

Lisa Speakman



Expertise

- Strategic planning and system optimisation
- Risk management and counter terrorism planning
- Guidelines and systems documentation
- Project and contract management
- Civil engineering concept design

Qualifications and Memberships

BEng (Hons) Civil Engineering, Monash University, 1985

Key Project Experience

PBJ & Associates, (2003-Present)

Senior Consultant

Strategic Planning

- Review of water and sewer network reliability service standards and the development and justification of nominated targets for Water Plan 3 for Central Highlands Water and Coliban Water.
- Assistance with North East Water's 2007 water supply demand strategy. Responsibilities included work included development of base demands using historical meter readings, regression analysis and calculation of climatic adjustment factors; and hydrologic yield assessment considering step climate change and gradual climate change scenarios incorporated into REALM models.
- Documentation of the water and wastewater network plans for Water Plan 3 which addresses the management of networks asset performance and a 10 year program of works.
- Comprehensive investigations of storage options to improve the level of reliability for the townships of Bright, Wandiligong, Porepunkah and Harrietville over a fifty-year planning horizon, taking into account climate change and environmental flow scenarios
- Operational environment reviews
- Development of outline methodologies for the management of water resources, water quality, water distribution, wastewater collection, wastewater treatment and catchments and land for Central Highlands Water, and development of management plan summaries for these work areas by town
- Finalisation of Water Plans 1 and 2, and the preparation for the ESC audits, for Central Highlands Water, including documentation of budgets and allocation of reason codes for projects.
- Review of four wastewater treatment plants which formed the basis of developing the long term management strategies for these plants
- Review of Melbourne University's strategy for upgrading the water supply and distribution system to meet fire requirements
- Review of Melbourne Airport's requirements to meet domestic and fire fighting supply obligations, including identification of regulatory requirements, and a review of the condition and operation of the water supply system.
- Design and technical supervision of an upgrade to Melbourne Airport's water supply system to meet storage and pressure requirements.

Lisa Speakman

- Review of the strategic service extensions for four wastewater systems in Westernport in 2004 and 2011. The review considered long term growth projections, upgrade and staging options, cost estimates and risk assessment of options.
- Development of concept options for sewer backlog catchments
- Development of a planning framework and Management Plan for water services at Melbourne Zoo

Project Development

- Operations and maintenance services – review and develop KPIs, develop payment mechanisms
- Assistance with the development of the EOI process for the outsourcing of operations and maintenance services, including acting as Tender Liaison Officer for the EOI submission and documenting the EOI evaluation process
- Development of user-friendly Request for Quotation packages to obtain prices for normal business activities undertaken by members of a panel.
- Development of tender documentation for the outsourcing of sewer pump station maintenance services including acting as Tender Liaison Officer and tender evaluation.

Risk Management

- Development and documentation of a terrorism risk assessment and a risk management plan for essential services to meet the requirements of the Terrorism (Community Protection) Act.
- Development of contingency plans and action plans to manage risks of terrorism and incorporation of these plans into Coliban Water's Emergency Management System.
- Assistance for Coliban Water with the collation and integration of all the plans within its Emergency Management System. Documents were checked for consistency and co-ordination and a ten year management plan for the EMS was developed.
- A review of Veolia Water's Incident and Emergency Manual including its integration with Coliban Water's Emergency Management System and compliance with terrorism legislation. A Counter Terrorism Plan for the management of terrorism risks applicable to the Bendigo Operations managed by Veolia Water was developed.
- Counter-terrorism exercise assistance
- Development of an outline plan for the management of loss of water supply which identified the objectives, scope and timeline for the development of a water loss management strategy
- An assessment of the risks posed by fire damage to the Central Highland Water's assets including identification of existing and future controls, the system capacity for stored water and the management options for assets which have lost power.
- A risk based assessment of the options to prevent spills from the sewer pump station in Clunes.

