



## Teamwork Succeeds in Pipeline Refurbishment at Stanhope Grove

---

Some jobs are awkward, risky and complex. Refurbishment of pipelines on bridges over electrified suburban rail tracks falls into this category. There are many stakeholders – the water authority, the roads authority, the rail authority, local government, scaffolders, painters, maintenance crews and inspectors. Each has their OH&S guidelines, operating procedures and restrictions on access. There are major safety hazards such as electrocution, road traffic and height. Problems with the job could lead to disruption of the suburban rail network, which would be extremely costly, a public embarrassment and a loss of corporate reputation. Other issues are road and pedestrian traffic disruption, security of the site, and public safety. There are also the unknowns of weather and pipeline condition.

Work needed to be completed on the Stanhope Grove Bridge, Camberwell, before Xmas 2012. Approval to proceed was given on 16<sup>th</sup> October 2012. Timing was tight. ALS worked as part of a team to overcome the obstacles and achieve a successful outcome, on time and in budget. ALS's role was co-ordination of the stakeholders, procurement of permits, quality auditing and coating inspection.

The Stanhope Grove Bridge, Camberwell, has a Yarra Valley Water pipeline on both sides. The east side, 300mm steel pipeline was nominated for inspection and re-coating. Access by usual means was impossible because of the proximity of high voltage rail power lines. The bridge was over 5 busy electrified suburban tracks. Metro Trains advised that the maximum "Occupation", to allow works above the railway overhead electrified lines, was 4 hours per week, from 2:30 am to 6:30 am, on Sunday mornings. Occupations incurred Metro's charges. The 4 hour Occupation time-window was insufficient for ALS rope access. Also, the usual scaffolding practices would have been too slow and costly. A team problem solving approach, involving Yarra Valley Water, Metro Trains, MAC Coatings and ALS, developed a counter-weighted hanging scaffold, occupying one footpath, only, and not restricting road traffic. The hanging scaffold was installed, in stages, using two Sunday morning "Occupations". When installed, the hanging scaffold allowed access to the pipeline, anytime, without affecting rail traffic. Hi-Rail Boom Lift access was used, for one section of the pipeline, where power lines were too close for a hanging scaffold. ALS co-ordinated access approval from Metro, VicRoads and the City of Booroondara. The ALS Coatings Inspector worked, in co-operation with MAC Coatings applicators, to provide an efficient inspection service, free of delays.



**Figure 1 Before**



**Figure 2 Night work assembling the hanging scaffold**

A Yarra Valley Water meeting of all parties, at the commencement of the project, ensured that each member of the team knew their role, the project organization structure, and contingency plans. There were unforeseen problems such as a narrowly avoided late Metro cancellation of “Occupation”, an unsuitable boom lift, a pipe leak, and asbestos containing packing under pipe saddles. Good working relationships and positive support by team members ensured everyone on this project provided extraordinary effort to resolve problems. Frequent, open and honest communication was the key to success.

Obstacles were overcome and the end result was a beautifully refurbished pipeline, after 4 weeks on site, on time and in budget. Yarra Valley Water were delighted and all participants achieved a high level of job satisfaction. There are many more “pipe over rails” and ALS have demonstrated specialist capability in project management, quality auditing and coating inspection.



**Figure 3 Hi-Rail boom lift access, dawn, end of shift**



**Figure 4 After**

**POWER SERVICES –**  
 U 1, 2 Alhambra Avenue,  
 Cardiff NSW 2285  
 Phone: +61 2 4953 7999

**BRISBANE –**  
 2 Ron Boyle Crescent, Carole  
 Park QLD 4300  
 Phone +61 7 3718 0300

**MELBOURNE –**  
 294 Arden Street, North  
 Melbourne VIC 3051  
 Phone: +61 3 9236 8000

**PERTH –**  
 109 Bannister Road,  
 Canning Vale WA 6155  
 Phone: +61 8 9232 0300

**SYDNEY –**  
 U 1a & 2, 171-175 Newton  
 Road,  
 Wetherill Park NSW 2164  
 Phone: +61 2 8786 3100

**ADELAIDE –**  
 60-62 Gray Terrace,  
 Gillman SA 5013  
 Phone: +61 8 8240 1299