

7th April, 1964.

NI/GP/64/12

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GENERAL PURPOSES COMMITTEE

General Financial Statement

Submitted by Finance Officer

1. Explanatory Note

2. Financial Statement 1963/64 - Schedule I

The latest forecast of expenditure for 1963/64 compared with the Treasury Grant and the forecast of 28th January, 1964.

3. New Commitments - Schedule II

A statement of commitments entered into since the January statement.

4. Schemes costing over £100,000 - Schedule III

A summary of the present position on each major scheme.

5. Financial Statement 1964/65 - Schedule IV

A forecast of expenditure for 1964/65 compared with the Treasury Grant and the January forecast.

EXPLANATORY NOTE

1. The preparation and circulation of this statement have been delayed until after the end of the financial year in order to incorporate as accurate a forecast as possible of the 1963/64 outturn and of the consequences for 1964/65. A substantial part of the Institute's expenditure is however, incurred by Authority Groups acting as agents for the Institute; and although up-to-date estimates of this expenditure have been obtained from the Groups, small adjustments to the figures may prove to be necessary when the actual expenditure has been worked out.

Financial Forecast 1963/64 (Schedule I)

2. The position of the Institute as a whole is as follows, (NI/GP/64/1 figures in brackets):-

Total	£190,000	underspend	(£338,000 underspend)
Capital	£120,000	underspend	(£236,000 underspend)
Current	£70,000	underspend	(£102,000 underspend)

3. For the two nuclear physics laboratories the figures are:-

Total	£54,000	underspend	(£248,000 underspend)
Capital	£71,000	underspend	(£196,000 underspend)
Current	£17,000	<u>overspend</u>	(£52,000 underspend)

4. It appeared probable at the end of February that there would be a small overspend on current expenditure at the nuclear physics laboratories (up to £50,000) and the Accounting Officer was accordingly informed via the Authority. The reply sent on his behalf said that this variation would be regarded as de minimis and that the Accounting Officer would defend it.

5. The reason for the main variations between the current and January forecasts are:-

- (a) Capital bills on both plant and buildings at the Rutherford Laboratory matured rather more rapidly than expected during the last two months of the year and R.H.E.L. capital outturn is now put at an overspend of £47,000 compared with the underspend of £52,000 estimated in January. The overspend goes some way towards offsetting the underspend at D.N.P.L. (£118,000).
- (b) The current forecast of expenditure on salaries etc. includes £5,000 in respect of the pay settlement for senior and banded staff.
- (c) The increase in the estimated building expenditure at Daresbury from £250,000 to £290,000 reflects the very satisfactory progress made possible by the good weather this winter.
- (d) A bill for £22,000 for Atlas magnetic tape just failed to mature before the end of the year and is the main cause of the drop in the predicted expenditure on materials and services for the year from £25,000 to £6,000.

Financial Forecast, 1964/65 (Schedule IV)

6. Since the January Financial Statement, notification of the Institute grant of £9,648 (gross) for 1964/65 has been received. This includes £8.0M for the nuclear physics laboratories, but as previously

reported, plans at the nuclear physics laboratories were drawn up on the basis of an outturn of £8.2M. The 3% non-industrial pay agreement (£58,000) and the increased electricity tariff (£15,000) are cost increases which have arisen since the closing of the 1964/65 estimates; and at current pay and price levels the planned programme is costed at £8.273M. As it would have been impermissible to allow for such increases in the estimate it is considered that the Accounting Officer would not object to the outturn now predicted for the nuclear physics laboratories.

