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The Parliament of the Commonwealth of Australia

Proposed CSIRO  
Entomology Bioscience  
Laboratory at Black  
Mountain, Canberra, ACT

Parliamentary Standing Committee on Public Works

August 2005  
Canberra

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## Membership of the Committee

Chair            Hon Judi Moylan MP

Deputy Chair   Mr Brendan O'Connor MP

Members        Mr John Forrest MP

Mr Harry Jenkins MP

Mr Bernie Ripoll MP

Mr Barry Wakelin MP

Senator Alan Ferguson

Senator Michael Forshaw

Senator the Hon Judith Troeth

## Committee Secretariat

Secretary            Mrs Margaret Swieringa

Inquiry Secretaries   Ms Vivienne Courto

Research Officer     Mr Raymond Knight

Administrative Officer   Mr Peter Ratas



## List of Abbreviations

AGO	Australian Greenhouse Office
BCA	Building Code of Australia
CPSU	Community and Public Sector Union
CSIRO	Commonwealth Scientific Industrial Research Organisation
DEH	Department of Environment and Heritage
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
OH&S	Occupational Health and Safety
OTGR	Office of the Gene Technology Regulator
PC2	Australian Standards for Physical Containment Level 2
NCA	National Capital Authority



# Extract from the Votes and Proceedings of the House of Representatives

**No. 28 dated Wednesday, 11 May 2005**

24 PUBLIC WORKS – PARLIAMENTARY STANDING COMMITTEE –  
REFERENCE OF WORK – CSIRO ENTOMOLOGY BIOSCIENCE LABORATORY  
AT BLACK MOUNTAIN, CANBERRA, ACT

Dr Stone (Parliamentary Secretary to the Minister for Finance and Administration), pursuant to notice, 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 Entomology Bioscience Laboratory at Black Mountain, Canberra, ACT.

Question – put and passed.



# List of Recommendations

## 3 Issues and Conclusions

### Recommendation 1

The Committee recommends that the Commonwealth Scientific Industrial Organisation take all necessary steps to identify and ensure the safe removal and disposal of hazardous materials from the site of the proposed works.

### Recommendation 2

The Committee recommends that the Commonwealth Scientific Industrial Organisation continue discussions with the National Capital Authority to resolve outstanding design issues.

### Recommendation 3

The Committee recommends that the proposed construction of a new entomology bioscience laboratory for the Commonwealth Scientific Industrial Organisation at Black Mountain, Canberra, ACT proceed at the estimated cost of \$14.5 million.





## Introduction

### Referral of Work

- 1.1 On 11 May 2005 the proposal to construct a new entomology bioscience laboratory at Black Mountain, Canberra, ACT was referred to the Public Works Committee for consideration and report to the Parliament in accordance with the provisions of the *Public Works Committee Act 1969* (the Act).<sup>1</sup> The proponent agency for this work is the Commonwealth Scientific Industrial Organisation (CSIRO).
- 1.2 The Hon Dr Sharman Stone MP, Parliamentary Secretary to the Minister for Finance and Administration, advised the House that the estimated cost of the proposed works was \$14.5 million. She reported that, subject to parliamentary approval, tenders would be called for early in 2006, with a view to completing construction by early 2007.

### Location

- 1.3 The CSIRO Division of Entomology is located at the CSIRO Black Mountain Campus; a roughly triangular site which is bordered by the national Botanical Gardens to the west, Barry Drive to the north and Clunies Ross Street to the south.<sup>2</sup>

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1 Extract from the *Votes and Proceedings of the House of Representatives*, No. 28, Wednesday 11 May 2005

2 Appendix C, Submission No. 1 from the CSIRO, Drawing 02 – Campus Plan

- 1.4 The proposed new Entomology Bioscience Laboratory is to be located in a courtyard between the existing Buildings 101, 135, 137 and 150.<sup>3</sup> It is proposed that the new building will be constructed at the south end of the courtyard, while the north end of the courtyard will be landscaped and retained as a breakout area for staff. The small buildings and sheds which currently occupy the south end of the courtyard will be demolished.<sup>4</sup>

