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Special Minister of State
Minister for Commerce
Minister for Industrial Relations
Assistant Treasurer
Minister for the Central Coast

22 OCT 2004

Ref: PAC248

Mr Matt Brown, MP
Chairman
Legislative Assembly Public Accounts Committee
Parliament of New South Wales
Macquarie Street
SYDNEY NSW 2000

Dear Mr Brown

I refer to your letter dated 14 September 2004 inviting submissions to the Legislative Assembly Public Accounts Committee's inquiry into Sustainability Reporting in the NSW Public Sector.

The NSW Department of Commerce was one of those agencies that responded to the "sustainability survey" conducted by the Premier's Department. I have enclosed a copy of the Department's response to Dr Gellatly and refer you to that report.

Should you wish to discuss any aspects of this document please contact Mr Will Strachan, General Manager, Sustainable Water Solutions on telephone number 9372 7960.

Yours sincerely

John Della Bosca MLC

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Mr C Gellatly
Director-General
Premier's Department
GPO Box 5341
SYDNEY NSW 2001

Dear Mr Gellatly

I refer to your correspondence of 9 June 2004 seeking agency information on sustainability considerations in the public sector, particularly relating to impacts on communities.

The NSW Department of Commerce supports the Government's sustainability agenda. Commerce sees its role as being a service provider in support of the policy initiatives developed by other agencies.

To this end, Commerce has produced a document entitled "*Leading in sustainable outcomes*". It highlights, via a number of case studies, the Department's expertise in practice across a broad range of areas of sustainability including, public building design, water treatment, effluent management and reuse and energy efficiency, to name a few.

Should you wish to discuss any aspects of this document further please contact Mr Will Stachan, General Manager, Sustainable Water Solutions on telephone 9372 7960.

I trust that this information is of assistance to you.

Yours sincerely

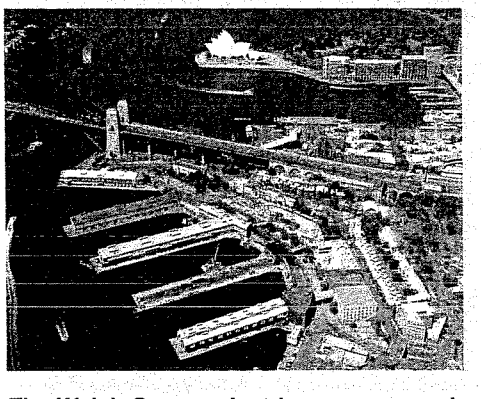
Kate McKenzie
Director-General

29 JUN 2004

NSW Department of
Commerce

Leading in Sustainable Projects

Walsh Bay Maritime Heritage Precinct ... Sustainable Urban Renewal



The Walsh Bay precinct has won several national awards for maritime heritage urban development and has been recognised for international best practice - urban renewal precinct

This maritime heritage precinct situated on one of the world's most famous harbours has undergone a long term mixed use urban renewal process, providing numerous sustainable benefits to the community:

- Opens up the waterfront to the public to accommodate diverse social and environmental community needs and services
- Provides new sustainable development which complements and is in harmony with the adaptively reused heritage buildings
- Creates a long term mixed use development in compliance with development standards and controls
- Provides protection of the city's maritime heritage assets and increases their economic development value
- Delivers a complementary urban outcome which maximises public benefits at minimal public expenditure

Parramatta Police HQ ... 4.5 Star Energy Rating

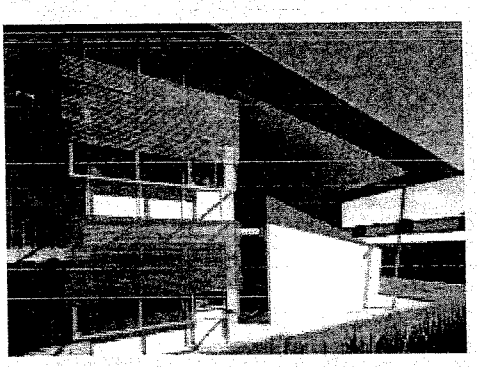
The project won three environmental awards at the Master Builders National Awards for excellence in building in November 2003 (in the categories Energy Efficiency Open, Resource Efficiency Open and Environmental Efficiency). The judges had high praise for the building's impressive energy efficiency

