

28th February, 63

Mr. J. C. Louth,
Building R1,
M.I.R.N.S.

M.I.R.N.S. - Mercury Plant Maintenance Building
(SWO Job No. 6697) - Order of Cost Estimate

(Informal estimate given for planning purposes only)

At the last Rutherford Laboratory Building Committee you indicated that a Mercury Plant Maintenance Building would be necessary and it was agreed that we should prepare preliminary sketches and Order of Cost estimate for consideration at the next meeting. Subsequently this matter was further discussed and I attach our outline functional specification and banda sketch plans for the building to meet these requirements.

Our Order of Cost estimate based on this information is in the region of £25,000 to £30,000, the approximate apportionment of the £30,000 figure being as follows:-

	£
Building & Civil Engineering work	11,000
Mechanical & Electrical	13,000
<u>Externals (Roads & Drains)</u>	
Civil	2,000
Mechanical & Electrical	4,000
	<u> </u>
Total	<u>£30,000</u>

The above figure for the building and its services excluding all external works gives a cost per sq. ft. of £10 15s. 3d. which, although it may on the first consideration appear high, the following factors should be borne in mind:-

- (a) The relative relationship of ventilation plant must in itself be high when associated with such a small building.
- (b) The height in relationship to the floor area is greater than normal for laboratories and the fact that overhead runways are required must not be overlooked.
- (c) A clinical finish is required to the majority of the building.
- (d) The cost includes for the supply of special benches which are required in stainless steel and to special design requirements.

The externals at £6,000 would normally be excessive for a building of this size but reference to the plan will indicate that these are not immediately adjacent and not only involve a longer run than normal but also the crossing of existing road.

These are the main and obvious points which are the chief cause of the cost of this project and it would be unwise to indicate any less expenditure at this very preliminary stage, it being clearly understood that the estimate is for planning purposes only and not as a basis for obtaining financial approval; it also being necessary to develop the drawings further if more accurate estimating is to be achieved.

/Finally

Finally it should be stated that the estimate includes for the special fittings together with the services as outlined in the brief specification attached.

As far as the building itself is concerned we propose using load bearing walls rather than incurring the expense of a frame building and I see little opportunity of making any reductions or economy in this side of the scheme unless standards of finishes are reduced, which presumably would be unwise in this instance.

I am not at this stage giving any programme but consider this could be contemplated as soon as we have your authority to proceed further with the development of the scheme.

K. H. Choate,
for Chief Architect.

c.c. Col. N. Wilson (2)
Mr. G. Dixon,
Mr. P. Byrne,
Mr. P.B. Dunthorne,
Mr. A. Hancock,
Mr. R. G. Bowers,
Mr. A. E. Cowton,
Mr. A. Youd (2)
Mr. P. Boddington,
Mr. J. Johnson,
Mr. J. S. Brown,
File.

