



About Liverpool City Council & the Casula Powerhouse Arts Centre:

Liverpool is Australia's fourth oldest town behind Sydney, Parramatta and Hobart. Pertaining to its heritage, Liverpool still consists of semi-rural areas however it still abounds with an expanding and lively city centre where major commercial and retail opportunities exist.

Located within the Liverpool City Council is the Casula Power House Arts Centre which has recently undergone a \$20m facelift. Developing a international standard exhibition space together with a 320 seat theatre, retail outlet, café and office space.

This capital redevelopment project is a joint initiative of NSW Government, NSW Ministry for the Arts, Liverpool City Council and its communities.



The Objective:

As part of this redevelopment, Liverpool City Council required relocation of 50 staff members from their main Administration Centre to the Arts Centre which is a distance of approximately 2.3kms.

The IT Division of Liverpool City Council required a voice and data link between these sites thus issuing a tender, requesting the supply and installation of a solution connecting the two sites.

The Solution:

Wave1 responded to the tender by submitting a proposal to provide the council with a 300Mbps Licensed Microwave link, including all necessary components and ACMA spectrum licensing.

Wave1 won the tender to supply, install, commission and maintain the wireless solution based on Liverpool City Council's strict conditions.

Wave1 Wave1 Pty Ltd ABN: 74 006 395 026 Email: sales@wave1.com.au Web: www.wave1.com.au
Melbourne (03) 9212 7200 Sydney (02) 9556 1500 Brisbane (07) 3343 0555



Due to the location of the Museum and the Administration centre direct line of sight was not available from the roof.

To obtain this line of sight the microwave antenna and outdoor RF unit needed to be installed on top of a 70 meter chimney stack, which is situated next to the Museum's main building. As a result of the height of the chimney stack and movement at the top caused by the wind, a microwave antenna with wide beam width was installed to offset the movement.



The resulting cable run between the antenna and the indoor equipment exceeded 200 meters, which presents substantial technical challenges for any microwave system installation. A cable run of this distance can also cause loss of data or degradation of the signal quality. To avoid these restrictions a special high quality, low loss coaxial cable was used between the outdoor equipment and the indoor equipment.

In order to blend in with its surroundings the equipment was required to be painted the same color as the stack.

Wave1 deployed the link in record time, to coincide with the Museum's opening ceremony.

Since installation of the microwave system, its performance has exceeded the council's expectations for operation and reliability. Together with the planning, supply and installation of the microwave link, Wave1 provides the council with 4 hour On Site maintenance contract should they experience any technical queries or difficulties.