Managed by State Property for NSW Police, this project is an example of the private sector working with Government to deliver a sustainable and economical building:

- Multiplex entered into an agreement with the Sustainable Energy Development Authority (SEDA) to develop a building with a 4.5 star energy rating
- Working with a team of consultants, Multiplex came up with a design for two office towers linked by a central foyer and covering nearly 33,000 square metres
- Reductions in greenhouse gas emissions will amount to 155,000 tonnes over a 30-year period.
- Savings in water consumption will exceed 30 per cent or 7.5 million litres and the value of energy saved will be in the order of $15M for the same period
- A total commitment to innovative design and construction of the headquarters will clearly exceed compliance with all environmental benchmarks

Leading in Sustainable Projects

NSW Public Schools ... Environmental Technologies

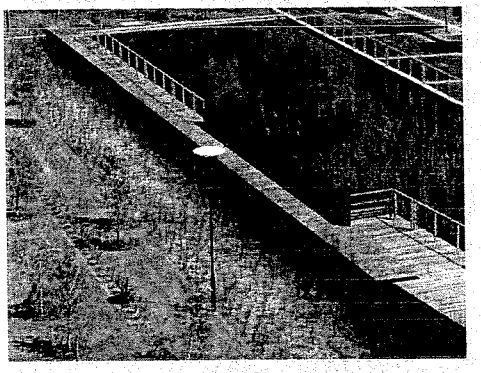


Buxton Primary School was selected to represent Australia in the International Green Building Challenge 2000

All schools designed by the Department maximise environmental systems and include:

- The use of natural daylighting strips within the roof to minimise the use of artificial lighting
- Maximising natural ventilation to avoid mechanical systems
- A thorough assessment of materials with the Department's LCAid software program to ensure environmentally responsible outcomes
- Careful water management to minimise the use of water in the building and across the site
- Environmentally sensitive landscaping

Victoria Park - Green Square ... Water Sensitive Urban Design

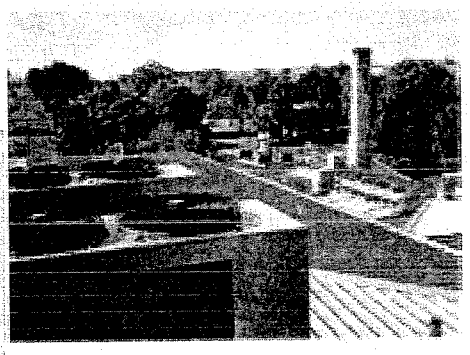


Awarded:
Public Domain Design Competition 1999
UDIA Professional Consultancy Award 2001
NSW Australian Institute of Landscape Architects Award 2002
Stormwater Industry Association: National for Excellence in WSUD 2002
Francis Greenway Green Buildings Gold Award 2002

Victoria Park, a 24 hectare, medium density residential development on a 'difficult' brownfield site, is one of the largest built examples of Water Sensitive Urban Design in Australia. It integrates sustainable stormwater management strategies with open space and urban landscape design to control the flow and water quality of stormwater runoff.

- A street based swale infiltration and recovery system, planted with endemic wetland species regulates both the quantity and quality of runoff leaving the site
- Treated stormwater is stored in ornamental ponds for reuse in site wide irrigation and serves as a central 'environmental' water feature
- Flooding flows are directed to site parks which double as retarding basins

Hunter Area Health Service ... Energy Efficiency



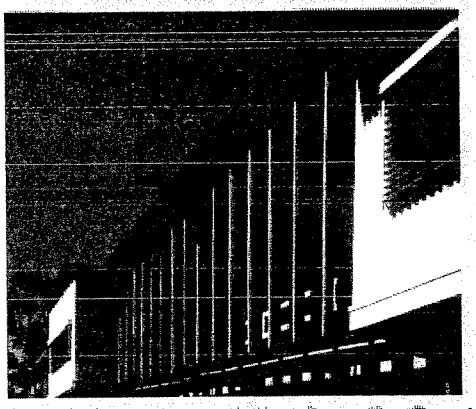
Awarded the Premier's 2002 Gold Award for Best Practice Business and Management