Establishment **N.I.R.N.S. HARWELL**

Project

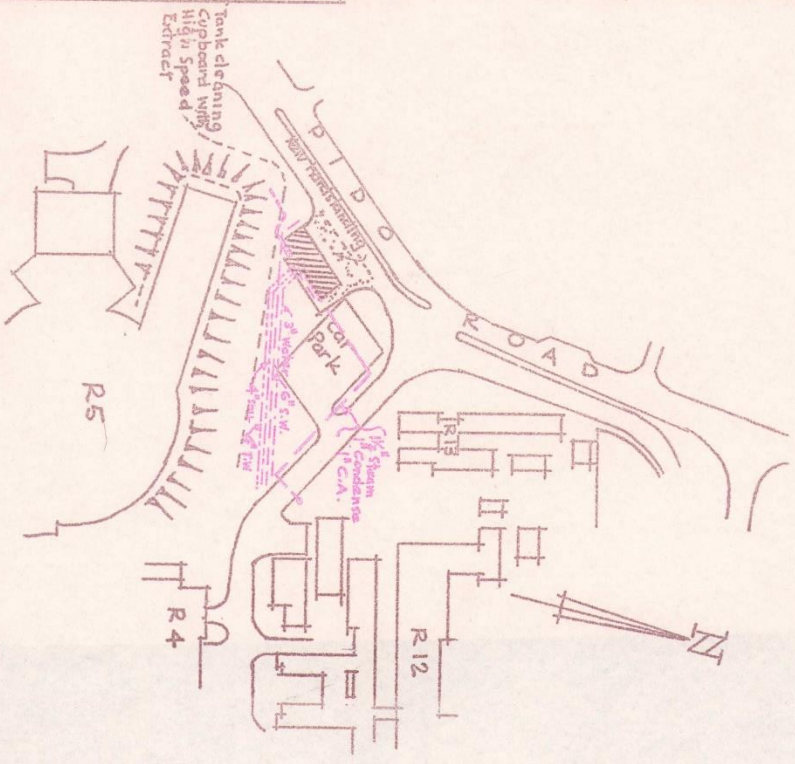
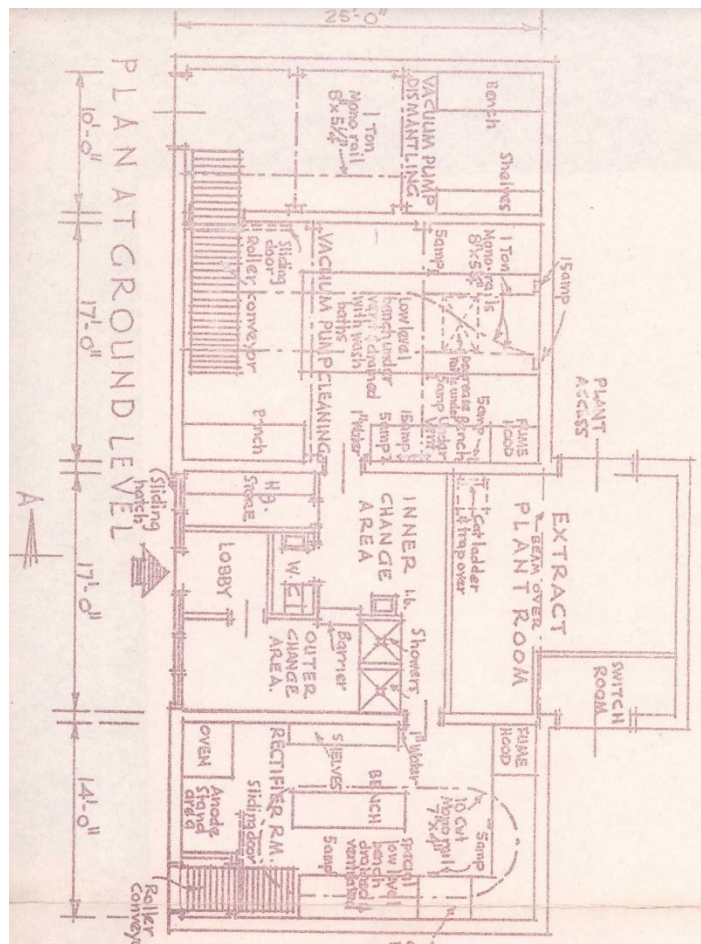
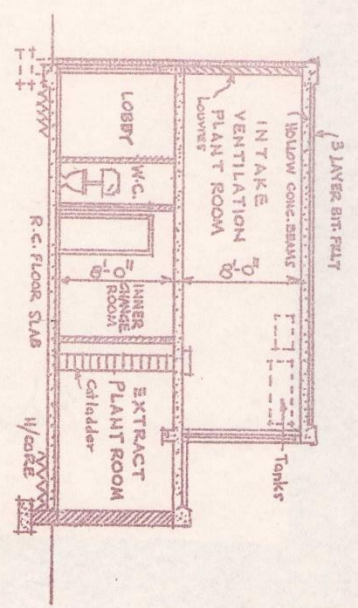
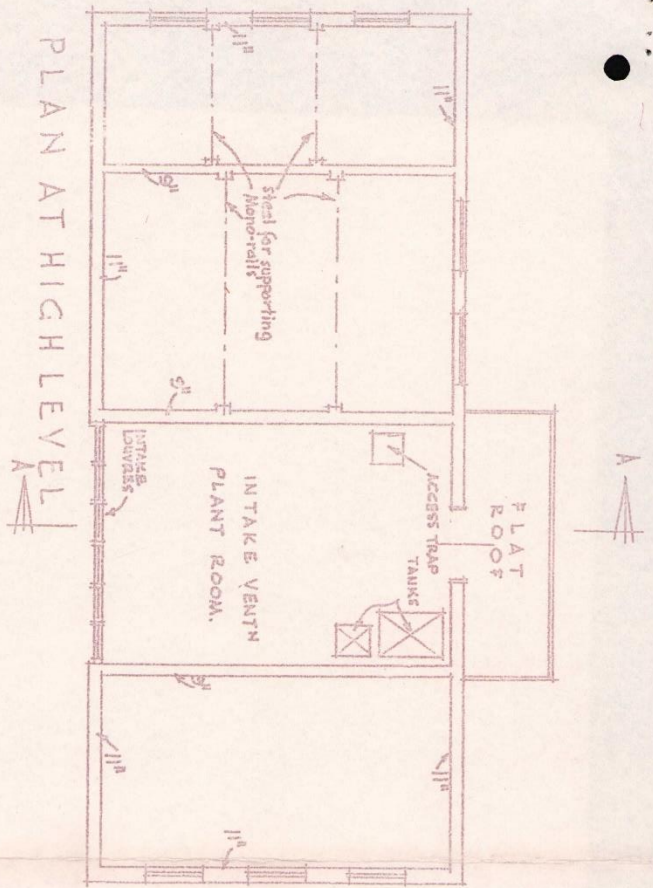
FUNCTIONAL SPECIFICATION BRIEF