## **Inquiry Process**

- 1.5 The Committee is required by the Act to consider public works over \$6 million<sup>5</sup> and report to Parliament on:

- the purpose of the work and its suitability for that purpose;
- the need for, or the advisability of, carrying out the work;
- whether the money to be expended on the work is being spent in the most cost effective manner;
- the amount of revenue the work will generate for the Commonwealth, if that is its purpose; and
- the present and prospective public value of the work.<sup>6</sup>

- 1.6 The Committee called for submissions by advertising the inquiry in *The Canberra Times* on Monday, 23 May 2005. The Committee also sought submissions from relevant government agencies, local government, private organisations and individuals, who may be materially affected by or have an interest in the proposed work. The Committee subsequently placed submissions and other information relating to the inquiry on its web site in order to encourage further public participation.

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3 *ibid*, paragraph 6.1.51 and Drawing 03 – Precinct Plan

4 *ibid*, paragraph 6.1

5 *Public Works Committee Act 1969*, Part III, Section 18 (8)

6 *ibid*, Section 17

## Public Hearing

- 1.7 On Friday, 17 June 2005 the Committee travelled to the CSIRO Black Mountain Campus and inspected at first hand the scope and environs of the proposed works. Later that day, the Committee received a commercial-in-confidence briefing on project costs from CSIRO, and held a public hearing at Parliament House, Canberra.<sup>7</sup>

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<sup>7</sup> See Appendix D for the official Hansard transcript of the evidence taken by the Committee at the public hearing held on Friday, 17 June 2005 in Canberra



## The Proposed Works

### Purpose

- 2.1 The purpose of the proposed work is to provide international standard accommodation to meet CSIRO Entomology research requirements. Specifically, it is anticipated that the new and refurbished facilities will:
- provide research laboratory accommodation for 55 scientific staff;<sup>1</sup>
  - comply with current legislative requirements for research facilities, including the Office of the Gene Technology Regulator (OGTR) guidelines and Australian Standards for Physical Containment Level 2 (PC2);<sup>2</sup>
  - ensure compliance with current occupational health and safety (OH&S) legislation;<sup>3</sup>
  - facilitate the promotion of current and future research based on integrated biosciences;<sup>4</sup>
  - enable the rationalisation, expansion and reconfiguration of laboratory, office and public space;<sup>5</sup>
  - improve amenity for staff and visitors;<sup>6</sup> and

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1 Appendix C, Submission No. 1, paragraph 1.0.2

2 *ibid*, paragraph 2.1.12

3 *ibid*, paragraph 13.0.101

4 *ibid*, paragraph 1.0.5

5 *ibid*, paragraph 1.0.7

6 *ibid*, paragraph 2.2.19

- improve the overall appearance of the campus thorough the demolition of redundant buildings and improved landscaping.<sup>7</sup>

## Need

2.2 The Division of Entomology currently conducts scientific research in buildings that range in age from 32 to 76 years old. Building 101, constructed in 1929, was modified in 1956,<sup>8</sup> while building 135 was constructed in 1973 and has never been refurbished.<sup>9</sup> These buildings:

- do not meet contemporary research standards;
- have, in some instances, structural constraints which prevent them being refurbished to a level commensurate with current and evolving laboratory standards;
- do not meet current OH&S standards; and
- cannot accommodate anticipated Division growth.

## Options Considered

2.3 In planning the proposed works, the CSIRO considered a number of options. The 'do nothing' option was rejected as the existing facilities cannot continue to support the requisite biotechnological research activities.<sup>10</sup>

2.4 Re-use of the existing buildings alone was not considered to be viable as the buildings could not deliver sufficient floor area (paragraph 2.3.20). Further, modification of the laboratories housed in the heritage listed Building 101 would require costly alterations to the building's structural support system of load-bearing internal walls. Such refurbishment would also necessitate an increase in fume cupboard exhaust stacks, which would have an unacceptable impact upon the heritage values of the building façade.<sup>11</sup>