7. At the Rutherford Laboratory, building expenditure is now assessed at £111,000 below the January prediction. The reduction is due partly to the earlier maturity of some bills already referred to, and partly to closer estimating by S.W.O. of the likely expenditure on fees. This reduction is offset by an increase of £151,000 in the expected expenditure on plant, following a close reappraisal of the progress on major plant projects in 1963/64 and 1964/65. The expenditure now forecast will not provide for more plant in 1964/65 than is implicit in the figures given in the 1965/70 five year forecast.
8. After discounting the pay and price increases already referred to, the outturn at R.H.E.L. is maintained at the agreed planning figure by a reduction of £35,000 in the unallocated element within Group Budgets.
9. The Daresbury forecast remains substantially at the levels predicted in January, but the outturn for plant has not yet been closely reassessed. This will be done in conjunction with the review of the plant estimate planned during the next few weeks; and in the meantime the retention of the shadow cut virtually at the level in the estimates is justified by the continuing probability that stage payments, which were provided for in the estimates, will not be required in some plant contracts. To ensure containment of nuclear physics expenditure within the Grant (after adjustment for pay and price increases) it will be necessary to complete a thorough review of the plant estimate and spend, and to make a realistic assessment of the shadow cut, before the July meeting of the Committee.
10. The latest forecast shows a trend towards overspend of capital (£116,000) and complementary underspend of non-capital, which is somewhat greater than in the January Forecast (£80,000). In effect about £100,000 of the R.H.E.L. shadow cut will be taken against Group Budgets instead of capital. This small tendency hardly seems a matter for concern at this stage of the year, in view of the past history of switching from capital to current expenditure.
11. The Atlas forecast shows a substantial reduction in the predicted Atlas building expenditure due to a reduction in the estimated cost to completion. In addition there is an increase in stores expenditure within Group Budgets arising from the slip of expenditure on magnetic tape referred to in paragraph 5(d).

FINANCIAL FORECAST, 1963-64

	Allocation of Original Treasury Grant £000	Allocation of Revised Grant £000	Forecast in paper NI/GP/64/1 £000	Latest Forecast £000
RUTHERFORD LABORATORY				
CAPITAL				
Buildings	797	580	609	662
Plant	2,553	2,626	2,545	2,591
	<u>3,350</u>	<u>3,206</u>	<u>3,154</u>	<u>3,253</u>
NON CAPITAL				
Salaries, Wages, etc.	1,213	1,264	1,239	1,247
E.M.R. and Administration Expenses	216	385	370	385
Reactor Support	110	110	95	97
Materials and Services	1,912	2,393	2,382	2,440
	<u>3,451</u>	<u>4,152</u>	<u>4,086</u>	<u>4,169</u>
Less overheads - ATLAS	63	69	60	57
	<u>3,388</u>	<u>4,083</u>	<u>4,026</u>	<u>4,112</u>
R.H.E.L. Total	<u>6,738</u>	<u>7,289</u>	<u>7,180</u>	<u>7,365</u>
DARESBURY LABORATORY				
CAPITAL				
Buildings	524	140	250	290
Plant	192	320	66	52
	<u>716</u>	<u>460</u>	<u>316</u>	<u>342</u>
NON CAPITAL				
Salaries, Wages, etc.	170	50	69	67
E.M.R. and Administration Expenses	51	25	22	22
Materials and Services	152	94	83	68
	<u>373</u>	<u>169</u>	<u>174</u>	<u>157</u>
D.N.P.L. Total	<u>1,089</u>	<u>629</u>	<u>490</u>	<u>499</u>
NUCLEAR PHYSICS LABORATORIES TOTAL (Gross)	7,827	7,918	7,670	7,864
Less Shadow Cut	600			
NUCLEAR PHYSICS LABORATORIES TOTAL (Net)	<u>7,227</u>	<u>7,918</u>	<u>7,670</u>	<u>7,864</u>
Capital (Net)	3,466	3,666	3,470	3,595
Non Capital	3,761	4,252	4,200	4,269
ATLAS LABORATORY				
CAPITAL				
Buildings	200	176	172	164
Plant	756	679	643	642
	<u>956</u>	<u>855</u>	<u>815</u>	<u>806</u>
NON CAPITAL				
Salaries, Wages, etc.	40	46	40	38
E.M.R. and Administration Expenses	60	20	10	5
University Computer Support	40	40	40	32
Materials and Services	59	50	25	6
Overheads	63	69	60	57
	<u>262</u>	<u>225</u>	<u>175</u>	<u>138</u>
ATLAS Total	<u>1,218</u>	<u>1,080</u>	<u>990</u>	<u>944</u>
N.I.R.N.S. Capital (Net)				
	4,422	4,521	4,285	4,401
Non-capital	4,023	4,477	4,375	4,407
N.I.R.N.S. Total				
	8,445	8,998	8,660	8,808
Receipts	120	120	140	135
N.I.R.N.S. Total (Net of Receipts)				
	8,325	8,878	8,520	8,673

