



Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed

CSIRO DIVISION OF BUILDING CONSTRUCTION AND ENGINEERING DEVELOPMENT WORKS AT RIVERSIDE CORPORATE PARK, NORTH RYDE, NSW

(Ninth Report of 1999)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1999

The Parliament of the Commonwealth of Australia

**CSIRO Division of Building
Construction and
Engineering Development
Works at Riverside
Corporate Park, North Ryde,
NSW**

Parliamentary Standing Committee on Public Works

23 September 1999
Canberra

© Commonwealth of Australia 1999

ISBN 0 642 40995 1



Contents

Membership of the Committee.....	iv
Extract from the Votes and Proceedings of the House of Representatives	v

THE REPORT

The Reference	1
The Committee's Investigation	2
Background	3
The Need for Development	4
The Proposal	6
Overview.....	6
Site	7
Design and Standards	8
Services and Systems	9
Special Features.....	14
Cost and Timetable	15
Issues	16
Environmental Impact.....	16
Adequacy of Community Consultations	20
Conclusions and Recommendations	22

APPENDICES

Appendix A – Witnesses	A1
Appendix B – Associated Drawings	B1



Membership of the Committee

Chair Hon. Judi Moylan MP

Deputy Chair Hon. Janice Crosio MBE, MP

Members **House of Representatives**

Mr John Forrest MP

Mr Colin Hollis MP

Mr Peter Lindsay MP

Mr Bernie Ripoll MP

Senate

Senator Paul Calvert

Senator Alan Ferguson

Senator Shayne Murphy

Committee Secretariat

Secretary Mr Bjarne Nordin

Inquiry Secretaries Ms Shelley McInnis

Ms Maria Grainger

Administrative Officer Mrs Angela Nagy



Extract from the Votes and Proceedings of the House of Representatives

No. 62 dated Wednesday, 30 June 1999

**PUBLIC WORKS—PARLIAMENTARY STANDING COMMITTEE—
REFERENCE OF WORK—CSIRO DIVISION OF BUILDING
CONSTRUCTION AND ENGINEERING DEVELOPMENT WORKS AT
RIVERSIDE CORPORATE PARK, NORTH RYDE, NSW**

Mr Slipper (Parliamentary Secretary to the Minister for Finance and Administration), by leave, moved—That, in accordance with the provisions of the *Public Works Committee Act 1969*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for consideration and report: CSIRO Division of Building Construction and Engineering Development Works at Riverside Corporate Park, North Ryde, NSW.

Question—put and passed.



1. On 30 June 1999, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the following proposed work – CSIRO Division of Building Construction and Engineering Development Works at Riverside Corporate Park, North Ryde, NSW.

The Reference

2. The terms of the reference were as follows:

CSIRO proposes to construct new facilities for its Division of Building Construction and Engineering at Riverside Corporate Park, North Ryde, New South Wales. The proposed works will replace predominantly old and substandard facilities with new state-of-the-art accommodation for the Division's construction materials laboratory and fire technology complex. These new facilities will be consolidated with other recently constructed facilities within a discrete Divisional precinct at Riverside Corporate Park. These works are a further stage in the major redevelopment of Riverside Corporate Park as a high technology business which will incorporate both CSIRO research and development facilities and compatible private industry occupants.

The proposed facilities will accommodate the construction materials laboratory, which will house groups undertaking research and testing of concrete masonry materials, and the fire technology complex, which will conduct fire-related research activities, including the behaviour of structures and materials subjected to fire and advanced fire protection technologies. The new facilities will replace accommodation on one site scheduled for sale and fire research structures erected on another site in the early 1950s which are inadequate for current activities and substandard in terms of structure and materials. The existing

structures are constructed of materials containing asbestos, and will be demolished. The land will be decontaminated in preparation for future use by CSIRO.

3. When referred to the Committee, the project had a budget of \$10 million.

The Committee's Investigation

4. The Committee received a written submission from the CSIRO and took evidence from CSIRO officials at a public hearing held at Riverside Corporate Park, North Ryde, on 18 August, 1999.
5. The Committee also took evidence from:
 - APP Projects Pty Ltd;
 - Brewster Hjorth Architects;
 - Ryde-Hunters Hill Flora and Fauna Preservation Society;
 - North Ryde Residents Group;
 - Connell Wagner Pty Ltd; and
 - DesignInc Ltd.
6. In conjunction with the public hearing, the Committee was briefed by CSIRO officials on the proposed works and undertook an inspection of existing CSIRO facilities at North Ryde and the sites proposed for the new facilities.
7. Written submissions were also received from the following organisations and were incorporated in the transcript:
 - Tyco Building Products Pty Ltd;
 - Hilti (Aust) Pty Ltd;
 - Hunter Douglas Architectural Products;
 - NSW Dept of Public Works and Services;
 - Bostik (Aust) Pty Ltd;
 - NSW Dept of Land and Water Conservation – Sydney/South Coast Region;
 - Grace Australia Ltd;
 - WD Nichols Professional Electrical Consulting Pty Ltd;
 - Environment Australia;

- Walter Construction Group Ltd;
 - NSW National Parks and Wildlife Service;
 - Jackson International Pty Ltd.;
 - Ryde City Council; and
 - Energy Australia.
8. Witnesses who appeared before the Committee at the public hearing are listed in Appendix A. The Committee's proceedings will be printed as Minutes of Evidence.