As a result of innovative energy management concepts, this plan is considered a model of energy conservation performance. Over the last 7 years, the plan has:

- Reduced energy consumption by 30%
- Exceeded the Government Energy Management Policy's target of 25% for 2005 within seven years of the projected ten year timeframe
- Reduced greenhouse gas emissions equivalent to 2,000 cars off the road in the Hunter area each year
- Savings of $750,000 p.a. in energy purchasing costs

Leading in Sustainable Projects

Manly Hydraulics Laboratory ... Natural Ventilation

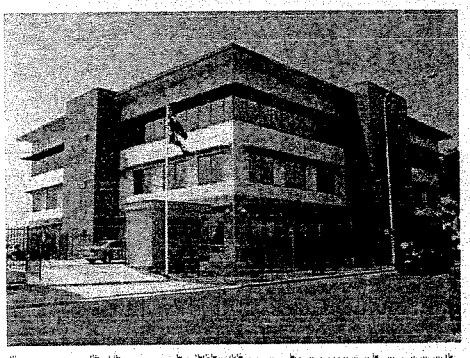


Awarded a commendation from the Royal Architects Institute of Australia for its environmental performance

The Department's own commitment in sustainable design at MHL showcases Passive Solar Design and Natural Ventilation Systems.

- Sub-floor ventilation plenum tempers incoming air to substantially avoid the need for air conditioning or heating
- Thermal stacks encourage air movement through the work place without mechanical assistance
- Adjustable sun screening, shading and building orientation avoid heat gain yet provide natural day lighting
- Building management system records building performance and energy efficient appliances avoid wasting power
- Photovoltaics collect electricity and feed excess requirements back into the grid
- Building design saves emitting 80 tonnes of greenhouse gases into the atmosphere annually

Nowra Government Offices ... Government leading in Sustainable Buildings

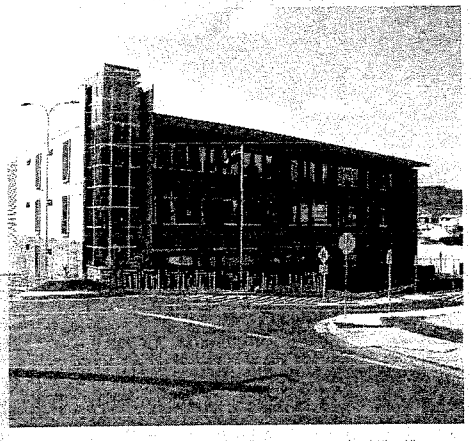


Some of these initiatives incurred a cost premium but because they were included in the project from the outset, the overall impact on the project cost was negligible

The Nowra Government Office Building was designed to achieve a 4.5 star Australian Building Greenhouse rating. The design was based on the best available conventional technology to achieve this rating. Design initiatives included:

- High performance windows and shading devices to reduce solar heating
- T5 tri-phosphur fluorescent lighting with electronic ballasts
- Control of the air conditioning and lighting by a Building Management System
- Variable speed drives on all fans and pumps
- Enhanced efficiency electric motors on fans
- High efficiency chillers
- Modelling and optimisation of the air conditioning design

Lithgow Government Offices ... Sustainability and Decentralisation



The sustainable development initiatives are designed to ensure a comfortable and healthy indoor environment, minimised non-renewable resource consumption and environmental impacts, and cost effectiveness over its whole life cycle

