



**MINUTES OF THE THIRTEENTH COMBINED  
ANNUAL GENERAL MEETING AND COUNCIL MEETINGS**

Held on Tuesday September 28, 2004 at 5.20pm in meeting rooms 2 and 3,  
Melbourne Exhibition and Conference Centre, Melbourne

**ATTENDING:**

Menno Henneveld	-	Chairman of ASTT
Ken Walter		Western Australian Council Representative
John DeGrazia		Victorian Council Representative
John Monro	-	New South Wales Council Representative
Rob Burnell	-	South Australian Council Representative
Graeme McArthur		Tasmanian Council Representative
Andy Krumins		Queensland Council Representative
Grant Binns	-	New Zealand Council Representative
Jeff Pace	-	Secretary / Treasurer

Also attending were:

Bill Goodman OAM, Sudipta Basu, Trevor Gosatti, Geoff Weaver, Chris Geehman, Mike Smythe, Mick McGill, Lance Horlyck, Ken Pearson, Marc Peril, Trevor Groeneveld and Daniel Gamboa.  
Observing the meeting was Mike Morris from CCF(WA).

**1. Open Meeting.**

Menno Henneveld, Chairman of ASTT opened the Meeting, welcomed Councillors and Members and thanked them for attending.

The agenda was reviewed, the relatively short time available for the meeting was noted and those attending were provided with the opportunity to advise of any items to be included in General Business.

**2. Apologies.**

Apologies have been received from Ian Wight, Northern Territory Council Representative

**3. Minutes of the previous meeting.**

Moved John Monro and seconded by John Hassen that the minutes of the previous meeting held in Auckland, New Zealand and dated September 18, 2003 be accepted as a true and correct record.

## **4. Chairman's Report**

The Chairman outlined the direction that ASTT had taken during 2003/2004, commenting on the objectives, priorities and a number of key initiatives in this year's Business Plan that were undertaken during the past 12 months.

### **4.1 2003 ISTT NO-DIG AWARD**

The ASTT has lodged a submission based on the Educational CD jointly prepared by ASTT and the University of NSW for this years ISTT NO-DIG Award. The category the submission has been lodged is under the heading of "Academic Research or Training Aid"

The outcome of this submission will be made known at the International NO-DIG this November in Hamburg.

Progress on the implementation of the Educational CD in Australia and New Zealand will be commented on in Item 7 on the Agenda.

### **4.2 Standards and Guidelines**

Five proposals were received from consultants specialised in the field of Trenchless Technology to develop a "Framework for Guidelines and Standards to Support Trenchless Technology". A consortium of Sewer Assessment Pty Ltd, Trenchless Technologies International and McGill Enterprises was awarded the contract.

The scope of the consultancy is to:

1. Establish the current status of the TT industry and its market with particular emphasis on the techniques used; determine current industry usage of standards and guidelines and how standards and guidelines may be more effectively used.
2. Undertake a literature survey to review the standards and guidelines for the application and utilisation of TT, which are currently available both locally and internationally, as well as other sources of information relevant to establishing a framework for guidelines and standards to support the use of TT.
3. Discuss the relevant merits of the manner in which standards and guidelines are used by transport agencies and utilities.
4. Develop a framework for standards and guidelines incorporating a range of TT methodologies and materials currently available and suitable for use in Australia and New Zealand.

### **4.3 No-Dig International (NDI) Magazine**

In May 2004 I wrote to all members advising the following changes.

NDI informed the ISTT last year that the magazine was likely to cease publication, and the Executive Sub-Committee sought alternatives so that members will continue to receive a magazine as a benefit of membership.

In December 2003 seven possible International publishers were contacted, of whom 3 replied with good offers. None of the three bids covered all the requirements, however the ESC felt that Trenchless Technology International (TTI), which is already well know to North American Society members, most closely met the full requirement and has been selected to take over from NDI with the first issue in May, 2004. There will be 3 issues during 2004, and 6 are planned for 2005.