Operations and Asset Management

- Development of climatic adjustment factors to predict the end of month reads to improve the accuracy of monthly non-revenue water percentage reporting. Climate adjustment factors are based on regression analysis of historical climate and demand data.
- Development and documentation of ten year operational plans for the management of water quality treatment, water quality during distribution and non-revenue water were developed for each water supply system for Coliban Water's WP3 submission
- Asset management plan for Goldfields Superpipe
- Development, calibration and upgrades of water reticulation network distribution models, including provision of pressure and flow data for proposed new developments
- Development of water and wastewater monitoring requirements and implementation plans
- A review of water supply operations to optimise the operation of a major water inlet valve in Bendigo
- Water storage upgrade and maintenance plans
- Review of accepted pump maintenance practices

Lisa Speakman

- Hydraulic modelling of water storage options, and development of options
- Development of a capital replacement and maintenance program for Melbourne Airport's water reticulation assets. Standards and Guidelines for water supply assets were updated, and a condition assessment of assets undertaken.

Organisational Development

- Determine the service standards, expectations and KPIs to manage operations & maintenance services, including workshops with stakeholders. Relevant and practical KPI's were developed for each service area. Performance measurement and payment mechanisms for an operations and maintenance contract were developed
- A review of each town based water and wastewater system to determine existing information and plans, and the functional requirements for each management plan. An audit was undertaken to determine the status of each plan.
- Review and documentation of the status of all plans required for the Water Plan 3 submission and development of a matrix to summarise the plan status for each system for Coliban Water and North East Water.

Optimum Resource Management, (1996-1998)

Project Engineer

BP Australia

Managed the engineering aspects of the selection and implementation of an \$11 million new automatic rollover carwash machine into the BP network

Areas of responsibility included:

- Evaluation and selection of equipment and supplier
- Close interaction with product management, asset management and purchasing teams to respond to all relevant engineering issues
- Equipment specification and modifications
- National liaison with regional engineers regarding the refurbishment and installation of over 35 machines
- Building refurbishment and newbuild specifications and documentation
- Signage specifications and documentation
- Contract specifications and supply negotiations for carwash and ancillary equipment
- Further trial programs such as DIY and conveyor carwash installations

BP, Shell and Mobil

Additional contract work for BP, Shell and Mobil including:

- Preparation of various services maintenance contracts and specifications
- Training of oil industry contractors in HSSE and QC protocols
- Evaluation of maintenance and upgrade requirements for carwash facilities

BP Oil, National (1991 – 1994)

Project Engineer, Design and Technical Services

- BP representative for Australian Institute of Petroleum national standards committee
- Evaluation and development of fuel system technology
- Evaluation of environmental hazards and preventative technologies
- Brand image control and development of retail sites
- Prototypes and launch of new signage to sites
- Production of signage specification manual for retail sites
- Liaison point with national product suppliers and field engineering staff
- Continual review of building designs in response to marketing initiatives and changes

Lisa Speakman

Regional Project Engineer, Environmental and LPG

Environmental:

- Managed divestment portfolio of 55 sites, ranging from site assessment to demolition and remediation of about 30 of these sites
- Review of remediation techniques for soil and water contamination led to demonstrated cost reductions of 15%

LPG:

- Launch and installation of first 18 autogas facilities in 18 months
- Achieved a 25% cost reduction as installation techniques and design were refined

General:

- Installation and maintenance of 7 carwash units
- Relocation of regional offices and associated tenancy fit-out

Ove Arup and Partners (1986 – 1991)

Structural Design Engineer

Design and construction of all elements of building structures, including residential extensions, refurbishments, facades, high rise construction and hospitals

101 Collins St - \$220million office tower

- Design of new structure
- Refurbishment of existing properties
- Design, testing and erection of various cladding systems
- Tenancy works
- Site inspections

Australian Embassy, Tokyo

- Design of prestige multi storey embassy development
- Design and construction methodology to both Australian and Japanese codes for earthquake loading

Western Hospital, Sunshine

- Design of \$60 million extension and refurbishment works to hospital complex

Monash House, Melbourne

- Refurbishment works associated with the repair of the existing façade

Palmer St Housing, Fitzroy

- Residential development of 72 units of reinforced concrete, load bearing brickwork and timber construction

Corrigan Residence, Carlton

- Design of extension works to architect's own residence