NEW COMMITMENTS OF £1,000 AND OVER18th January, 1964 to 20th March, 1964

<u>Commitment</u>	<u>Amount £</u>	<u>Contractor or Agent</u>
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RUTHERFORD HIGH ENERGY LABORATORYCAPITALExpenditure Authorised by the Director on Approved Schemes

Prefabricated Offices - Building R.20	Increase 3,518	Southern Works Organisation
Coseners House - Alterations	Increase 1,263	" " "
Nimrod Tektronix Oscilloscopes	5,089	Tektronix (U.K.) Ltd.
Water & Air Services for Nimrod	Increase 9,407	Z.D. Berry & Sons
Routing of Nimrod Cables	Increase 4,250	J. Kilpatrick & Sons
Cabling for Nimrod Power Supplies	Increase 8,230	English Electric Co.
Temperature Control Equipment for the Heavy Liquid Bubble Chamber	4,481	Heatrae Ltd.
Bending Magnet for Nimrod Beam Handling	6,490	Lintott Engineering Co.
Nimrod Beams Target Mechanism	5,000	Bourdon Tools Ltd.
Particle Separator Electrode for Handling Nimrod Beams	1,754	Marston Excelsior Ltd.
Nimrod Beams Shielding	20,524	Thos. Ward & Sons
Gas Detector for Nimrod Operations	2,239	Europe Engineering
Mass Spectrometer for Nimrod Operations	1,204	A.E.I. Ltd.
Fork Lift Truck	8,480	Cleco Electric Industries

Other Capital Expenditure Authorised by the Director

Plastic Scintillators	1,400	Nuclear Enterprises
Tape Transporter Equipment	3,846	Potter Instrument Co.
Oltronix Power Units	1,048	Miles Hivolt Ltd.
Vacuum Pump & Equipment	1,600	Genevac Ltd.
Oscilloscope & Equipment	1,069	Tektronix (U.K.) Ltd.
Voltage Regulating Unit	1,030	Foster Transformers
Domestic Furniture	1,050	Wards (Oxford)

CURRENTExpenditure Authorised by the Director

Transistors	1,054	R.C.S. (Gt. Britain)
Computer Tapes	4,500	I.C.I. Ltd.
Sealectro Terminations	2,621	Sealectro Corp.
Transistors	1,110	S.G.S. Fairchild
Tube Stack	2,047	Serck Radiators
Hire of Draughtsman	Increase 1,250	J. Kilpatrick
Photomultiplier Tubes	Increase 3,619	Mullard Ltd.
Design, Development, Manufacture & test Target Mechanism	Increase 6,500	Sperry Gyroscopes
Scintillator Holder & Bases	1,665	C.F. Taylor (Ind.) Ltd.

Commitment

Amount £

Contractor or Agent

RUTHERFORD HIGH ENERGY LABORATORY

CURRENT (Cont'd)