Background

9. In April 1989 the Committee recommended to the Parliament the construction of the Stage 1 redevelopment facilities at CSIRO, North Ryde, at an estimated cost of \$18.52 million at August 1988 prices. CSIRO sought funds in the Budget context for this development to proceed. However, funds were not provided and it was decided that the project should be funded through rationalising CSIRO's property holdings at North Ryde. A review of the North Ryde site was undertaken and a redevelopment strategy proposed. The strategy involved a staged development and release of certain lands for high technology business purposes. The proceeds from the staged land releases would be used to consolidate CSIRO activities on the site and upgrade and replace substandard facilities.¹
10. The main elements of the proposed strategy were:
- a rationalisation and consolidation of the CSIRO accommodation at North Ryde;
 - a progressive release of approximately 15.8 ha of identified surplus land and up to 11 indicative development lots to create a science and technology park;
 - the retention of principal CSIRO buildings in good condition to form the nucleus of the redevelopment in the divisional precincts;
 - the provision for all of CSIRO's anticipated accommodation needs for the foreseeable future in retained existing buildings, upgraded as necessary and state-of-the-art new buildings;
 - provision of controlled access to the site to address urgent safety issues;

¹ Parliamentary Standing Committee on Public Works, *Report relating to the CSIRO Redevelopment: North Ryde, NSW*. AGPS, Canberra, 1992, p. 1.

- an orderly continuous redevelopment program anticipated to run some nine years, but the program to permit on-site research to proceed with little interruption;
 - the whole redevelopment to be self-funding.
11. The out turn cost of the work when referred to the Committee was \$101 million to be funded from the sale and/or lease of identified surplus land. To reduce the construction timetable, the Government provided CSIRO with an interest-free loan of \$10 million to reduce the out turn cost.²
 12. In 1988 the National Building Technology Centre (NBTC) was transferred into CSIRO and incorporated into CSIRO Building, Construction and Engineering (CBCE). All NBTC land holdings at North Ryde were passed to CSIRO with Government directives that new facilities be constructed to replace existing NBTC facilities at North Ryde, specifically including the development of new fire science facilities on the site.³
 13. Since the Technology Park concept was endorsed by the Public Works Committee, CSIRO has proceeded with progressive replacement and consolidation of the CBCE North Ryde facilities in a dedicated precinct. Redevelopment work undertaken to date has included provision of most of the site infrastructure, site amenity facilities and the concurrent development of facilities in the business precinct for private organisations such as Fujitsu, Syntegra, Gradipore, Oracle, BOC Gases and Revlon.⁴
 14. The facilities proposed in this stage of the replacement program will accommodate 70 research and support staff and comprise modern research facilities and management and administration offices, together with industrial scale technical areas and testing bays.⁵

The Need for Development

15. The objectives of CSIRO Building, Construction and Engineering are to support, advance and improve the operation of industries relating to the built environment. Strategic research is focused on three key areas (life cycle performance, intelligent construction systems, and information and communication in construction) that will provide substantial advantage to Australia in the next century.

2 Ibid., p. 2.

3 CSIRO, *Submission*, p. 1.

4 CSIRO, *Transcript of Evidence*, p. 254.

5 Ibid., p. 255.

16. The Construction Materials research team and its laboratories have been in operation since 1986 as part of the National Building Technology Centre (NBTC) and subsequently CSIRO Building, Construction and Engineering. The research team has established its reputation for CSIRO nationally and internationally as the Australian Centre in Advanced Cement and Concrete Technology. In Australia, the research team has earned its reputation in: advanced cement formulations, high performance and engineered concrete, and appropriate technologies in the use of industrial by-products.⁶
17. The Construction Materials research team is actively undertaking major collaborative research programs and provides strategic research support to Australian concrete research. The team is also engaged to conduct contract research and technology transfer packages to major players in the cement and concrete industry in Asia. Currently housed in temporary laboratories at Riverside Corporate Park, it is essential for new and improved laboratories to be built in order to support the growth in this important area of CSIRO research in Advanced Cementitious Technology in Sustainable Development.⁷
18. The mission of CBCE's Fire Science and Technology Laboratory (FSTL) is to enhance the competitiveness of Australian industry and public safety through performance prediction methods, measurement technologies and technical advances to assure improvement in the build environment. The Laboratory has a proven track record of success in satisfying complex issues created by a range of building codes, standards and regulations at the design stage of projects. FSTL's strength in research is leading to new methods of fire safety design, and its work in developing new fire safe materials is offering alternative solutions to design problems and improving public safety.
19. FSTL has won the approval of the Japanese Government for fire resistance testing of building materials and systems for the Japanese housing and construction market. This capacity provides Australian exporters of building products the opportunity to significantly reduce costs associated with entry into the Japanese market.
20. The existing fire research and testing facilities constrain CBCE's current capabilities and will not fulfil the future local and international market needs of its Fire Technology program. The proposed new facility will focus on new science capabilities in fire suppression technology, including methods of extinguishing large industrial fires such as the Longford gas fire and the fire at Coode Island in Victoria. This capability and the necessary facilities are not currently available.⁸

6 CSIRO, *Submission*, p. 3.

7 *Ibid.*, p. 7.