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7 Appendix C, Submission No. 1, paragraph 6.1

8 *ibid*, paragraph 1.0.3

9 *ibid*, paragraph 2.2.17

10 *ibid*, paragraph 2.3.21

11 *ibid*, paragraph 2.2.16

- 2.5 The selected option was most preferred as it would preserve the heritage features of Building 101 and ensure minimal disruption to research activities during construction.<sup>12</sup>

## Scope

- 2.6 The proposed work comprises the following elements:
- construction of a new two-storey, 2,313 square metre Entomology Bioscience Laboratory (Building 179) including laboratories, roof-top plant room, ablutions, staff areas, lifts, stairs and workstations;
  - refurbishment of existing Building 101, including conversion of existing laboratories to office accommodation, new reception, exhibition, seminar and meeting spaces, new registry, new staff canteen, upgrade of ablutions, and new disabled access;
  - refurbishment of existing Building 135, including new laboratories on level one, selective refurbishment, new floor treatments, repainting and new services as required;<sup>13</sup>
  - construction of covered walkways to link the new Building 179 with Buildings 101 and 135;<sup>14</sup> and
  - associated site works and landscaping, including demolition of redundant buildings and sheds.<sup>15</sup>

## Project Delivery

- 2.7 It is proposed that the works will be delivered under a lump sum contract by a successful short-listed tenderer (paragraph 17.0). It is anticipated that construction will commence early in 2006, with completion in 2007.<sup>16</sup>

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12 Appendix C, Submission No. 1, paragraph 2.3.22

13 *ibid*, paragraph 10.1.70

14 *ibid*, paragraph 10.1.71

15 *ibid*, paragraphs 6.1.52 and 10.10.87

16 *ibid*, paragraph 18.0.106

## Cost

- 2.8 The estimated cost of the proposed works is \$14.5 million. This figure includes escalation costs, contingencies, professional fees and authorities charges. It does not include relocation costs, loose furniture, fittings and equipment.<sup>17</sup>

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<sup>17</sup> Appendix C, Submission No. 1, paragraph 16.0

## Issues and Conclusions

### Heritage Issues

- 3.1 The main Entomology Building at the CSIRO Black Mountain Campus (Building 101) was constructed in 1929 and is listed on the Commonwealth Heritage List due to its historical, aesthetic and social value. Features deemed to be of particular significance include the building's typology, its façade and elements of its interior, including the foyer, corridors, the parquet floor and some timberwork.<sup>1</sup> CSIRO intends that the proposed works will enhance the heritage aspects of the property.<sup>2</sup>
- 3.2 The Committee was interested to learn how the proposed construction and refurbishment would impact upon the identified features and how the heritage value of the building had been taken into account in the planning of the works. CSIRO explained that heritage considerations had been paramount in its planning and that it would seek to minimise the impact of the new structure upon the existing building. CSIRO envisages that enhancements to the heritage features of Building 101 will be achieved by removal of later additions to the structure, retention of existing doorways and timberwork, refurbishment of the façade and enhancement of the main public address.<sup>3</sup>

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1 Appendix D, Official Transcript of Evidence, page 4

2 Appendix C, Submission No. 1, paragraphs 8.0.64 – 8.0.65

3 Appendix D, Official Transcript of Evidence, page 5

## Geotechnical Issues

- 3.3 CSIRO reported that a preliminary geotechnical survey of the proposed site revealed the underlying rock strata to be comprised of Flanglomerate, in which the footings of the proposed new building are to be based. CSIRO added that:

...a detailed site specific geotechnical investigation is currently being carried out in order to complete the design for the footings and the pavement systems".<sup>4</sup>

- 3.4 At the public hearing the Committee inquired whether the detailed, site-specific investigation had been completed, and whether any unforeseen difficulties or costs may arise due to the geotechnical conditions of the site. CSIRO replied that some additional studies had been done, and that, having defined the building footprint, it intended to undertake further analysis. Results to date had indicated that the soil profile of the building site was consistent with other areas of the campus and the CSIRO was confident that the costs for earthworks and footings could be accommodated within the proposed budget.<sup>5</sup>

