Laid on the Table by Senator
Story

Pursuant to PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS
By Command
In return to Order

Clerk of the Senate.

PAPERS
16-3-17. to be laid on the Table of the Senate.

REPORT

relating to the

PROPOSED ERECTION OF POWER HOUSE AT FLINDERS NAVAL BASE.

1917

COMMONWEALTH OF AUSTRALIA.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

R E P O R T

RELATING TO THE

PROPOSED ERECTION OF POWER HOUSE AT FLINDERS NAVAL BASE.

Members

of the

Parliamentary Standing Committee on Public Works.

First Committee.

Edward Riley, Esquire, M.P., Chairman.

Senate	House of Representatives
Senator the Honorable John Henry Keating	James Edward Fenton, Esquire, M.P.
Senator Edward Needham x	William Fyfe Finlayson, Esquire, M.P.
Senator Patrick Joseph Lynch, Vice-Chairman, ∮	The Honorable Henry Gregory, M.P.
Senator William Harrison Story	Sydney Sampson, Esquire, M.P.
	William Henry Laird Smith, Esquire, M.P. ∮

x Appointed 14th December, 1916.

∮ Ceased to be a member of the Committee, 14th November, 1916.

LIST of WITNESSES.

Clarkson, Engineer Rear-Admiral William, C.M.G.,
Third Naval Member, Naval Board of Administration,

Creswell, Rear-Admiral Sir William Rooke, K.C.M.G.,
First Naval Member, Naval Board of Administration,

Hill, Thomas, Engineer, Department of Works and Railways,

Marsh, Richard Arthur, Naval Civil Engineering Draftsman,
Department of Navy,

Murdoch, John Smith, Architect, Department of Works and
Railways,

Settle, Joseph Risley, Director of Naval Works, Department
of Navy,

Shannon, William Montgomery, Chief Mechanical Engineer,
Victorian Railways,

Swan, William Robert, Superintendent Naval Civil Engineer,
Department of Navy,

Whyte, Charles Edwin Montgomery, Engineer Constructor,
Department of Navy.

Extract from the

Votes and Proceedings of the House of Representatives,

No. 130 of 19th December, 1916.

2. PUBLIC WORKS COMMITTEE - REFERENCE OF WORKS - FLINDERS NAVAL BASE POWER HOUSE, ETC. - Mr Spence moved pursuant to notice, That, in accordance with the provisions of the Commonwealth Public Works Committee Act 1913-1914, the following work be referred to the Parliamentary Standing Committee on Public Works for their report thereon, viz:-

Flinders Naval Base - Erection of Power House and Workshops, Officers' Quarters, and other lesser works required for that establishment.

Mr Spence having laid on the Table plans, etc. in connexion with the proposed works -

Question - put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

FLINDERS NAVAL BASE - POWER HOUSE.

R E P O R T.

The Parliamentary Standing Committee on Public Works to which the House of Representatives referred for consideration and report the question of the erection of Power House and Workshops, Officers' Quarters, and other lesser works required for Flinders Naval Base has the honor to report as follows:-

Introductory.

1. Owing to the limited time at its disposal the Committee realized that it would be impossible to make exhaustive inquiries into all the items embraced in the reference and therefore decided to restrict itself, in the first instance, to an investigation into the proposed erection of the buildings known as the power house and workshops.

This block comprises three sides of a square on the south side of which it is proposed to erect the machine and fitting shop with the boiler shop forming the eastern side, and the power house, 2 boiler rooms, oil pump house, tool room, etc. forming the western side.

It is intended to locate the whole of these on an area of land which will permit of ample extension of all the buildings in a northerly or westerly direction.

Description of the proposed work.

2. It is proposed that the machine and fitting shop shall be 176feet 6 inches long by a width of 65 feet, and the boiler shop shall be 119 feet 6 inches long by 55 feet 6 inches wide.

The power house wing will contain the power house proper 61 feet by 30 feet 6 inches, No. 1 boiler room 36 feet 3 inches by 23 feet, No. 2 boiler room 19 feet 6 inches by 23 feet,

23 feet, 2 coal bunkers each 23 feet by 8 feet, a tool room 28 feet by 23 feet, a store 28 feet by 23 feet, and adjoining this wing an oil pump house 26 feet by 23 feet.