8 *Ibid.*, p. 8.

21. The existing Fire Technology facilities are located in the Riverside Corporate Park Central precinct, whilst the Construction Materials Laboratory is located on another site which is surplus to CSIRO needs and scheduled to be sold. Relocation of all CBCE research accommodation to a single site will facilitate rationalisation and consolidation. It will improve the utilisation of shared resources and equipment and enhance flexibility.⁹
22. Existing buildings have inherent problems with occupational health and safety, environmental emissions and fire protection. Other inadequacies include overcrowding, the lack of proper ventilation, poor air conditioning, substandard electrical and mechanical services.¹⁰
23. Despite numerous extensions to the buildings over the last 40 years the constraints imposed by the physical separation of research groups remain unresolved and have not succeeded in addressing the mounting problems associated with materials, handling, pollution and security. The facilities cannot provide appropriate conditions for the increasingly sensitive monitoring equipment now being deployed, nor the extra space which is required to accommodate larger fire testing furnaces.¹¹

The Proposal

Overview

24. The proposed development will comprise buildings of approximately 3,700m² Gross Floor Area (GFA) and will include:
 - CBCE Fire Testing Facilities – Technical and Testing bays and support areas;
 - Structural Fire and Testing facility;
 - Reaction to Fire Materials facility;
 - Fire Safety Performance Evaluation facility;
 - CBCE Construction Materials Facilities – process bays and laboratories; and
 - CBCE Central Facilities – reception, meeting rooms, office and support areas.

9 Ibid., p. 2.

10 Ibid., p. 3.

11 Ibid., p. 4.

25. In addition, it is proposed that associated roadworks extensions, additional parking bays, landscaping, engineering and communication services be provided. Roadworks will be needed to serve the development and to ensure safe movement for vehicles and pedestrians using the precinct.

Site

26. The site of the proposed development is within Riverside Corporate Park, which is located on the northeastern fringe of the Ryde Municipality adjacent to the Lane Cove State Recreational Area, with frontages to Delhi Road and Epping Road, North Ryde. The site forms the CBCE (Southern) Precinct of Riverside Corporate Park which is bounded by Julius Avenue to the northeast and Epping Road to the south.
27. The site is located on the southern side of the Delhi Road ridge and falls away to the south from Julius Avenue towards Epping Road. The fall from Julius Avenue to the site's southern boundary adjacent to Epping Road varies from 6 to 7 metres. Commercial properties to the west and east constrain any future development in these directions.
28. In 1990 a Site Development Strategic Plan was adopted by CSIRO and endorsed by the Public Works Committee. Subsequent refinement of the Plan established that CBCE facilities should be consolidated in the Southern Precinct and that accommodation and other resources should be located within the Central Precinct. In 1998 a Master Plan study of the Central and Southern Precincts commissioned by the CSIRO to evaluate relocation options confirmed that CSIRO's future needs at Riverside Corporate Park were best served by the two precinct strategic plan which proposes that the Southern Precinct be optimised for the consolidation of CBCE facilities.¹²
29. Existing CBCE facilities on the Central Precinct will be vacated and the structures demolished upon completion of proposed development works in the Southern Precinct. The North Ryde Residents Group has argued that the proposed development should be located in the Central Precinct on the site where old buildings are to be demolished. The matter was discussed at the public hearing in August and the CSIRO argued that¹³:
- it has been planned for some time that the proposed facilities would be located in the Southern Precinct;
 - there would be a cost penalty associated with the interruption to research which would be entailed in demolishing and then constructing facilities on the same site (the Central Precinct); and

12 CSIRO, *Submission*, p. 11.

13 CSIRO, *Transcript of Evidence*, pp. 258–259.

- most importantly, the CSIRO would like to integrate the Division's scientists on the one site, and the proposed development allows for that.

Committee's Conclusion

30. **The Committee concludes that there are sound logistic and economic reasons for the consolidation of the CSIRO Building Construction and Engineering facilities in the Southern Precinct of Riverside Corporate Park, North Ryde.**

Design and Standards

31. The design of building forms will reflect CSIRO's aspirations in a diversity of public and private spaces which:
- provide a public interface for clients and visitors;
 - act as a catalyst for promotion of CSIRO's work;
 - assist in creating conditions for product, staff and visitor security and personnel safety;
 - provide differentiation between communal areas and work areas;
 - provide differentiation between work areas dedicated to particular programmes or groups and shared support zones;
 - provide medium and long term flexibility and adaptability;
 - provide quality working facilities for research;
 - provide shared, common facilities that provide a focus and address for the Division and a place for the staff to meet and interact;
 - provide a commercially relevant facility that meets the needs of the commercial operations of the division in an efficient and cost effective manner; and
 - provide durable and modern buildings suitable for the intended usage and wear and tear.
32. The northern frontage of the site facing Julius Avenue will form the public entry and arrival point. The proposed Central Facilities Building (Building G) will be situated between the two existing main buildings (Building A and Building F) to provide a unified façade and clearly identifiable point of entry to the CSIRO Building, Construction and Engineering precinct and facilities.