Expenditure Authorised by the Director

Running Contracts

Methods of preparing Niobium Tin	Increase 3,000	Fulmer Research Institute
Neon/Helium Gas	Increase 4,500	Air Products
Cleaning of Offices	30,000	Office Cleaning Services
Design and Drawing Services	17,500	Technical Design and Tool Co.
" " " "	9,000	Portsmouth Aviation
" " " "	4,500	J. A. Smith and Co.
" " " "	9,000	B. S. P. Industries
" " " "	9,000	Norris Bros. (Reading)
" " " "	7,500	Techwork (Southampton)
" " " "	6,000	North West Machine Co.
" " " "	2,500	Beds. and Herts. Drawing Services
" " " "	2,500	Graviner (Gosport)
" " " "	2,500	Eng. and Drawing Services Ltd.
" " " "	22,500	C. and N. Electrical Ltd.
" " " "	7,500	G. C. Phillips Ltd.
Mechanical Daywork	125,000	G. E. Taylor Ltd.
Maintenance and Minor Works	Increase 20,000	W. E. Chivers & Sons
Quantity Surveying	Increase 8,000	F. Faulkner & Partners
Electrical Daywork	Increase 2,421	F. H. Wheeler
Labour and Materials	Increase 25,000	Shewry & Clewer
" " "	Increase 40,000	Kingerlee & Sons
Electrical Daywork	Increase 75,000	Read and Partners
Manufacture and Assembly of Equipment	Increase 145,000	Various (15)

University Agreements and E.M.R.

Analysis of Spark Chamber Pictures	2,810	Westfield College
" " " " "	4,800	University College - London

<u>Commitment</u>	<u>Amount £</u>	<u>Contractor or Agent</u>
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DARESBURY NUCLEAR PHYSICS LABORATORY

Expenditure Authorised by the Chairman, G.P.C.

CAPITAL

Vacuum Chamber Blanking Plates	1,030	Vickers Armstrong Eng. Ltd.
Milling Machine & Power Saw	1,489	Sales Enterprises Ltd.
Getter Ion Pumps & Control Units	1,962	Ferranti Ltd.
Additional Roads & Car Park for Temporary Offices	1,392	U.K.A.E.A. Engin. Group

CURRENT

Additional Work for Lighting, Heating & Power in Robin Hangar	1,520	U.K.A.E.A. Engin. Group
	Increase	
'D' Type Coils	1,100	Lintott Engin. Co.
Shaping of Magnet Laminations	6,200	A.E.I. Scientific Appliances

Expenditure Authorised by Dr. Pickavance in the absence of the Chairman

CAPITAL

Waveguide Components	3,065	C. H. Jucho
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CURRENT

Model Magnet & end blocks	2,500	U.K.A.E.A. Engin. Group
Running Contract for Fuel oil	4,000	Esso Ltd.
Engineer Design & Drawing	2,500	Graviner (Gosport) Ltd.

Expenditure Authorised by the Director on the
recommendation of the N.I.N.A. Project Committee

CAPITAL

Injectors for NINA	307,631	Mullard Ltd.
NINA Assembly Building	20,867	U.K.A.E.A. Engin. Group

Expenditure Authorised by the Director

CAPITAL

Supply & install Unistrut inserts	8,695	U.K.A.E.A. Engin. Group
Capacitors for N.I.N.A.	2,100	B.I.C.C.

ATLAS LABORATORY

Nil

SCHEDULE IIISCHEMES COSTING OVER £100,000 APPROVED BY THE G.P.C.

<u>Scheme</u>	<u>Initial Request to Treasury</u>	<u>Latest Treasury Approval</u>	<u>Latest Estimate of cost</u>	<u>Expenditure to 20.3.64</u>
	<u>£000</u>	<u>£000</u>	<u>£000</u>	<u>£000</u>
<u>RUTHERFORD LABORATORY</u>				
Nimrod Project	6,900	11,400	10,550	10,323
Phase II Buildings	380	412	412	408
Hydrogen Bubble Chamber Services	250	295	271	271
Beam Handling Plant-Nimrod Ph. I	1,000	1,000	1,000	724
			(3 years)	
Heavy Liquid Bubble Chamber	420	459	459	283
Orion Computer	400	400	364	360
Radio Chemical Lab. & P.L.A.				
Building Extension	230	273	273	272
Land and Houses at Didcot	120	120	120	116
Heavy Laboratory	140	127	127	121
Extension to Building R,2	243	221	223	170
Abingdon/Chilton Houses	220	220	108*	115
Restaurant	85	106	106	104
Beam Handling Plant-Nimrod Ph.II	400	-	400	169
Helium Bubble Chamber	400	471	471	126
Parasitic Area and Shielding	200	200	186	144
<u>DARESBURY LABORATORY</u>				
NINA Project	3,120	3,880	3,968	219 ⁺
<u>ATLAS LABORATORY</u>				
Atlas Computer and Buildings	3,400	3,580	3,414	1,595

*Chilton scheme deferred and not included in the latest estimate of cost.