## Amenity for Occupants

### Barrier-free Access

- 3.5 The Committee was pleased to note that the works proposed by CSIRO would significantly improve barrier-free access to the Entomology Division's building through the installation of a ramp, lifts, accessible toilets, hearing augmentation in seminar facilities and provision of adjustable desks and benches.<sup>6</sup>

### Space per Employee

- 3.6 The Committee sought to ensure that the proposed construction and refurbishment project would provide a reasonable level of amenity for employees in terms of the amount of space provided per person. CSIRO

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4 Appendix C, Submission No. 1, paragraph 6.4.60

5 Appendix D, Official Transcript of Evidence, page 6

6 *ibid*, pages 5 and 14

informed the Committee that it had undertaken benchmarking against other facilities and that:

...the area per person we have determined for the new facility and support at 50 square metres per person is consistent with what we would expect in any of our other facilities.<sup>7</sup>

## Car-parking and Bike Lockers

- 3.7 The CSIRO confirmed that there is sufficient car-parking available at the Black Mountain campus to cater for any increase in staff numbers contingent upon completion of the construction project. CSIRO added that it may also increase the number of bike lockers to meet staff requirements.<sup>8</sup>

## Consultation

- 3.8 At the public hearing, CSIRO elaborated on the consultation undertaken with staff and staff associations in respect of the proposed development. CSIRO reported that the Community and Public Sector Union (CPSU) representative was a member of the project control group, ensuring staff association representation throughout the design development.<sup>9</sup>
- 3.9 Noting that the proposed works will involve the relocation of some 22 CSIRO staff from premises in Gungahlin, ACT, the Committee sought to ensure that this matter had been adequately canvassed with the persons affected. CSIRO responded that the relocation of those staff had already commenced and whilst they were not consulted as a distinct group, they had been included in the general consultative process.<sup>10</sup>

## Removal of Hazardous Materials

- 3.10 The construction of the proposed new Building 179 at the southern end of the existing courtyard will necessitate the demolition of a number of small buildings and storage sheds.<sup>11</sup> Members wished to know whether the

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7 Appendix D, Official Transcript of Evidence, page 9

8 *ibid* page 15

9 *ibid*, page 14

10 *ibid*

11 Appendix C, Submission No. 1, paragraph 6.1.52

demolition would entail the removal of any hazardous materials. The CSIRO explained that the buildings earmarked for demolition had reached the end of their economic lives and had been written down to zero on the CSIRO's asset register. In respect of hazardous materials, the CSIRO intends to undertake a survey to determine the presence of any contaminants prior to demolition. CSIRO anticipates that the only hazardous material requiring removal will be asbestos roof cladding, which will be removed in accordance with the requirements of Worksafe Australia. CSIRO assured the Committee that the cost of any such removal had been factored into the project budget.<sup>12</sup>

### **Recommendation 1**

**The Committee recommends that the Commonwealth Scientific Industrial Organisation take all necessary steps to identify and ensure the safe removal and disposal of hazardous materials from the site of the proposed works.**

## **Ecologically Sustainable Development**

3.11 The CSIRO intends that the new Entomology Bioscience facilities will incorporate a range of active and passive energy conservation measures and initiatives to minimise environmental impacts.<sup>13</sup> At the public hearing, the Committee invited CSIRO to elaborate on some of the ecologically sustainable development (ESD) proposals. The CSIRO responded that it has a very strong sustainable development policy and that all proposed ESD measures would be tested and validated for operational efficiency and cost-effectiveness. Initiatives to be incorporated in the new facilities include:

- harvesting and re-use of rainwater for toilet services and irrigation;
- solar-heated hot water with gas-fired booster heaters;
- installation of energy-efficient lighting, appliances, plant and equipment; and

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12 Appendix D, Official Transcript of Evidence, page 7