33. Connection from Building G will be provided to the existing Administration Building (Building A) via a gallery and an elevated walkway to support its role as an extension of the Division's administration areas. A lift will provide access to the lower levels of the site and the Technical Areas and Testing Bays.
34. Technical Areas and Testing Bays will be situated to the middle and rear of the site to allow for truck access from the rear service road, separated from passenger vehicle movements. Facilities of a medium scale and less intrusive character will be situated in the middle level of the site and those of a large scale and more intrusive in character will be situated at the lowest level of the site toward the rear southern boundary.
35. Technical Areas and Test Bays will be constructed as lightweight, metal clad steel portal framed structures, typical of industrial type construction. Lower walls will be constructed in precast concrete panels with an applied paint finish. Upper walls and roofs will be constructed of metal sheeting with a factory applied paint finish. These materials have been chosen to provide a functional and economic enclosure to the testing facilities and equipment housed in them. They will provide a durable, easily maintained building with ready access to services as well as flexibility for refitting or for change of use.
36. Floors generally will be of concrete slab construction, screeded in the technical bays, and with vinyl finish generally to laboratories areas. Offices and meeting rooms will be carpeted. Entry and amenities areas will be tiled.
37. All buildings, services and external infrastructure will comply with all relevant town planning, Commonwealth and State building, health and safety regulations, the Building Code of Australia and all relevant Australian Standards. Construction contracts will comply with the National Code of Practice for the Construction Industry. At the public hearing on 18 August 1999, the Committee was advised that the Ryde City Council has approved CSIRO's development plans for the site.¹⁴

Services and Systems

Mechanical Services

38. The mechanical services at the site will include:
 - air conditioning for comfort conditions in laboratories, offices, meeting rooms, control rooms, etc.;
 - air conditioning for specific conditions in Constant Temperature Rooms;

14 CSIRO, *Transcript of Evidence*, p. 269.

- exhaust ventilation systems for Technical Areas and Test bays, toilets, hoods and specific equipment;
 - central chilled and heating water plant;
 - relocation of selected equipment;
 - automatic controls for air conditioning and ventilation systems incorporated into an integrated building management system; and
 - pollution control equipment.
39. The pollution generated from the fire test emissions will be collected and treated by state-of-the-art pollution control equipment. At the public hearing, proposed pollution control mechanisms were raised and the CSIRO explained that their processes now include electrostatic precipitators with specifications which will limit pollutants to '...very, very small' amounts which will '...meet or exceed any environmental regulations that are required'.¹⁵

Electrical Services

40. The electrical and communications services will include:
- upgrading existing sub-station (as necessary);
 - power factor correction equipment;
 - stand-by diesel generator;
 - uninterruptible power supply (UPS);
 - distribution boards;
 - submain cabling;
 - lighting system, including exit and emergency lighting;
 - automatic control of lighting systems;
 - external and security lighting;
 - general purpose outlets and special purpose outlets;
 - cable management systems;
 - voice and data communications systems;
 - electronic security and access control system; and
 - lightning protection.

15 CSIRO, *Transcript of Evidence*, pp. 260–261.

Hydraulic Services

41. The hydraulic services will include:
- connection to or modification of existing hydraulic site services;
 - sanitary drainage, plumbing and sewerage;
 - roof stormwater drainage;
 - laboratory drainage and plumbing and trade waste treatment;
 - water services; and
 - natural gas services.

Existing Site Services

42. The condition and capacity of the existing site services, including waste treatment, has been investigated to establish the most cost efficient solution to serve the proposed facilities. Interruptions to the existing services will be limited and construction staging will be adopted, including allowances for temporary services to maintain continuity of services to existing facilities.

Building Services

Stormwater Drainage

43. The stormwater drainage system has been designed to meet the requirements of Ryde City Council. Stormwater will be collected from roof outlets and discharge into below-ground stormwater mains.

Sanitary Drainage, Plumbing and Trade Waste

44. The sanitary drainage system will be designed to meet the requirements of Australian Standard 3500.
45. Fixtures and fittings will be piped to connect into drainage stacks and discharged into the sewer main.
46. The laboratory waste system will reticulate throughout the building in ducts evenly spaced to allow flexibility within the laboratory. Generally, wash down areas will discharge to settling pits with silt traps before connecting to the sewer system. Toxic wastes will discharge to settling pits, not connected to the sewer system but to be removed by licensed waste removal contractors. Sullage wastes from the chemical laboratory will discharge to chemical neutraliser pits with self monitoring automatic dosing facilities, and either be discharged to the sewer or removed by licensed waste removal contractors.

