

Australian Cotton Cooperative Research Centre

COTTON BREEDING

&

PLANT PATHOLOGY WING

DAN129C

FINAL REPORT



NSW Agriculture

Derek Scott-Robertson
NSW Agriculture
Building & Engineering Services

COTTON BREEDING & PLANT PATHOLOGY WING

Project Number: DAN 129c

Field of Research: Sustainable Cotton Production

Organisation: NSW Agriculture

Address: 161 Kite Street
Orange, NSW 2800

Project Supervisor: Derek Scott-Robertson
Technical Manager, Building
ph: 6391 3203

Administrative Contact: Mr Robin Scott
Assist Manager External Funding
6391 3541

Start & Completion Date: 18/1/99 - 29/7/99

PROJECT OBJECTIVES

The aim is to house current and future staff for expanded research projects. The better accommodation will improve the facility for work from existing projects and also allow new initiatives to be undertaken.

The construction of a new Cotton Breeding & Plant Pathology Wing included:

- Ten offices for technical staff.
- Director's office for CSIRO.
- Meeting Room with a seating capacity for eight people.
- General Office area for seven PHD students.
- PC 2 Bio Technology Laboratory.
- Plant Pathology laboratory.



COTTON BREEDING & PLANT PATHOLOGY WING

SUMMARY

Preparation of the tender documents commenced when funding was committed from Cotton Seed Distributors (CSD), Cotton Research & Development Corporation (CRDC), NSW Agriculture and CSIRO. NSW Agriculture's Building & Engineering Services section engaged, Havenhand & Mather Architects, to provide preliminary diagrams and upon approval detailed plans and specifications. Tenders for the project were called in August and closed in September 1998.

All tenders received were in excess of the funds available. Changes were made to the drawings and specification by NSW Agriculture's Building & Engineering staff and extra funding was committed by CSD & CRDC. The revised plans & specifications were re-priced by the building contractors and tenders closed in November 1998.

Dubbo Terrazzo & Concrete Industries were the successful building contractor. Work commenced on the building site on the 18th January 1999 and was completed by 29th July 1999. Overall project management was carried out by Derek Scott-Robertson with John Lean and Sunil Kammanankada, of NSW Agriculture's Building & Engineering Services Unit, supervising the electrical and mechanical components.

Despite the amount of rain early in the project, construction was undertaken within the time plan specified and within the allocated budget. In addition to the building works other related projects were completed including power upgrade of the site and a gas storage facility.

The official opening of the building is proposed on 8th December 1999.

REPORT

The Need for Additional Facilities

The increased research and extension programs being jointly conducted recommended additional facilities. NSW Agriculture, CRDC, CSIRO & CSD are all partners in this program.

Building Structure

The Cotton Breeding & Plant Pathology Wing was designed to match the existing Administration Building. Because of the highly reactive soil, the concrete footings were designed 900mm deep x 400mm wide, with external & internal interlocking footings. The suspended concrete flooring system used was 'Ultrafloor' because of the cost saving. The Ultrafloor system involves precast concrete joists placed at determined centres onto the support structure and fibro cement sheeting laid between the joists. The mesh is placed into position and concrete poured.



CONCRETE POUR FOR THE FOUNDATIONS



COMPLETION OF BRICKWORK



CONCRETE FLOOR SLAB

The building structure is a steel portal frame with light galvanised steel wall framework. The roof pitch was increased to 5 degrees because the existing building roof pitch of 3 degrees was allowing water to leak through the roof penetrations. An 'Exposed Grid Ceiling System' was used for easy access to the roof space. Three package and two split ducted air conditioning systems were installed to service the office areas and laboratory. The existing main transformer and switchboard for the site were upgraded to accommodate the extra power required for the new building.



STEEL FRAMEWORK



EXTERNAL FRAMEWORK



OFFICE AREA



LABORATORY

Laboratory 1 - PC2 classification and is used for molecular diagnostics, which is the use of genetically modified organisms for plant breeding, biological control of disease, biological control culture collection & soil microbiology.

Laboratory 2 - diagnosis of plant disease and experimentation on methods for their control, soil microbiology and plant pathogen culture collection.

Building Consultants

Architect

Havenhand & Mather
127 Keppel Street
Bathurst NSW

Structural Engineer

John Baker
9 McNamara Street
Orange NSW

Electrical / Mechanical / Hydraulic
Engineers

Marline
4/239 King Street
Newcastle NSW

Research & Support Staff To Be Based In New Building

The construction of this new facility will assist the cotton industry. Presently it's proposed to house the following staff :

Dr Norm Thomson	Consultant Cotton Breeder
Dr Greg Constable	Program Leader
Peter Reid	Cotton Breeder
Warwick Stiller	Cotton Breeder
Dr Stephen Allen	Plant Pathology
Dr David Nehl	Plant Pathology
Dr Subbu Putcha	Plant Pathology
#	Technical Officer's
#	Facility for scientific work
#	Post Graduate

expected recruitment within the next 6 months.