The machine and fitting shop is to be provided with a 30 ton travelling crane, the boiler shop is to have a 35 ton travelling crane, and the power house a 5 ton travelling crane.

In the power house it is intended to instal 3 reciprocating compound engines at present with provision for a fourth to be installed later. Each of these engines will have a capacity of 250 kilowatts, so that the complete installation of 4 machines will have a capacity of 1,000 kilowatts, or approximately 1,340 horse power. This,it is claimed, will be ample to supply all the power and light required at the Base for some considerable time.

Each of the buildings mentioned, with the exception of the oil pump house, is proposed to be a steel framed structure clothed with brick work and protected by a steel framed roof with galvanised iron covering. The height of the walls in each instance will be 46 feet from the floor level to the eaves of the roof.

Estimated cost.

3. The estimated cost of these buildings is set down at £41,350, and the time fixed for completion about 10 months from the date of commencement.

Committee's investigations.

4. The Committee visited the Flinders Naval Base and inspected the site of the proposed buildings and examined at some length the Chief Mechanical Engineer, Victorian Railways, and witnesses from the Department of the Navy and from the Department of Works and Railways.

A Sectional Committee was also constituted for the purpose of visiting Sydney and inspecting the power house and

workshops

workshops at the Naval Yard, Garden Island, and the Naval Dockyard, Cockatoo Island, Sydney.

5. Careful attention was given to the question of the height proposed for the buildings and also of the material of which the buildings should be constructed.

In view of the present abnormally high price of steel and galvanised iron, inquiry was made as to the feasibility of constructing the building of brick or reinforced concrete, but it was pointed out that the height of 46 feet proposed for the walls rendered construction in such materials an uneconomical proposition.

6. It was shown however that a brick building could be erected at a considerable reduction of cost if the height proposed were not so great.

While evidence tendered went to show that it was essential that the height of the boiler shop and perhaps the machine and fittingshop should be in the vicinity of 46 feet, the Committee was not convinced of the necessity for the power house being the same height, and is of opinion that a reduced height would provide a power house of equal efficiency at a considerable reduction of cost.

7. It was stated in evidence that a reduction in the height of the building would allow of the elimination of a large amount of expensive steel-work and information was obtained that if the power house wing were constructed with brick walls and piers 33 feet high from the floor and provided with composite timber and steel roof trusses, it could be erected at a cost of about £9,500.

Committee's recommendations.

8. After hearing the evidence tendered by the experts of the Naval Department, the Committee is convinced that it would be of the utmost advantage to proceed with the early provision of power and light at the Base, but is satisfied that there is not the same urgency for the erection of the

boiler

boiler shop and the machine and fitting shop. It was, therefore, decided to allow the question of the erection of the boiler shop and of the machine and fitting shop to await further consideration and to confine the present recommendation to the power house wing.

9. It was stated that the original proposition for the steel framed power house wing clothed with brick involved an estimated expenditure of approximately £15,000, and although consideration was given to the suggestion that the building should be constructed of steel stanchions and galvanised iron covering, it was pointed out that owing to the present abnormally high price of steel and galvanised iron, but little economy would be effected by using such materials and some delay and difficulty might be experienced in obtaining them. On the other hand a brick structure was considered a better housing proposition for the machinery to be installed, is a greater protection against dust, is less costly to maintain, and would permit of practically as easy alteration as a galvanised iron building in the event of an extension of the building. Furthermore bricks and other materials can be obtained within the Commonwealth and without delay and the money spent on such material is confined to Australia, whereas the expenditure for steel and galvanised iron is mainly spent abroad.

10. In view of all the circumstances and after careful consideration of all the evidence the Committee is unanimously of opinion that the power house wing should be constructed of brick, with brick or reinforced concrete piers, composite timber and steel roof trusses, with galvanised iron covering, and that the height of the walls be restricted to approximately 33 feet.

11. It is further recommended that the work be undertaken without delay.

Edward Riley
Per [illegible]

C h a i r m a n.

Office of the Parliamentary Standing Committee
on Public Works,
120 King Street, Melbourne, 16th [illegible]