47. For concrete destruction test areas, drainage from the floor areas will be provided with floor wastes incorporating bucket traps to collect all the large particles of solids, etc., from entering the sewer system. The floor waste will be piped to the sewer system via a silt arrester.
48. The sanitary and trade waste systems will be designed in consultation with Sydney Water and the EPA to conform with all their requirements.

Water Services

49. Water services into the buildings will be connected to the external mains and will incorporate backflow preventers and reduced pressure zone devices.
50. The domestic cold water distribution system will be zoned to give a range of terminal pressures of approximately 200 kPa minimum and 550kPa maximum. Cold water pipework will be grouped together with other services and arranged so that access can be gained with minimum disruption.

Domestic Hot Water

51. Domestic hot water will be generated for areas requiring hot water using remote hot water systems. The remote hot water systems will be located in the plant rooms or amenities areas and will be gas or electric fired depending on location. The use of a passive solar energy hot water system will be considered and assessed to determine if it is a viable alternative for the hot water system.

Natural Gas

52. Natural gas services, including the required metering, pressure regulating valve(s) and vents will supply the furnaces and all laboratories. Natural gas services will be installed in accordance with AG 601, the gas installation code and Australian Gas Light Company requirements.

Fire Protection

53. The fire protection systems will consist of fire hydrants and hose reels throughout all buildings and around the site, automatic sprinkler systems, gaseous flooding and smoke detection systems. Smoke detectors will be installed in conjunction with air handling plant in accordance with AS1668.
54. At the hearing there was some discussion about the adequacy of proposed fire protection measures, especially in view of the fact that the area has been threatened by fire before. The CSIRO does not have a comprehensive bushfire management plan for the Riverside Corporate Park development, but has

indicated to the Committee that it would be willing to '... review for the whole site the risks associated with bushfire incursions...'.¹⁶

Roadworks

55. Proposed roadworks improvements will include:

- car parks to expand capability in the Precinct to 100 carparking spaces, including disabled carparking bays;
- access road from Julius Avenue to link with a new Precinct road network, servicing both cars and heavy vehicles;
- manoeuvring areas and new loading areas for service vehicles; and
- pedestrian footpaths to link desire lines.

Building Management System

56. A proprietary Building Management System will monitor and/or control all building engineering services. The system will cover HVAC plant and equipment, airflows, filter performance, fume and other exhaust systems, heating and chilled water reticulation, Constant Temperature Rooms and artificial lighting. The system will be programmable with graphics interfaces for full zone control and will incorporate facilities for external monitoring and energy conservation. It will be capable of expansion.

Communications Systems

57. A communications closet in the Central Facilities Building will connect this complex to the site distribution system.
58. An integrated voice/data cabling system will be provided to link each voice and data outlet in each building back to the communications closet in each building.

Access Control System

59. The new access control system will be integrated with the existing precinct access control system and will incorporate proximity card readers and control door operations. Panic buttons will be provided strategically throughout the building enabling staff to summon assistance in the event of accident or emergency.
60. The access control system will be connected to the existing site monitoring system.

Special Features

Occupational Health and Safety

61. CSIRO pursues an active Occupational Health & Safety policy within the workplace and this will be extended to include all new facilities. Strict compliance with these requirements will be adhered to in all construction work.

Child Care Provisions

62. A CSIROCARE child care centre is located within the CSIRO Central Precinct at the Riverside Corporate Park. This centre is owned by CSIRO and managed independently. It has a current capacity of 40 places. The centre provides child care facilities for CSIRO, companies located at Riverside Corporate Park and the North Ryde Community.

Disabled Facilities

63. The proposed development will be designed to ensure access for disabled people will meet the requirements of the Building Code of Australia and relevant Australian Standards.
64. The main entry will provide ramp access from the main vehicular drop off point to the central lobby area. From this point a lift will provide access to the lower level of the new research facilities. Ramps will provide access to the technical bays and test facilities. Other disabled facilities to be incorporated include carparking and provision of disabled toilets.

Energy Conservation and Management Measures

65. Passive energy conservation measures will be incorporated into the buildings and landscape design, whilst the design of mechanical, electrical and hydraulic services will incorporate active energy conservation initiatives.
 66. Energy Conservation and management initiatives will include:¹⁷
 - optimum building orientation providing maximum north/south exposure in order to maximise opportunity for solar control in summer and passive solar energy in winter;
 - optimum building layout to maximise daylight conditions for both offices and laboratories;
 - provision of primary or borrowed natural light wherever possible in all major functional spaces thus minimising the use of artificial lighting;
-