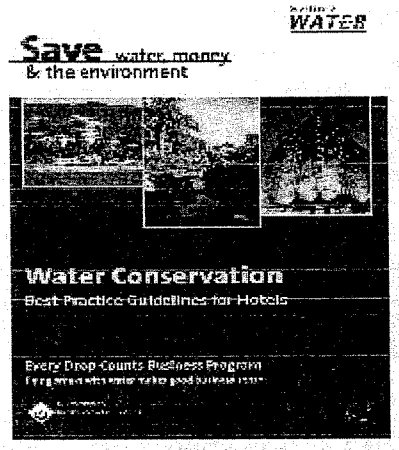
Under the Government's decentralisation policy, a new office building was recently completed in Lithgow to house the State Debt Recovery Office and the Police Assistance Line. Designed by the Government Architect's Office, the building achieved a 4.5 Australian Building Greenhouse rating. The best available conventional technology has been used to achieve the high performance expected, including:

- Use of high efficiency T5 lighting with electronic ballasts
- High efficiency glass to reduce solar heating
- Insulation of external surfaces to reduce heat loss or gain
- Use of high efficiency air conditioning plant
- Computerised control of the air conditiioning system and lighting
- Dimming of office lighting near windows
- Variable speed drives on fan electric motors
- Provision of facilities to help tenants store recycled waste products
- Use of high efficiency water fittings and sensor controlled urinal flushing to minimise water usage

A saving of approximately $50,000 a year in power bills is expected

Leading in Sustainable Projects

Water Savings ... Using Water More Efficiently



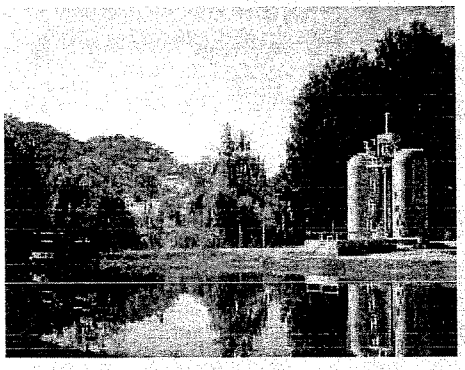
It is simple for hotels to implement effective water savings strategies using information on best practice methods of water savings and real time data

One way of meeting growing water needs is to use water more efficiently. There is potential to reduce water demands considerably by installing the most water efficient appliances and fittings currently available.

The Department has been undertaking water audits for NSW government facilities and other clients since 1992 and has identified opportunities to save a total of 1,050 ML per year; enough water to supply 4,200 new homes. These audits can reduce water bills by 20% to 30% by identifying water leakage, overflows and installing water efficient appliances and fittings.

Sydney Water Corporation engaged the Department to audit the water consumption of 24 commercial hotels. Our results have shown that it is possible to save around 20% and sometimes 30% of water usage without compromising hotel guest comfort levels. The Department is now undertaking follow on work with Sydney Water to audit additional hotels as well as industrial and commercial facilities.

Innovation in Water Treatment ... Pure Clean Water



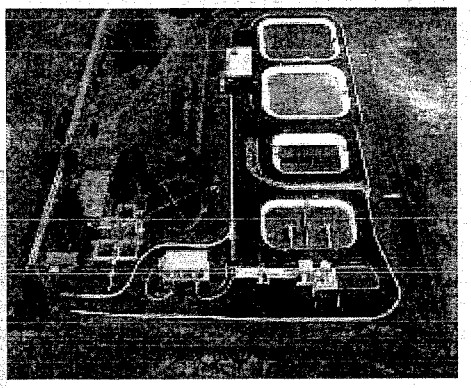
The Department has assisted hundreds of communities in NSW achieve safe, clean and affordable water supplies

Our Water Services team specialises in the investigation and design for new and ageing water supply infrastructure. The Department has procured new water supply and treatment technologies to improve the quality and cost of drinking water for NSW country towns.