Client Division **N.I.R.N.S.**

Function	MERCURY PLANT MAINTENANCE BUILDING	
Number of	Male = Ind.	} 6.
	Non-Ind.	
Occupants	Female = Ind.	} NIL
	Non-Ind.	
Roofs	No special requirements Special* Hollow tile on beams	
Floors	No special requirements Special* Concrete with impervious finish	
Walls	Piling or Special Foundations. Fair faced with gloss paint finish Plastered impervious to mercury vapours & oxide dust Acoustic Shielding Demountable Partitions Framed or Load Bearing	
Ceilings	No special requirements Special* Plastered & coved finish as for walls.	
Doors	No special requirements Special* Clear finish generally.	
Windows	No special requirements Special* opening to Vac. Pump Single Dismantling Room Double Fixed Timber H/Wood Cill height Normal. Curtains Blinds	
Height of Rooms	Work rooms 12'-0" to 15' non-rail hook remainder 8'-0"	
Special Fittings by Architects*	Special Steel benches & Steel shelving.	
Fire Precaution CO2	Normal S.A.	
" Alarms	Hand Ext. quidlers	
" Auto Heat Rise		
" Smoke Detector		
Sanitary Accommodation	Yes.	
Heating	Steam	to Ventilation System + H.W. Service
	Hot Water	
Hazard*	Toxic	
Ventilation	Plenum	Heating to 60° max
"	Extract	10 air changes per hour.
"	Active	
"	Non Active	
"	Toxic	
"	Filtered	
"	Non Filtered	Humidity control
Air Sampling	Particulate	} Yes
	Gaseous	
Lighting	No special requirements Special* 15 ft. & 25-30 ft. c. Flush-down finish	
	Hand	Electric
Cranes		
Lifts		
Hoists		
Monorails	10 cwt. & 2 No. at 1 Ton.	
Quote operating speeds and hook clearances 12'-0"		
Effluent & Drainage	Sewage (Foul) & Radio Active Trade waste via down receivers Storm Water Photographic CHILLERS IN FLOOR.	
Services -	Water ✓ Drinking ✓ Raw Domestic ✓ Raw Process ✓ Hot Domestic ✓ Hot Process ✓ Demin. ✓ Distilled ✓ Conductivity ✓ Cooling ✓	
Services -	Steam Process ✓ Compressed Air ✓ Town Gas ✓ Vacuum ✓ Gas Argon ✓ Gas Argon & Nitrogen ✓ Gas Nitrogen ✓ Gas Oxygen ✓	
Electricity	A.C. power to equipment No special requirements D.C. Special* Standby Guaranteed Power Plugs Lighting Points	
Furniture*	Changing seats & lockers	
Security	Fencing - Height	NIL
	Burglar Alarms	
Plant & Equipment Users	oven...	
Mountings	NIL	
Access (Roads & Paths)	to all entrances	
Streetlighting	- exists to be revised	
Fencing & Gates		
Telephones	Yes 2.	

Notes:- All items marked * to be amplified on appendices if required. All items MUST be answered YES or NO, PROBABLE etc.

Signed:..... Date:..... Signed:..... Date:.....



PROPOSED MERCURY PLANT MAINTENANCE
BUILDING at N.I.R.N.S. 1/8" = 1'-0"

S.W. O. TADLEY 15-2-63 Arch Ref. 1122 A
revised 26-7-63