17 CSIRO, *Submission*, p. 26.

- thermal insulation to reduce heating and cooling loads;
 - provision of sunscreening elements to the northern façade to control solar heat gains;
 - building Management System to operate, control and monitor engineering services;
 - incorporation of water saving devices on hydraulic fittings and fixtures to reduce water consumption;
 - installation and connection of power factor correction equipment to improve the building power factor and reduce energy cost;
 - provision of a dedicated automatic lighting control system with features such as:
 - ⇒ time clock control switches to turn the bulk of lighting off at predetermined times;
 - ⇒ passive infra-red detectors to activate/de-activate lighting to intermittently used rooms such as toilets, storerooms and meeting rooms; and
 - ⇒ photo-electric control of lighting in perimeter rooms with access to natural lighting.
 - separate air handling plant for each functional area allowing independent control and operation out of hours;
 - use of variable fresh air supply (to suit the population density) and motion detectors to control meeting room air conditioning;
 - selection of cost effective and energy efficient and mechanical plant; and
 - the use of variable speed pumps and fans (where applicable) to closely match systems load fluctuations and minimise power requirements.
67. These initiatives and measures are consistent with a continuing commitment by CSIRO to reduce energy use through the adoption of better and more efficient energy management practices in the design and operation of its facilities.

Cost and Timetable

68. The estimated cost for this proposal is \$10 million at June 1999 prices, inclusive of escalation costs, contingencies, all professional fees and authorities charges. The estimate excludes loose furniture and fittings, research equipment and the cost of relocating staff and equipment from existing facilities.

69. At the hearing the CSIRO said that the budget was very tight but it was their intention to '...maintain costs within that budget...'.¹⁸ The CSIRO also clarified that expenses relating to furniture and fittings, research equipment and the cost of relocating staff and equipment would be met from a separate budget within the CSIRO.¹⁹
70. The Committee questioned the project budget's ten per cent contingency allowance and the CSIRO pointed out that, while normally such an allowance would be five per cent, in this case it is ten per cent because '...there is still a lot of design development work that needs to be carried out'.²⁰ The Committee was reminded that the introduction of the GST next year would also result in cost increases.
71. It is anticipated, subject to a favourable report from the Committee and Parliamentary approval, that construction will commence in early 2000 with completion and occupancy in the first quarter of 2001.
72. At the present time the CSIRO is undergoing an independent review of its property management practices, but the CSIRO does not expect the review outcomes to have any implications for this development proposal.²¹

Issues

Environmental Impact

73. When the CSIRO first proposed its redevelopment of North Ryde, it sought an environmental clearance for its plans from the then Department of Arts, Sport, the Environment, Tourism and Territories (DASETT), in accordance with the requirements of the *Environment Protection (Impact of Proposal) Act 1974*. DASETT determined that neither a public environment report nor an environmental impact statement was required to satisfy the objects of the Act, but recommended that the CSIRO consult with its own Division of Wildlife and Ecology and the NSW National Parks and Wildlife Service regarding the protection of native fauna.²²

18 CSIRO, *Transcript of Evidence*, p. 263.

19 CSIRO, *Transcript of Evidence*, p. 264.

20 CSIRO, *Transcript of Evidence*, p. 267.

21 CSIRO, *Transcript of Evidence*, p. 266.

22 Parliamentary Standing Committee on Public Works, *Report relating to the CSIRO Redevelopment: North Ryde, NSW*. AGPS, Canberra, 1992, p. 26.

74. In December 1992, the CSIRO Division of Wildlife and Ecology released a report on the flora, fauna and soils at the proposed redevelopment site in North Ryde which concluded that redevelopment without posing a threat to flora and fauna was possible '...provided that detailed work and landscape plans are developed and adhered to and that there is adequate on-ground supervision during construction work to avoid accidental or incidental impacts on vegetation and isolated trees'.²³ The report also cautioned that the largest remaining patch of natural vegetation in the southeast corner of the site should be retained in an undeveloped state.
75. The CSIRO's submission to the Committee identified the major environmental issues on the site as being:
- ...the protection of the remnant bushland, and the topography of the site on its eastern and southeastern sides where it slopes towards the Lane Cove River, having implications for run-off and sedimentation, water quality management, landscape and habitat.²⁴
76. The CSIRO does not expect its proposed development to impact adversely on the environment, but nevertheless will be monitoring impacts on an ongoing basis and continuing to consult and liaise with State Government authorities on these matters. CSIRO's submission notes that it has been consulting with the Environmental Protection Authority (EPA) on matters concerned with waste generation, plant noise and facility emissions. Discussions with Sydney Water have centred on trade waste and sewerage connections.²⁵ The Committee is aware that the CSIRO is currently preparing, in consultation with the NSW National Parks and Wildlife Service, an environmental management plan specific to this project.²⁶ The comprehensive plan will address, in particular, issues of water run-off and control which were raised by the NSW National Parks and Wildlife Service in a submission on this Inquiry.²⁷ The Committee has been advised that the management plan will be completed by October 1999.
77. The CSIRO's submission to the Committee identified the following 'specific actions' which are to be implemented as part of the proposed development:²⁸
- appropriate tree planting and landscaping adjacent to the facilities;

23 Doherty, M.D., Braithwaite, L.W., and Tongway, D.J., *Proposed Redevelopment of CSIRO Property at North Ryde, Sydney: Survey of Flora, Terrestrial Vertebrate Fauna and Soils*. CSIRO Division of Wildlife and Ecology, December, 1992, p. 25.