FINANCIAL SUMMARY

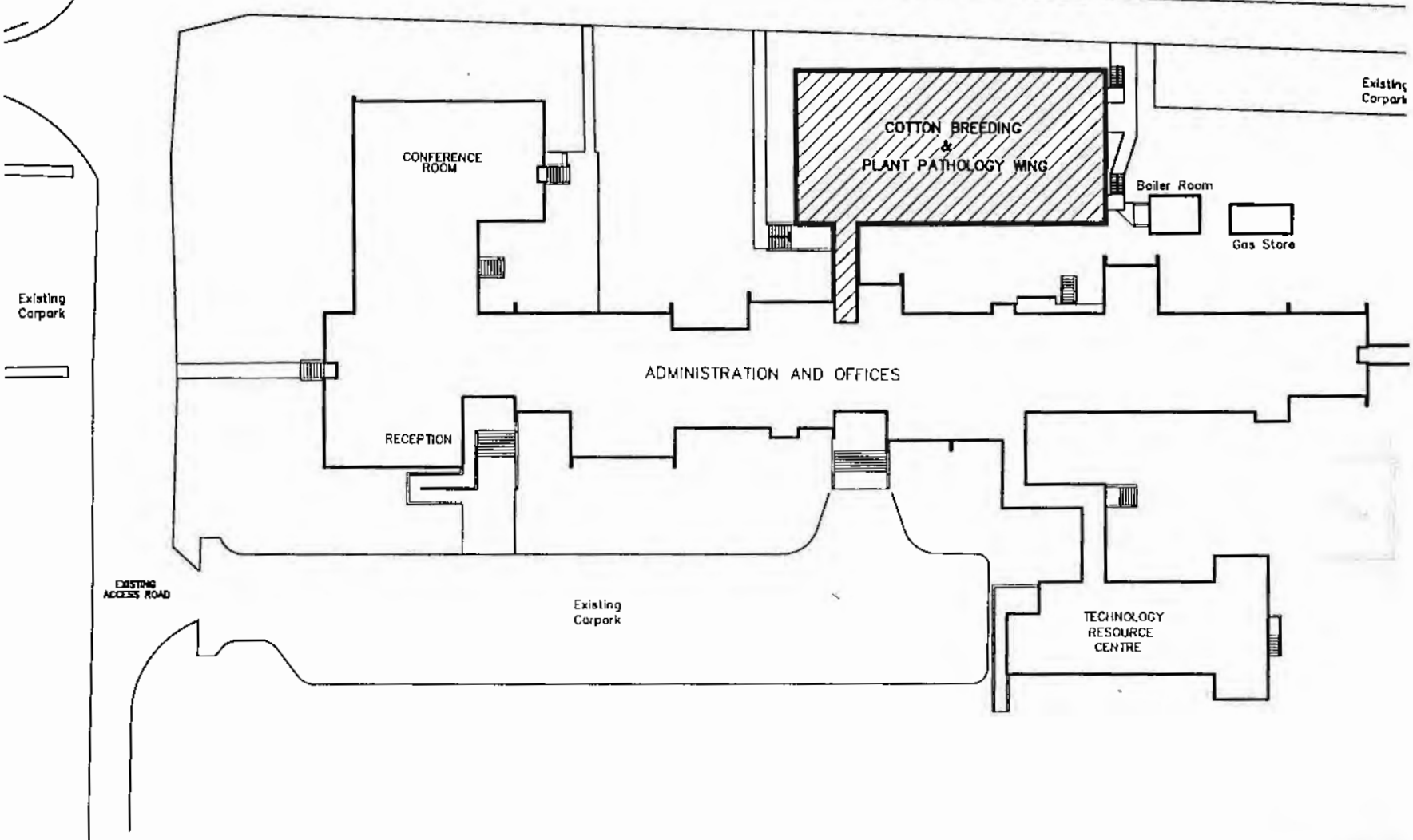
Available Funds

<u>CSIRO</u>	
Power Upgrade	\$ 15,000
Project Management	\$ 10,000
Supply Fume Cupboard	<u>\$ 32,000</u>
	\$ 57,000
<u>CSD</u>	
Building Works	<u>\$ 415,000</u>
	\$ 415,000
<u>CRDC</u>	
Building Works	<u>\$ 415,000</u>
	\$ 415,000
<u>NSW Agriculture</u>	
Project Management	\$ 30,000
Relocation of Septic Tank	\$ 5,500
Switchboard & Transformer Upgrade	\$ 12,000
Main Power Supply	\$ 25,000
Gas Store	<u>\$ 15,000</u>
	\$ 87,500
Total	\$ 974,500

Expenditure

Building Design , Havenhand & Mather	\$37,890.00
Building Contractor, Dubbo Terrazzo	\$753,529.00
Office Furniture	\$33,581.00
Landscaping / Minor Works	\$5,000.00
Fume Cupboard	\$32,000.00
CSIRO Project Management	\$10,000.00
NSW Ag Project Management	\$30,000.00
Relocate Septic Tank	\$5,500.00
Gas Store	\$8,220.00
Power Upgrade	\$53,010.00
Temporary Power Equipment	\$5,770.00
Total	\$974,500.00

Additional fire protection equipment will be installed to further protect the above facilities from fire risk.



SITE PLAN.