I also reported that the ISTT has at the last minute reached an agreement with Mining Communications Ltd (MCL) that they also decided to launch a new magazine called "Tunnelling and Trenchless

Construction". MCL will provide the ASTT membership a copy of their new magazine on a monthly basis.

#### **4.4 ASTT's New Official Magazine "Trenchless Australasia"**

After 12 years of hard work and dedicated input by Jeff Pace in producing the ASTT Newsletter, production of what was previously our official "magazine" has now ended.. ASTT has successfully negotiated an agreement with Pipeline Publications Australia (PPA) for the production of ASTT's new official magazine "Trenchless Australasia". It is planned to produce it quarterly with a distribution starting at around 1500.

The inaugural magazine was launched at the Welcome Reception yesterday and all indications thus far indicate that it was well received. This is a wonderful opportunity to promote Trenchless Technology in Australia and New Zealand, and all members (past, present and future) are encouraged to get behind this initiative and give the magazine as much support as possible.

#### **4.5 Training and Development**

Work has been finalised on a Nationally recognised framework of competencies for those working in the Trenchless Technology industry. This has been developed by ASTT in close liaison with the Construction Contractors Federation, and jointly funded by ASTT, BCTIF and CCF.

The Australian Drilling Industry Training Committee (ADITC) and the Australian National Training Authority (ANTA) have endorsed the HDD and Rehabilitation competencies developed by CCF. At the present time, CCF is working on writing the learning materials for the three HDD competencies. This will provide a resource to commence training delivery once the new competencies and qualifications are declared. Funding for this component is again from ASTT, ANTA and CCF.

#### **4.6 General**

Membership decline is of concern but we are optimistic that we shall generate some new members through the Melbourne Conference and Exhibition and the release of the new ASTT magazine.

A program of National and International events for ASTT through to 2006 will see the continued promotion of Trenchless Technology throughout Australasia.

The 2005 No-Dig will be held in Rotterdam in the Netherlands and will see the commencement of my 3 year term as the International Chairman for the ISTT.

### **5. Secretary/Treasurer's Report**

#### **5.1 Financial Report**

Jeff Pace reported on the financial status of the Society.

He referred to the 2003 Auditor's Report that was tabled, and highlighted the following points to note.

Last year the Society produced a positive outcome of \$15,917. This result was mainly due to the success from the Sydney Conference. The Sydney profit was \$43,730.

Expenditure was up from year 2002 by some \$15,353 with the big ticket items being the CCF expenses for the development of Competency Standards and the second payment to the University of NSW for the Educational CD. These 2 payments alone totalled \$17,870

This year 2004, the ASTT needs to carefully monitor its funds as I am anticipating two significant payments, the first being the seed funding of up to \$50,000 required for the Brisbane International NO-DIG 2006 and around \$45,000 for the consultancy work that has been done on the development of Guidelines and Standards.

We are confident of a modest profit from the Melbourne Conference and also the repayment of seed funding will boost the Societies Operating Account back to a healthier position, it is all a matter of timing though.

In order to continue tackle and fund the initiatives as outlined in the Business Plan, we need to increase our income. Because of membership reductions over the past 2 years, the Society is losing a significant percentage of its annual income. Similar declines are also being experienced by the GSTT.

The Society has managed to keep the fee increases to a minimum, but with rising prices, the commitment to completing the obligations as outlined within the Business Plan and the drop off in members, there is now a need to consider an increase. The last increase the Society had was introduced in January 2002.

In order to retain a membership income of around \$45,000 to \$50,000 with the membership base that we currently have, there is now a need to increase the fees as shown in the table under.

**Motion:** That the fees be increased by 8% for Australian Members and 6% for New Zealand Members in accordance with the table under and that this increase be effective January 1, 2005.

Country	Corporate	Individual
Australia - Current	AUD\$500.00 + GST	AUD\$125.00 + GST
<b>Australia - Proposed</b>	<b>AUD\$540.00 + GST</b>	<b>AUD\$135.00 + GST</b>
New Zealand - Current	NZ\$640.00	NZ\$170.00
<b>New Zealand - Proposed</b>	<b>NZ\$680.00</b>	<b>NZ\$180.00</b>

The motion was moved by Jeff Pace and seconded by Grant Binns.  
There was no objection to this motion.