24 CSIRO, *Submission*, p. 12.

25 *Ibid.*, pp. 12–13.

26 CSIRO, *Transcript of Evidence*, p. 255.

27 NSW National Parks and Wildlife Service, *Submission*, p. 2.

28 CSIRO, *Submission*, p. 13.

- filtering and control of all stormwater run-off to prevent any potential pollutants from reaching the Lane Cove River;
- sound attenuation and vibration isolation within the new facilities to maintain acceptable noise and vibration limits on the site;
- maintenance of air quality at the site and surrounding areas in accordance with best management practices;
- dilution and treatment of non toxic, liquid waste prior to discharge to sewer;
- collection of any wastes such as solvents, potentially flammable liquids, oils and toxic liquids at the point of use in waste containers. The containers will be collected for disposal by a licensed industrial waste collector;
- storage of hazardous goods, chemicals and gases in accordance with respective codes; and
- installation of pollution control equipment to treat and control emissions arising from research and testing programs.

78. On 12 August 1999 the Committee was advised by the CSIRO²⁹ that the following additional initiatives would be implemented in the Riverside Corporate Park development site. Some of the additional measures are designed to address concerns raised by the Department of Land and Water Conservation (Sydney/South Coast Region) about soil erosion and sediment control:³⁰

- retention of bushland in the southeast corner of the Park adjacent to Lane Cove National Park as part of the CSIRO's commitment to minimise loss of remnant vegetation;
- replacement of trees lost within building lots with suitable canopy planting;
- retention, where possible, and replacement of trees along the Delhi and Epping Road frontages, supplemented with additional buffer planting of locally indigenous species and native species already existing on the site;
- bush regeneration programmes where sewer and stormwater infrastructure works have affected the remnant natural bush;

29 Mr George Harley, General Manager, CSIRO Corporate Property, letter dated 12 August 1999.

30 Concerns about these had been raised by the Department of Land and Water Conservation – Sydney/South Coast Region in their *Submission*, pp1–2.

- stormwater collection and discharge via sedimentation ponds and a wetland watercourse to reduce the impact of stormwater which previously discharged from a piped system overland through the Lane Cove National Park into the Lane Cove River;
- replacement of an old sewer pumping station system with a gravity sewer under Epping Road, significantly reducing the risk of untreated effluent discharging into Lane Cove River; and
- landscape maintenance activities to eradicate and control weed infestation.

Committee's Conclusion

79. **The Committee is satisfied that the CSIRO's development proposals take appropriate account of the environment and that the various conservation measures outlined to the Committee will minimise adverse environmental impacts.**

Committee's Recommendation

80. **The Committee recommends that the CSIRO continues to supervise development works and management of the environmental aspects of the project to ensure effective and thorough implementation of promised conservation measures .**
81. The Committee received submissions from the North Ryde Residents Group and the Ryde-Hunter's Hill Flora and Fauna Preservation Society and met with their representatives at a public hearing on the proposed development in August 1999.
82. The Ryde-Hunter's Hill Flora and Fauna Preservation Society is concerned that an 'insidious legacy' of the proposed CSIRO development will be further degradation of the Lane Cove River and national park and the loss of local biodiversity.³¹ It attributes this outcome to a 'flawed' planning process which has in their view been piecemeal and which has left relevant agencies out of the decision-making loop.
83. By way of illustration, a representative from the Ryde-Hunters Hill Flora and Fauna Preservation Society referred to concern about the fate of the

31 Ryde-Hunters Hill Flora and Fauna Preservation Society, *Transcript of Evidence*, p. 275.

endangered *Darwinia biflora*, which is not endangered by this specific development, but which is also not 'safely locked up in a conservation area'.³² The Committee notes that the submission from the NSW Parks and Wildlife Services has recommended that future development on the rest of the Riverside Corporate Park site pay special regard to the protection of the *Darwinia biflora* population.³³

84. Another environmental concern raised by this group is the overall amount of hard stand (paved surfaces), which contributes to water run-off and adds pressure to the Lane Cove River catchment. At the hearing the Committee asked the CSIRO whether it would consider alternative paving materials to reduce run-off, and the CSIRO agreed to examine alternative paving materials, even though it questions whether any such alternative would significantly impact on run-off.³⁴

Committee's Recommendation

85. **The Committee recommends that the CSIRO investigate alternative paving materials to reduce run-off at the proposed development site and incorporate results of this research into the comprehensive environmental management plan for this project.**

Adequacy of Community Consultations

86. Though both community groups encountered by the Committee expressed concerns about possible adverse environmental impacts of the proposed development, they emphasised they are not in fact opposed to the CSIRO development. In fact, a representative of one of the groups said:

'Everyone accepts that what is going on here is a good thing and it makes sense. But it is not being done in a way that allows the members of the community who live here to suggest what they should do.'³⁵

87. The overriding message received by the Committee from community groups was that CSIRO's community consultation processes had been inadequate. As the representative of the North Ryde's Resident Group said:

