WHERE THE FOREST MEETS THE SEA

Taking its inspiration from the beauty of its surroundings, the exclusive Oceanvale Warriewood is located between the forest and the sea

Located between the forest and the sea, Oceanvale Warriewood is an exclusive residential enclave that offers resort style facilities. Karimbla Construction Services was the builder for the project and worked closely with the developer, Meriton.

The apartments have been designed with luxury in mind and offer a range of fantastic inclusions. Oceanvale Warriewood is located in a beautiful wetland environment and accordingly, the design has considered ways to minimise impact on the surrounding area. Both Meriton and Karimbla Construction Services value their contribution to reducing the carbon footprint. Oceanvale has a 6.0 star average thermal comfort rating which is well above the current building standards. Environmental features of the design include skylights, sunshades and louver shutters so residents are able to better control the temperature of their apartments.

Other attributes include:

- Energy efficient lighting and appliances
- Water efficient fixtures
- Rainwater harvesting
- Solar panels and
- Drought tolerant landscaping.

Karimbla Constructions Services specialises in construction and project management. Their experienced team offers a seamless service that delivers on time and above expectations. Other projects Karimbla Construction Services have worked on include:

- · The Infinity Tower in Brisbane
- Peninsula Apartments in Rhodes
- Victoria Square in Zetland
- Verde Apartments in St Ives

Karimbla Constuction Services is part of the Meriton Group. Meriton have been building premium apartments across Sydney, Gold Coast and Brisbane for almost half a century. During this time Meriton has become Australia's largest property developer, having received numerous awards and recognition for building excellence.



Meriton undergoes the majority of its operations in-house; from buying land, planning projects, building, selling, property management and financing to strata management. This model ensures quality control at each output.

The Australian economy depends on the residential housing and construction industries of which Meriton drives. Meriton produces thousands of apartments each year, providing homes, accommodation and investment opportunities to Australians in serviced apartments and residential properties sold and leased.

For more information contact Meriton Group, Level 11, Meriton Tower, 528 Kent Street, Sydney 2000, website www.meriton.com.au, Facebook.com/meritonapartments, Twitter.com/meritongroup



LOCAL ALLIES WITH INTERNATIONAL REACH

An international consultancy with a long history in the delivery of significant projects, RPS provides clients – public and private - with the widest range of professional urban growth services in Australia.

RPS' Newcastle based Quantity Surveying team delivered realistic and accurate cost estimates to Meriton for the Oceanvale Warriewood project including the public and private roadworks, relocating infrastructure services underground, creation of bio-retention basins, flood storage areas and the establishment of cycleways. RPS also assisted Meriton to estimate capital investment values and elemental estimates for the units to achieve feasibility and obtain project approval.

In Australia and Asia Pacific, RPS employs around 900 people in 27 locations, including capital cities and regional centres. Globally, the company is represented by over 4,500 people who work from offices in the UK, Ireland, the Netherlands, the United States, Canada, Australia and Asia.

Australian operations commenced in 2003, and since this time RPS has strengthened its capability using a mix of organic growth and acquisitions of leading consultancies including the purchase of longstanding local Newcastle company Harper Somers O'Sullivan in November 2006.

RPS' experts are committed to helping their clients meet the challenges posed by all projects by ensuring a balance of technical, social, environmental and economic outcomes. The company's teams of Urban Planners, Economists, Project Managers, Surveyors and Mapping Specialists, Landscape Architects, Urban Designers, Quantity Surveyors and Specialists in Environment, Water, Climate Change, Sustainability and Cultural Heritage, have built a reputation for involvement in a vast range of large and often complex projects across sectors including:

- residential
- commercial, retail and industrial
- public space and recreation
- educational institutions
- health and community infrastructure
- aviation
- transport infrastructure

In a move that will allow RPS to deliver more value to its clients than ever before, it recently acquired Manidis Roberts, an environmental and project management consultancy founded in 1988 and headquartered in Sydney, with small offices in Brisbane and Melbourne.

The 90-strong Manidis Roberts team delivers a significant boost to RPS' Australian operations through their significant expertise in Project Development, Communication, Creative and Bid Services and Corporate and Project Services with lead roles in major infrastructure and property projects in NSW, Queensland and Victoria.

For more information or contact details for RPS in Australia, please visit rpsgroup.com.au

FROM THE GROUND UP

Jeffery and Katauskas Pty Ltd (now trading as JK Geotechnics) are a specialised Australian geotechnical and environmental consultancy. They were commissioned by Meriton to carry out geotechnical and hydrogeological investigations at an 80,000m² site adjacent to a large wetland in Warriewood.

The development consists of several residential unit blocks over basement parking together with all associated infrastructure, including access roads, open parking areas, buried services and dams. The proposed development was to be completed in stages and the investigations, which were carried out over several years, addressed the larger site area in general and the initial stages in more detail.

The initial investigation of the greater site area had to be revised at an early stage due to the unexpected subsurface conditions which were encountered. Previous geotechnical investigations which JK Geotechnics had undertaken immediately to the north-west and to the south-east revealed relatively deep alluvial deposits. Furthermore, immediately to the south of the development site is a large wetland.

Somewhat surprisingly, investigation of the subject site revealed residual soils over relatively shallow bedrock. Shallow groundwater was also encountered.

The principal geotechnical and hydrogeological issue associated with the proposed development of the subject site was the control of the groundwater during construction and over the long term. This was of particular significance due to the environmental sensitivity of the site being adjacent to a wetland.

JK Geotechnics drilled over thirty boreholes across the greater site area for logging, sampling and testing purposes. Wells were also developed to enable the team to monitor groundwater levels and the response to rainfall.

On the basis of the above, JK Geotechnics provided parameters for the design of footings, retaining walls, on grade floor slabs and pavements. For groundwater control, they developed a scheme whereby the groundwater seepage is harvested upslope of the basement, diverted using pipework around and beyond the basement and drained into wide shallow trenches downslope to allow discharge into the wetland via infiltration.

JK Geotechnics are based in Sydney and provide expertise in the following areas: geotechnical, geomechanical, forensic and expert witness reporting, groundworks construction, site investigations, cliff and coastal stability studies, slope stabilization, retaining walls, shoring, foundation evaluation, risk assessment, earthworks, rock excavations, soil reinforcement and geotechnical/geological mapping.

For more information contact JK Geotechnics, PO Box 976 North Ryde BC NSW 1670, 115 Wicks Road Macquarie Park NSW 2113, phone 02 9888 5000, fax 02 9888 5003, website www.jkgeotechnics.com.au





Meriton, the developer of Oceanvale Warriewood, is just one of the valued clients which Acrow has formed a long-standing relationship with.

Acrow features an impressive portfolio of projects including, but not limited to, the redevelopment of the MCG, Kogan Creek Power Station, the Brisbane Airport Link Project, the Urban Superway Northern Connector, Adelaide, the Royal Children's Hospital, Perth and AAMI Park, Melbourne.

Acrow is a privately owned company formerly known as Boral Formwork & Scaffolding. In 2010, the organisation was rebranded as Acrow Formwork and Scaffolding Pty Ltd. The name Acrow has been active in the Australian construction industry since 1950 and its heritage dates back to 1936, when the company was first launched in the United Kingdom. The decision to rebrand back to the grass roots of the organisation reflects the companies determination to be leaders in their industry by delivering impeccable service and providing access and safety solutions that are synonymous with the 'Acrow' brand.

For more information contact Acrow Formwork & Scaffolding Pty Ltd, 2A Mavis Street Revesby NSW 2212, phone 02 9780 6408, fax 02 9780 6463



Formwork & Scaffolding