961
Power supply for pole face windings	20,000	Competitive tender	Tender action to be taken in April,
Water and compressed air services to Vacuum pumps & pole face windings	7,500	Competitive tender	Tender action to be taken in May, 1961
Short straight section vacuum boxes	18,000	"	" " " " " "
Long straight section vacuum boxes	12,000	"	" " " " " "
Inflector vacuum vessel	8,250	"	" " " " " June 1961
Cabling	28,000	English Electric Ltd.	Tender being considered

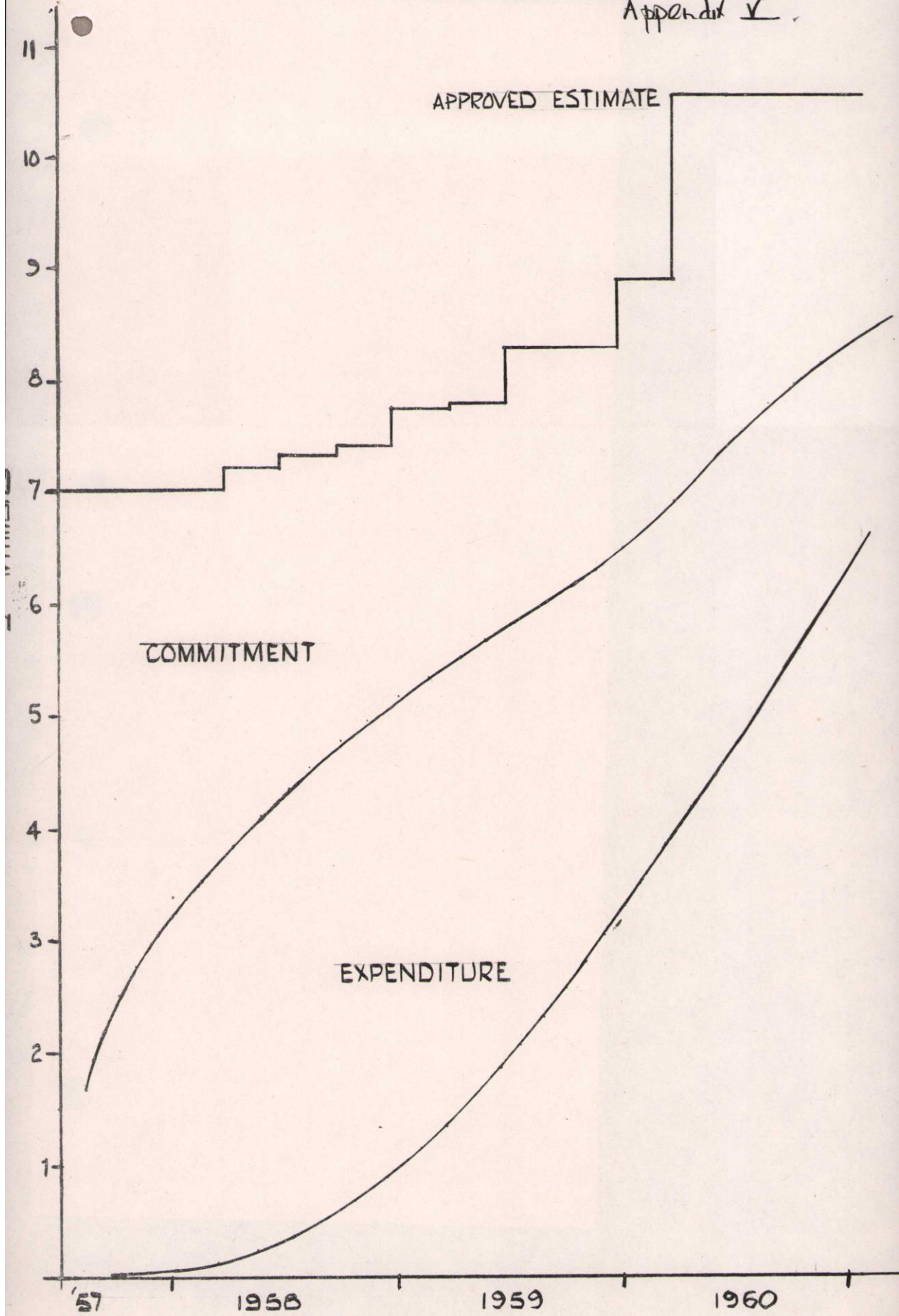
Appendix V



Appendix V



Appendix V.



PLANT & BUILDINGS