Innovative solutions and technologies to counter contaminants and improve water quality in water supply schemes include:

- New membrane technology to protect urban water supplies against crytosporidium and lower chemical use in treating the water
- Ozone and biologically activated carbon filter plants to eliminate the seasonal taste and odour problem in drinking water

Sewerage Technology ... Efficient, Effective and Low Cost



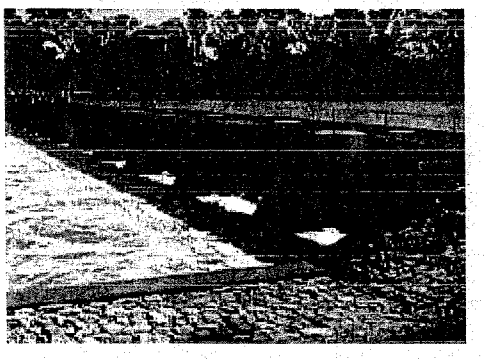
In 2001 the International Water Association gave the Department international recognition for our pioneering role in the development of modern, efficient, low cost, sewerage technology

The Department is a leader in sewage treatment, with the design of over 100 sewerage treatment plants [STP] in NSW, interstate and overseas. The benefits for NSW include:

- Savings of $350M [7%] of the NSW Country Towns Water Supply & Sewerage Program over the past 30 years
- Proven sewerage technology preferred by the majority of NSW regional councils
- Development of a world-class, low cost, biological phosphorous removal process to improve discharges and river water quality
- R&D to increase the productivity of existing STPs by an average of 30% and potentially generate savings of $1200 per new house (an estimated potential savings of $400M over the next 20 years)

Leading in Sustainable Projects

Our Irrigation Assets ... Leading, Securing and Greening



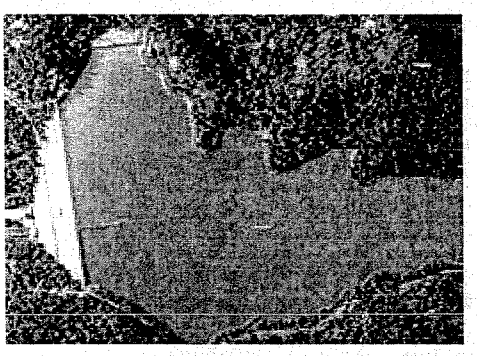
Working with fish biologists, the Department is currently undertaking concept and detailed design of some ten fishways structures in western NSW

The State's dams and irrigation structures are vital to the NSW economy. But most were built with little thought of the ecology of the river itself. Our clever solutions are addressing:

- The passage of fish through weir structures
- Environmental flows in our rivers to sustain the ecology of the river
- Solutions to mitigate against cold water pollution

The Department's dam expertise is also being applied to securing the safety of our older dams at risk. For the Sydney Catchment Authority, our team investigated and designed the recently completed side spillway for Warragamba Dam, which is designed to ensure the safety of the main dam structure and to protect downstream communities.

Cowarra ... Securing Reliable Water Supply for Future Generations



The Commerce project team received high praise for their work from the Mayor of Hastings Council

Hastings Council is an example of local government securing the future of its water supply by drawing on the Department's services.

- Construction of an "off creek" storage dam was decided on after extensive investigations and public consultations into water supply options
- Adopting a partnering approach with the stakeholders, the Cowarra project allows for water to be pumped to the storage dam while substantial environmental flows in the Hastings River are maintained
- The design allows this to continue through to the year 2040 catering for a future population of 120,000
- Our expertise was applied in concept design, site investigations, detailed design and project management of the construction

Shannon Creek Dam ... Security from Drought

Our work will include preparation of a Dam Safety Emergency Plan

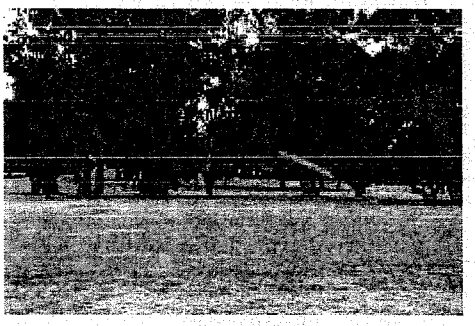
The Department is currently undertaking detailed design and documentation of Shannon Creek Storage and associated works for the Clarence Valley and Coffs Harbour Regional Water Supply Scheme.

