



# Biosecurity and Biocontainment International Consultants Pty Ltd (Bio2ic)

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## Background

Biosecurity and Biocontainment International Consultants Pty Ltd were registered under the Corporations Act 2001 in Victoria, Australia, on 9 May 2003. The Company has a number of professional staff with skills in biocontainment, biosafety, laboratory design and operation.

Bio2ic consults on issues relating to biosecurity and biocontainment to various clients both within Australia and internationally. The Company's principal clients are government organisations, laboratory design and construction companies, research and biological manufacturing facilities and universities.

## Types of Activities Undertaken by Bio2ic

- Assisting in planning and design of contained microbiology facilities according to relevant standards (P2/PC2, P3/PC3 and P4/PC4) (BSL-2, BSL-3 and BSL-4 work)
- Training of staff to work in PC2 and PC3 laboratories (at BSL-2 and BSL-3)
- Training of architects, engineers, project managers and facility managers in the design, construction and decontamination of biocontainment facilities
- Assisting in the preparation of biological safety manuals
- Conducting biosafety inspections of PC2 laboratories
- Conducting biosafety and biocontainment inspections of PC3 and PC4 laboratories
- Provision of consultancy services on biosecurity matters
- Provision of consultancy services on planning for emerging disease emergencies

## Projects

2009 - 2011	Consultants to NSW Primary Industries for peer review of design and construction of the biosecurity upgrade to Elizabeth Macarthur Agricultural Institute, Camden
2011	Consultant to Biocline for the design and construction of BSL-3 laboratories at Macau Hospital

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2011	Consultants to EMEC Technology, for design and construction of BSL-3 laboratory for Malaysian Institute of Medical Research, Kuala Lumpur
2011	Consultants to Bill Ross & Associates for AQIS Post Entry Quarantine Facility Upgrade Option
2010 - 2011	Consultants to Bill Ross & Associates for AQIS Post Entry Quarantine Start-Up Consultancy
2008 - 2011	Consultant to JCY Architects and Urban Designers for the PathWest Stage 1 pathology building at the Queen Elizabeth Hospital, Perth
2010	Consultants to Aptus for accreditation requirements of Victorian Collaborative Cancer Centre tender preparation
2010 - 2011	Consultant to Honeywell for advice on compliance requirements for Bioscience Research Centre operations and maintenance
2009 - 2010	Consultants to EMEC Technology, Kuala Lumpur, for design and construction of BSL-3 tuberculosis laboratory for University of Malaya
2009 - 2010	Consultant to the John Curtin School of Medical Research, ANU, for the preparation of a PC3 Safety & Operations Manual
2009 - 2010	Consultants to Grimshaw Architects for preparation of a strategic brief for the Peter Doherty Institute for Immunity and Infection, University of Melbourne
2009	Consultants to the Australian Centre of Excellence for Risk Management for facility needs and review of Australian PC3 and PC4 facility needs in relationship to the AAHL-NCRIS facilities.
2009	Consultants to Bovis-Lend lease for review of laboratories in the Royal Children's Hospital, Parkville project.
2007 - 2009	Consultants to Johnstaff Projects (Project Manager) for the Bioscience Research Centre (BRC) being designed and constructed at Latrobe University for the Victorian Major Projects
2007 - 2009	Consultant to Johnstaff Projects for the design and planning of the PC2 and PC3 laboratories for the WHO Collaborating Centre for Reference and Research in Influenza being relocated to the Victorian Infectious Diseases Reference Laboratory, North Melbourne.