⁺Up to 29th February, 1964.

FINANCIAL FORECAST 1964-65

	<u>Allocation of Treasury Grant</u> £000	<u>Forecast in paper NI/GP/64/1</u> £000	<u>Latest Forecast</u> £000
<u>RUTHERFORD LABORATORY</u>			
<u>CAPITAL</u>			
Buildings	360	426	315
Plant	1,323	1,333	1,484
	<u>1,683</u>	<u>1,759</u>	<u>1,799</u>
<u>CURRENT</u>			
<u>Standing Charges</u>			
Salaries and wages, etc.	1,350	1,378	1,430
Travel and subsistence	90	105	105
Houses, hostels and restaurant	43	62	62
Electricity, rates, telephones, etc.	523	579	594
U.K.A.E.A. charges:-			
Overheads, etc.	170	150	150
Site services	130	130	130
General services	185	195	195
<u>Group Budgets</u>	<u>2,165</u>	<u>1,972</u>	<u>1,937</u>
	4,656	4,571	4,603
Less overheads - Atlas	89	80	85
	<u>4,567</u>	<u>4,491</u>	<u>4,518</u>
<u>R.H.E.L. Total</u>	<u>6,250</u>	<u>6,250</u>	<u>6,317</u>
<u>DARES BURY LABORATORY</u>			
<u>CAPITAL</u>			
Buildings	890	874	896
Plant	880	890	874
	<u>1,770</u>	<u>1,764</u>	<u>1,770</u>
Less shadow cut	410	200	210
	<u>1,360*</u>	<u>1,564</u>	<u>1,560</u>
<u>CURRENT</u>			
Salaries, wages, etc.	140	153	159
Administrative expenses	20	21	21
Stores, materials and services	190	176	176
E.M.R.	40	40	40
	<u>390</u>	<u>390</u>	<u>396</u>
<u>D.N.P.L. Total</u>	<u>1,750</u>	<u>1,954</u>	<u>1,956</u>
<u>NUCLEAR PHYSICS LABORATORIES TOTAL</u>	<u>8,000</u>	<u>8,204</u>	<u>8,273</u>
Capital (Net)	3,043	3,323	3,359
Current	4,957	4,881	4,914

*Agreed planning figure £1,560,000

SCHEDULE IV

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	<u>Allocation of Treasury Grant</u>	<u>Forecast in paper NI/GP/64/1</u>	<u>Latest Forecast</u>
	£000	£000	£000
<u>ATLAS LABORATORY</u>			
<u>CAPITAL</u>			
Buildings	76	76	32
Plant	1,186	1,173	1,143
	<u>1,262</u>	<u>1,249</u>	<u>1,175</u>
<u>CURRENT</u>			
<u>Standing Charges</u>			
Salaries and Wages	68	62	65
Travel and Subsistence	6	6	6
Electricity, rates, cleaning, etc.	27	27	30
Computer maintenance	50	50	50
R.H.E.L. overheads	89	80	85
<u>Group Budgets</u>	<u>146</u>	<u>137</u>	<u>159</u>
	<u>386</u>	<u>362</u>	<u>395</u>
<u>ATLAS Total</u>	<u>1,648</u>	<u>1,611</u>	<u>1,570</u>
N.I.R.N.S. Capital (net)	4,305	4,572	4,534
Current	5,343	5,243	5,309
N.I.R.N.S. Total	9,648	9,815	9,843
Receipts	181	181	181
N.I.R.N.S. Total (net of receipts)	9,467	9,634	9,662