Objectives of the Scheme are:

- To meet future water consumption needs of a population of 160,000
- To provide drought security for predicted demands up to the year 2021 and possibly beyond
- To allow higher environmental flows to be implemented in both the Orara and Nymboida Rivers

Leading in Sustainable Projects

Effluent Management & Reuse ... Environmental Benefits



Awarded:
2000 NSW Premier's Bronze Award of Achievement in the category of Economy and the Environment
2001 Institution of Engineers Australia Awards - Highly Commended

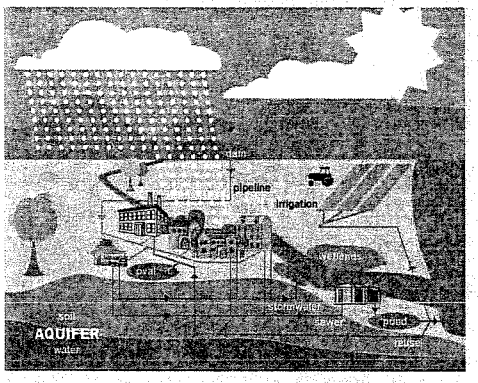
Designed by the Department, the features of the *Shoalhaven Regional Effluent Management Scheme [REMS]* include:

- An innovative water re-use scheme that stores and delivers recycled water for farmland irrigation
- The scheme reuses up to 80% of the recycled water from 6 sewage treatment plants to drought proof local agricultural production
- Phasing out the discharge of effluent into the sensitive waters of Jervis Bay, NSW

Significant outcomes for the Scheme included:

- Major cost savings have been achieved without compromising the Scheme's productivity
- Removing the need for a new large ocean outfall originally proposed next to Jervis Bay
- Reduced power requirements and Greenhouse gas emissions
- Lowering the risk of effluent overflow to sensitive waterways

Integrated Water Cycle Management Strategy ... Eurobodalla Shire



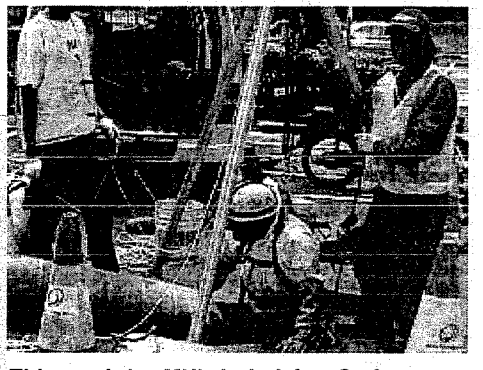
Gold Award for the Environment category in the 2003 Premier's Public Sector Awards; the National Office of Local Government, Local Government Infrastructure category Award and the AWA 2003 Water Environment Merit Award

IWCM strategies are a new way of approaching total water use by communities. By investigating the opportunities provided viaan all encompassing approach it is possible to provide many benefits to the environment, the local economy and to socially benefit the NSW communities. The outcomes of this multi-award winning project at Eurobodalla include:

- Delayed need for new infrastructure
- Expanded demand management programs
- Identified re-use water sources for environmental flows in local rivers
- Improvements to existing reticulation systems
- Reduced urban demand by approximately 20%
- Estimated cost saving of $72M over the next 30 years

The Integrated Water Cycle Management Strategy improves the efficiency of human water use through diversion, storage, distribution, use, treatment and recycling

Sewer Flow Monitoring ... Helping to Prevent Sewage Overflows



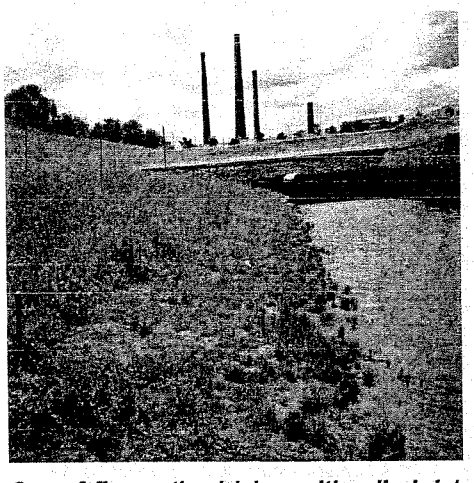
This work by MHL is helping Sydney Water to prevent sewage overflows and enhance the waterways of our Harbour