13 Appendix C, Submission No. 1, paragraphs 11.1 - 11.2

- solar orientation to maximise penetration of natural light in office areas.<sup>14</sup>
- 3.12 The Committee was also interested to know what overall energy rating the new facility would achieve, and whether the CSIRO had consulted with the Australian Greenhouse Office (AGO) in respect of the proposed works. The CSIRO explained that while existing energy rating schemes refer to office buildings and are not applicable to laboratories, it is currently working with the AGO to determine appropriate energy use targets for laboratory facilities.<sup>15</sup>

## Statutory Approvals

### Department of Environment and Heritage

- 3.13 The CSIRO's main submission records that a formal application regarding the proposed works has been lodged with the Environment Minister under the terms of the EPBC Act [*Environment Protection and Biodiversity Conservation Act 1999*].<sup>16</sup> The Committee questioned the CSIRO as to the progress of this application, and its potential impact upon the project schedule. CSIRO replied that it was engaged in consultation with the Department of Environment and Heritage (DEH), and had submitted that the proposed works did not constitute a controlled action under the terms of the EPBC Act. CSIRO reported that it had supplied all requisite information and was currently awaiting the Department's decision, but did not anticipate any delays.<sup>17</sup>
- 3.14 Subsequent to the public hearing, the CSIRO provided the Committee with a copy of a letter from the DEH stating that the proposed works do not constitute a controlled action under the terms of the EPBC Act.

### National Capital Authority

- 3.15 The CSIRO Black Mountain Campus is situated on National Land within a 'Designated Area' under the provisions of the National Capital Plan. As

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14 Appendix D, Official Transcript of Evidence, page 11

15 *ibid*, page 12

16 Appendix C, Submission No. 1, paragraph 8.0.67

17 Appendix D, Official Transcript of Evidence, page 15

such, any works undertaken at the site require the approval of the National Capital Authority (NCA).<sup>18</sup>

- 3.16 The Committee expressed concern that, at the time of the public hearing, formal NCA approval of the CSIRO's plans had not been granted, and queried whether this may delay the works. The CSIRO assured the Committee that consultation with the NCA was ongoing and that the Authority had given 'in-principle' support to the project, based on preliminary designs. The CSIRO expressed confidence that final NCA endorsement would be obtained in a timely manner.<sup>19</sup> A spokesperson for the NCA confirmed that the CSIRO had successfully completed the first stage of the NCA's two-step approval process, adding that:

Except for minor details that we have not received at this point in time, the proposal as it is looks fine and is able to be approved.

- 3.17 The Committee was somewhat concerned to note that the NCA can not approve the proposed works until it has received the determination of the DEH in respect of the EPBC Act.<sup>20</sup> The NCA responded that it expected the DEH decision to be made in about a week, and did not anticipate any delay to its own approval process.<sup>21</sup> The CSIRO subsequently forwarded to the Committee a copy of a letter from the NCA expressing the Authority's in-principle support of the project.
- 3.18 The NCA reported that a key consideration in its assessment of the building had been the parapet height of the heritage-listed Building 101. The Authority expressed approval of the CSIRO's efforts to maintain the height of the new building and plant room at a level which would not impact visually upon the heritage façade, adding that the only unresolved design consideration was the height of the new exhaust flues, which would be the subject of further negotiation.<sup>22</sup> In response, the CSIRO referred to specific laboratory standards requirements governing the provision of flues, stating that the proposed flues represented the optimum height for their function. The CSIRO is, however, willing to discuss the matter further with the NCA.<sup>23</sup>

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18 *Volume of Submissions*, Submission No. 2, National Capital Authority, paragraph 3

19 Appendix D, Official Transcript of Evidence, pages 12-13

20 *Volume of Submissions*, Submission No. 2, National Capital Authority, paragraph 4

21 Appendix D, Official Transcript of Evidence, page 18

22 *ibid*, page 19

23 Appendix D, Official Transcript of Evidence, page 20

## Recommendation 2

**The Committee recommends that the Commonwealth Scientific Industrial Organisation continue discussions with the National Capital Authority to resolve outstanding design issues.**

## Project Schedule

- 3.19 CSIRO anticipates that construction will commence early in 2006, with completion in 2007.<sup>24</sup> In order to minimise disruption to research activities, the CSIRO intends to execute the works in stages, as follows:
- demolition of existing redundant structures;
  - construction of new Building 179; and
  - refurbishment of buildings 101 and 135.<sup>25</sup>
- 3.20 The Committee sought assurance that the project would be completed within the projected time-frame, including all relevant statutory approvals processes. To this end, the Committee requested that CSIRO provide a project schedule including approvals and other major project milestones. A project schedule was forwarded to the Committee by the CSIRO on 8 July 2005.