32 Ibid., p. 283.

33 NSW National Parks and Wildlife Services, *Submission*, p. 3.

34 CSIRO, *Transcript of Evidence*, p. 260.

35 North Ryde Residents Group, *Transcript of Evidence*, p. 300.

'Our main concern is that the CSIRO seems in all ways to be continuing to keep its back to the community both in the design of these building and in its attitude to public participation'.³⁶

88. At the public hearing the CSIRO was given an opportunity to comment on the criticisms about the adequacy of the community consultation process. Its response was to cite the extensive consultations already undertaken with State and local government entities which were detailed in its submission³⁷, and which the Committee regards as being quite impressive.
89. With regard to the charge that its community consultations had been inadequate, the CSIRO said the Ryde City Council, which was representative of the community, was its 'major point of contact'.³⁸ Furthermore, the CSIRO had identified the North Ryde Residents Group as an appropriate group to consult. While the North Ryde Residents Group admitted it was flattered at being so identified, its representative pointed out at the hearing that other groups might have been approached as well, and talking to local government is not the same as consulting with the community.³⁹ The Committee can only agree with this assessment and encourage the CSIRO to widen its net the next time it undertakes a community consultation on a proposed development.

Committee's Recommendations

90. **The Committee recommends that the CSIRO ensure that local resident groups have the opportunity to contribute to and/or comment on the comprehensive environmental management plan currently being prepared for this project.**
91. **The Committee recommends the construction of the CSIRO Division of Building Construction and Engineering Development Works at Riverside Corporate Park, North Ryde, NSW, at a cost of \$10 million at June 1999 prices.**

36 Ibid., p. 299.

37 CSIRO, *Submission*, pp 13–14.

38 CSIRO, *Transcript of Evidence*, p. 269.

39 North Ryde Residents Group, *Transcript of Evidence*, p. 300.

Conclusions and Recommendations

The conclusions and recommendations of the Committee and the paragraphs in the report to which they refer are set out below.

- 1. The Committee concludes that there are sound logistic and economic reasons for the consolidation of the CSIRO Construction Building and Engineering facilities in the Southern Precinct of Riverside Corporate Park, North Ryde. (paragraph 30)**
- 2. The Committee is satisfied that the CSIRO's development proposals take appropriate account of the environment and that the various conservation measures outlined to the Committee will minimise adverse environmental impacts. (paragraph 79)**
- 3. The Committee recommends that the CSIRO allocate sufficient resources to the supervision of development works and management of the environmental aspects of the project to ensure effective and thorough implementation of promised conservation measures. (paragraph 80)**
- 4. The Committee recommends that the CSIRO investigate alternative paving materials to reduce run-off at the proposed development site and incorporate results of this research into the comprehensive environmental management plan for this project. (paragraph 85)**
- 5. The Committee recommends that the CSIRO ensure that local resident groups have the opportunity to contribute to and/or comment on the comprehensive environmental management plan currently being prepared for this project. (paragraph 90)**
- 6. The Committee recommends the construction of the CSIRO Division of Building Construction and Engineering Development Works at Riverside Corporate Park, North Ryde, NSW, at a cost of \$10 million at June 1999 prices.(paragraph 91)**

Hon. Judi Moylan MP

Chair

23 September 1999



Appendix A – Witnesses

APP Projects Pty Ltd

Mr Kerry Ardern, Project Director

Brewster Hjorth Architects

Mr Ian Brewster, Principal

Connell Wagner Pty Ltd

Dr Jacobus Wynhoven

CSIRO

Mr Larry Little, Chief, Building Construction and Engineering

Mr Trevor Moody, Assistant General Manager, Corporate Property

Dr Ronald Sandland, Deputy Chief Executive, Information Technology,
Infrastructure and Services and Manufacturing

Mr Damien Thomas, General Manager Marketing, Building Construction and
Engineering

DesignInc Ltd

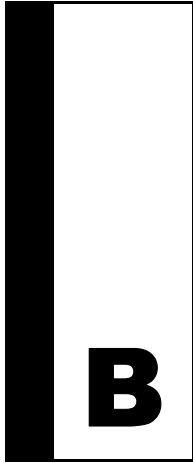
Mr Richard Dinham

North Ryde Residents Group

Mrs Diane Michel, Convenor

Ryde-Hunters Hill Flora and Fauna Preservation Society

Ms Catherine Merchant



Appendix B – Associated Drawings

	Page
Regional Location Plan	B-1
Locality Plan	B-2
Precinct Plan	B-3
Site Plan	B-4
Level 1 Plan	B-5
Level 2 Plan	B-6
Level 3 Plan	B-7
Elevation 1 North – Julius Avenue	B-8
Elevation 2 – West	B-9
Elevation 3 – South	B-10
Elevation 4 – East	B-11
Section 1 North – South	B-12
Section 2 North – South	B-13
Section 3 East – West	B-14
Perspective View from Julius Avenue	B-15
Riverside Corporate Park Master Plan	B-16