## 5.2 Membership

Once again there has been a reduction in members and this is of concern as this is our primary source of income excluding Conferences.

The table below reflects the membership breakdown by States as at December 31, 2003.

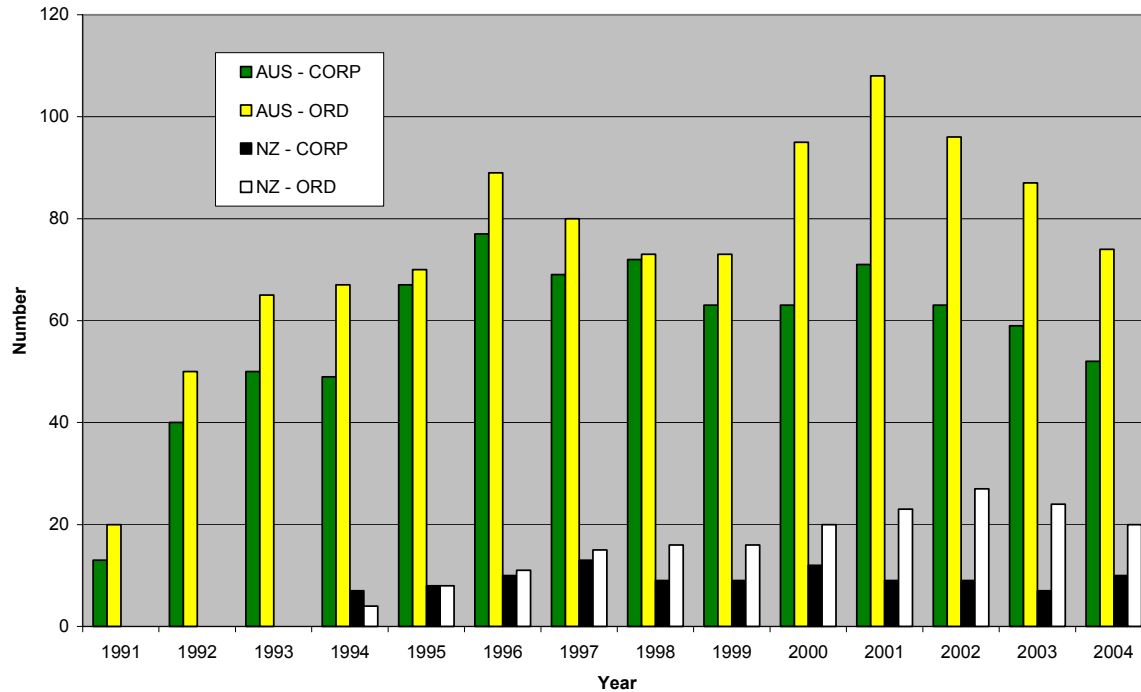
DECEMBER 31, 2003 MEMBERSHIP BREAKDOWN										
STATE	Total	W.A.	S.A.	VIC	N.T.	NSW	QLD	TAS	NZ	other
<b>CORPORATE</b>	<b>66</b>	<b>12</b>	<b>2</b>	<b>11</b>	<b>0</b>	<b>20</b>	<b>13</b>	<b>1</b>	<b>7</b>	<b>0</b>
<b>ORDINARY</b>	<b>111</b>	<b>14</b>	<b>3</b>	<b>18</b>	<b>2</b>	<b>30</b>	<b>14</b>	<b>5</b>	<b>24</b>	<b>1</b>
<b>TOTAL(2003)</b>	<b>177</b>	<b>26</b>	<b>5</b>	<b>29</b>	<b>2</b>	<b>50</b>	<b>27</b>	<b>6</b>	<b>31</b>	<b>1</b>
<b>TOTAL(2002)</b>	<b>195</b>	<b>29</b>	<b>5</b>	<b>29</b>	<b>2</b>	<b>53</b>	<b>31</b>	<b>9</b>	<b>36</b>	<b>1</b>

The table above reflects the decline in memberships when compared to the 2002 year. You will see that we have dropped from 195 in 2002 to 177 in 2003 and now 156 in 2004.