## Costs

- 3.21 The Committee wished to know how the cost of the proposed refurbishment of Building 135 to meet modern laboratory standards compared with the provision of comparable facilities in the newly-constructed Building 179. The Committee inquired whether it would be more cost-effective to accommodate all laboratory staff in the new building. CSIRO explained that, as staff may move between the two buildings, it was important for all facilities to satisfy contemporary standards for PC2 laboratories.<sup>26</sup>

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24 Appendix C, Submission No. 1, paragraph 18.0.106

25 Appendix D, Official Transcript of Evidence, pages 13

26 *ibid*, page 9

- 3.22 In response to a request made by the Committee following the confidential briefing on project costs, the CSIRO provided a detailed breakdown of budgeted professional fees.

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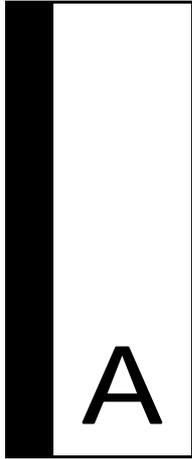
**Recommendation 3**

**The Committee recommends that the proposed construction of a new entomology bioscience laboratory for the Commonwealth Scientific Industrial Organisation at Black Mountain, Canberra, ACT proceed at the estimated cost of \$14.5 million.**

**Hon Judi Moylan MP**

Chair

17 August 2005



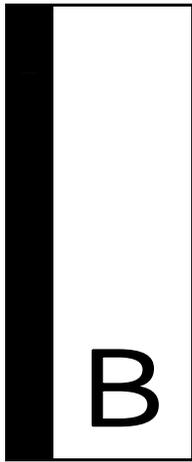
## Appendix A – List of Submissions

### Submissions

1. Commonwealth Scientific Industrial Organisation
2. National Capital Authority
3. Grains Research and Development Corporation
4. Commonwealth Scientific Industrial Organisation (Supplementary)
5. Commonwealth Scientific Industrial Organisation (Supplementary)







## Appendix B – List of Witnesses

Ms Natalie Broughton, Senior Town Planner, National Capital Authority

Dr Joanne Daly, Chief, Division of Entomology, Commonwealth Scientific Industrial Organisation

Mr Shamsul Huda, Principal Planner, National Capital Authority

Mr Antony Mikulic, Acting Manager, Capital Projects and Sustainable Environment, Corporate Property, Commonwealth Scientific Industrial Organisation

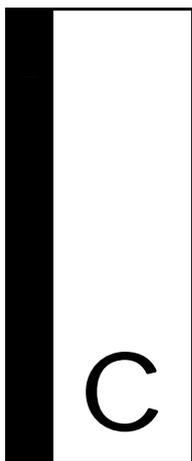
Mr Trevor Moody, General Manager, Corporate Property, Commonwealth Scientific Industrial Organisation

Dr Stephen Morton, Group Executive, Sustainable Energy and Environment, Commonwealth Scientific Industrial Organisation

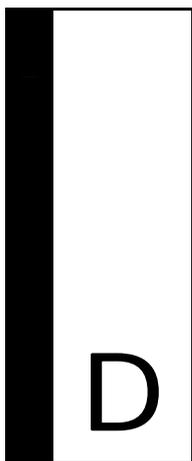
Mr Alastair Swayn, Director, Daryl Jackson Alastair Swayn Pty Ltd







Appendix C – Submission No. 1 from the  
Commonwealth Scientific Industrial  
Organisation



## Appendix D – Official Transcript of Evidence