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- 2008 Consultants to Baulderstone's for the Burnet Institute PC3 laboratories in the Alfred Hospital Stage 2 Project at the Alfred Hospital, Melbourne
- 2008 Consultant to Direkt Consulting for the development of the Security-sensitive Biological Agents (SSBAs) Standards, as part of the National Health Security Act – 2007, for the Australian Department of Health and Ageing.
- 2008 US Civilian Research and Development Agreement for the provision of biosafety and biosecurity training and assessment of biosafety level 3 facilities in Manila, Philippines.
- 2008 WHO/CDC Technical Consultation on Strategies, Approaches, and Partnerships for Improving Global Laboratory Biosafety, September 2-4, 2008, Atlanta, Georgia, USA
- 2006 - 2008 Consultant to the Northern Territory Department of Planning of infrastructure of the design and review of construction of a PC3 laboratory at the Royal Darwin Hospital.
- 2007 Audit of MAF Investigation and Diagnostic Centre Laboratory, Wallaceville, Upper Hutt, New Zealand for Biosecurity New Zealand.
- 2006 – 2007 Consultant to Barwon Health to review PC1 and PC2 laboratories at Geelong Hospital
- 2006 Advice to Lyons Architect on virology laboratories in new John Curtin School of Medical Research, Australian National University, Canberra, ACT
- 2006 Consultant to the South Australian Department of Health for the development of concept plans for a PC3 laboratory facility at the Institute of Medical and Veterinary Science (IMVS), Adelaide.
- 2006 Consultant to WHO “1<sup>st</sup> Workshop on Laboratory Biosafety and Biosecurity” for WHO Eastern Mediterranean Region held in Tehran, Iran 28-31 October.
- 2006 Consultant to the Pasteur Institute, Ho Chi Minh City, Vietnam, for the development of concept plans for a BSL-3 and BSL-2 laboratory complex.
- 2006 Consultant to WHO for assistance to the China Centre for Disease Control, Beijing, in the development of process for gathering information about BSL-2 Laboratories in China and for provision of biosafety advice.
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- 2005 – 2006      Consultants to the New South Wales Department of Commerce for concept planning and advice on a PC3 laboratory for the NSW Police Forensics in Sydney.
- 2005              Consultant to Li Ka Shing Foundation for inspection of the Joint Influenza Research Facility of Shantou University and University of Hong Kong, Shantou, China (a BSL-3 facility)
- 2005              Consultant to WHO as part of an inspection team for the smallpox laboratories at the Centres for Disease Control, Atlanta, USA, and VECTOR, Novosibirsk, the Russian Federation.
- 2005              Consultant for SQ Architects, Bangkok, Thailand, for the planning and design of the South East Asian Avian Influenza Reference Centre for the National Institute of Animal Health, Bangkok, Thailand (a BSL-3 and BSL-2 facility).
- 2005              Consultant to Tysan Project Management for the design and construction of a BSL-3 laboratory in the Pathology Department, Queen Mary Hospital, University of Hong Kong.
- 2005              Consultant to Curtin University to review the PC3 laboratory facility design which is part of the vivarium.
- 2004 - 2005      Consultant to Thiess Engineering for the design of a PC3+ microbiology laboratory facility for the Institute for Clinical Pathology and Microbiological Research (ICPMR), Westmead Hospital
- 2004              Consultant to Australian Department of Health and Ageing on the “Capacity of Australian Laboratories to respond to disease emergencies and the development of a stockpile of diagnostic kits”
- 2004              Consultant to Australian Department of Health and Ageing to provide a “Scoping study on the development of a register of Australian laboratories holding high risk pathogens”
- 2004              Consultant to American Type Culture Collection under a National Library of Medicine grant to provide training and initiate the entry of virus isolate data into the International Virus Database (ICTVdB).
- 2004              Consultant to CSIRO to provide a report for the Australian Animal Health Committee and the Sub-Committee on Animal Health Laboratory Standards on handling infectious agents in Australian Veterinary Laboratories
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- 2004 WHO consultancy as a member of a team of experts to investigate a SARS-Coronavirus laboratory infection in Taiwan and to advise on biological safety requirements for Taiwan
- 2002 – 2004 Consultant to the Department of Microbiology, University of Hong Kong regarding proposed Biosafety level 3 and 4 facilities for studies of avian influenza and high risk diseases (including SARS), which included laboratories and animal facilities (now commissioned as the University of Hong Kong's Research Centre for Emerging Infections).
- 2003-2004 Consultant to the New Zealand Ministry of Health regarding their biosecurity needs for the next decade to meet terrorism issues and emerging diseases
- 2003 WHO consultancy to Singapore Ministry of Health (Leader of Joint CDC-WHO Team of Experts) to investigate SARS-Coronavirus Infection and to advise on future biological safety and security requirements.

## Private Training

- 2011 University of Malaya, Working Safely in Biosafety Level 3 (BSL-3) Laboratories & Gaseous Decontamination with Formaldehyde.
- 2011 Elizabeth Macarthur Agricultural Institute (EMAI), two PC3 Training Courses (one including plant materials).
- 2010 AQIS PEQ, Design & Construction of Laboratory Biocontainment Facilities Workshop.
- 2010 Plenary Group, Workshop on Biocontainment Facilities.
- 2010 Elizabeth Macarthur Agricultural Institute (EMAI), Design & Construction of Laboratory Biocontainment Facilities Workshop.
- 2010 University of Malaya, Gaseous Decontamination using Formaldehyde.
- 2010 EMEC Technology at University of Malaya, BSL-3 Training Course.
- 2009 QLD Forensic & Scientific Services (QFSS), Gaseous Decontamination using Formaldehyde.
- 2009 John Curtin School of Medical Research (JCSMR), PC3 Training Course.
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2009	VIDRL, PC3 Training Course.
2008	NSW DPI Elizabeth Macarthur Agricultural Institute (EMAI), Design & Construction of Laboratory Biocontainment Facilities Workshop.
2008	Therapeutic Goods Administration (TGA), PC2 Training Course
2008	NSW Department of Primary Industries (DPI), Orange, PC3 Training Course.
2007	Defence Science and Technology Organisation (DSTO), PC3 Training Course.
2007	University of Hong Kong, BSL-3 Training Course.
2006	Defence Science and Technology Organisation (DSTO), PC2 Training Course.

## Public Training

2011	PC3 Training Course, Sydney
2010	MEGA Course (Biocontainment Facility Construction, Design & Construction of Biocontainment Facilities, Gaseous Decontamination of Biocontainment Facilities), Perth
2009	PC2 & PC3 Training Course, Melbourne
2009	Biocontainment Facility Construction, Sydney
2008	PC3 Training Course, Darwin
2008	PC2 & PC3 Training Course, Sydney
2008	Design & Construction, Gold Coast
2008	Gaseous Decontamination, Melbourne
2007	PC2 & PC3 Training Course, Brisbane
2007	PC2 & PC3 Training Course, Melbourne
2007	PC3 Training Course, Adelaide
2007	PC3 Training Course, Perth

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2007	Design & Construction, Geelong
2006	PC3 Training Course, Canberra
2006	PC2 & PC3 Training Course, Melbourne
2006	PC2 & PC3 Training Course, Brisbane
2006	PC2 & PC3 Training Course, Wallaceville, New Zealand
2006	PC2 & PC3 Training Course, Tamaki, New Zealand
2006	PC2 & PC3 Training Course, Adelaide
2006	PC2 & PC3 Training Course, Sydney
2005	PC2 & PC3 Training Course, Sydney
2005	PC3 Training Course, Perth
2005	PC3 Training Course, Brisbane
2005	PC3 Training Course, Melbourne

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