The Department's Manly Hydraulics Laboratory (MHL) collects sewer flow data for Sydney Water Corporation (SWC). Features of the project are:

- Using this data, SWC can better manage its sewerage system and improve sewer efficiency by responding quickly to potential overflow problems, identifying remediation works and preventing environmental damage
- The innovative data collection and management system provides near-to-real-time information on the condition of sewers, enhancing SWC's decision-making processes
- MHL's sophisticated system can automatically pinpoint weaknesses in the network and inform the operator via SMS, e-mail or fax of the fault at a particular site
- The reliability of data and recovery rate is of a consistent high quality

Leading in Sustainable Projects

Wetlands ... the "lungs and liver" of our Waterways



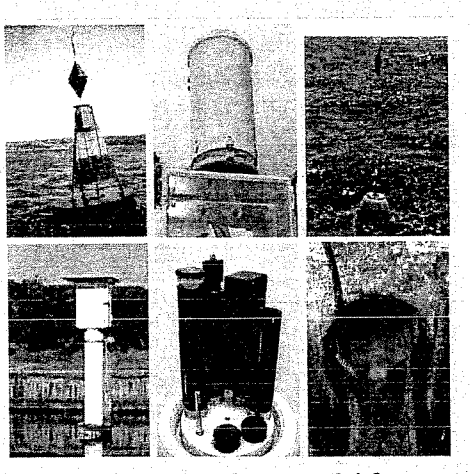
One of five wetland lakes with relic brick kiln stacks in the background

Commerce has carried out numerous wetland studies and designs. An example of our expertise and innovation can be seen at the Sydney Park Wetland.

Sydney Park, located in Alexandria, covers an area of 44ha. Originally a brick making facility which included a number of deep pits and kilns, the site was later filled with domestic waste and a series of hills and flat areas constructed over the fill in the northern and western sectors. Sydney Park currently has a distinctive landscape character as a result of its history and the land forms created by disposal of soil and other inert material. Given the location, accessibility and relatively large size of Sydney Park, it performs an important regional recreatiional role as well as serving the local community in compliance with the Sydney Park Plan of Management.

Sydney Park Wetlands comprise five interconnected lakes and associated areas of reed planting in the central drainage corridor of the park. These lakes/wetlands provide stormwater detention, pollution treatment, wildlife habitats, educational resources and recreational opportunities for park visitors.

Environmental Data ... Solutions On-Line



Environmental data is essential for cost effective and efficient planning, management and design of both built and natural assets ... it is an investment in the future

In managing the State's assets and natural resources, decision-makers must assess risks and evaluate the consequences of accepting a certain level of risk. Manly Hydraulics Laboratory (MHL) provides real-time environmental information via the Internet to enable:

- Natural resource managers to examine data, risks and consequences under a range of environmental conditions
- Management of the NSW's fragile coastline and planning responses to storm and flood emergencies

MHL manages a data network of state-of-the-art telemetered instrumentation along the whole length of the NSW coast and includes 1000 instruments that regularly record environmental data; such as wave climate, tides, rainfall, floods, water levels, water quality and current flows.

MHL provides environmental data via customised web addresses to Department of Sustainable Natural Resources offices and some 36 local councils. Data access is also provided to State Emergency Services, Bureau of Meteorology, NSW Police, NSW Surf Life Saving Association and environmental agencies.

Monitoring Algal Blooms at Berowra ... Enhancing our Estuaries

Once the study is complete, a reliable early warning system can be developed to monitor algal blooms in rivers and estuaries around New South Wales

Algal concentration is an important aspect in monitoring water quality due to the potential for algal blooms, particularly in nutrient-enriched waterways.

Manly Hydraulics Laboratory [MHL] is currently undertaking real-time monitoring of algal concentrations for Hornsby Shire Council in Berowra Creek. MHL is also assessing the effectiveness of current technology as an early warning tool to determine the potential for algal blooms.

The outcomes for this project will see:

- The health of our estuaries, rivers and dams enhanced by MHL's leading edge work
- Benefits realised by recreational users, the fishing and oyster industry and the natural ecology of our waterways