The table under reflects the membership status as at **June 30, 2004** and you can see the continuing reduction in membership numbers.

STATE	Total	W.A.	S.A.	VIC	N.T.	NSW	QLD	TAS	N.Z	other
<b>CORPORATE</b>	<b>62</b>	<b>9</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>18</b>	<b>13</b>	<b>1</b>	<b>10</b>	<b>0</b>
<b>ORDINARY</b>	<b>94</b>	<b>10</b>	<b>2</b>	<b>18</b>	<b>1</b>	<b>28</b>	<b>10</b>	<b>4</b>	<b>20</b>	<b>1</b>
<b>TOTAL</b>	<b>156</b>	<b>19</b>	<b>4</b>	<b>27</b>	<b>1</b>	<b>46</b>	<b>23</b>	<b>5</b>	<b>30</b>	<b>1</b>

## ASTT Membership



Once again it is worth noting that the society spends an enormous amount of time and effort in chasing up members that un-financial. This year was no different from the last.

Members probably do not realise that payment of the Affiliation Fee to ISTT is directly related to the number of members (financial or otherwise) that the Society has on its books as at March 31 of each year. Therefore the Society carries the risk of paying for members that may end up cancelling their membership after March 31. Perhaps we should consider amending our year structure from calendar year to financial year and see if that makes a difference?

Members are also reminded that if they shift addresses, to forward their new address and contact details to me. This info will then immediately be passed onto the ISTT.

### 5.3 Internet

ASTT's homepage is constantly being upgraded. In year 2003 we averaged 213 hits per month. This year we are averaging 290 (till end of August 2004). This is pleasing because it means that the site is being accessed by people who have an interest in trenchless technology.

## 6. Councillor's Reports

### 6.1 New South Wales - By John Monro

NSW members have maintained their involvement in the affairs of the ASTT over the past year.

An important activity of the Branch is the holding of quarterly meetings, which have been attended by 15 – 20 members. Sydney Water kindly allows us use of their Yagoona premises for these meetings. As well as valuable networking opportunities, these events enable members to be kept up to date with

Society initiatives and to discuss matters of relevance. Invitations are emailed to all NSW members, and we aim to keep our members in remote locations involved by emailing them the Meeting Reports.

Typically these meetings include a presentation by a prominent industry specialist. Presentations over the past year have been

- February 2004: “SWSOOS Airport Package – Innovation on a Major Trenchless Technology Rehabilitation Project” – Presentation from Lance Horlyck
- May 2004: “Trenchless Pipeline Condition Assessment – Innovative Australian Technology” Presentation from Phil Ferguson, Earthtech
- August 2004: “The Effectiveness of Sydney Water’s Small Sewer Rehabilitation Programme on Rainfall Derived Inflow / Infiltration” Presentation from Rod Kerr, Sydney Water

All presentations generated considerable discussion, and we are grateful for the obvious effort that the presenters had expended in their preparation. An apparent conclusion from the content of these presentations is that Australian technology is at the forefront of world developments in the Trenchless Technology industry.

Three of our NSW members, Mick McGill, Lance Horlyck and TTI Consulting (K Bala and Jacob George) were awarded the Main Roads WA / ASTT Contract for the development of a framework for establishing guidelines for Trenchless Technology. They kept us up to date with reports of their progress, which will culminate in a workshop at the ASTT National Conference.

The Educational CD prepared by the ASTT and the Uni of NSW has so far been distributed to relevant lecturers at:

Sydney University	University of Western Sydney
Wollongong	University of Technology, Sydney
University	(UTS)

Names of lecturers were obtained through contacts members already had; in some cases from students doing work experience with member Companies. In all cases lecturers indicated that they intended to incorporate at least some of the material in an appropriate subject, typically “Civil Construction” although none committed to the amount of content that the Uni of NSW includes.

An important result so far has been in the establishment of contacts at the Universities, which should be built on in the future.

## **6.2 South Australia - By Rob Burnell**

Having just taken up the role of ASTT Council Member for South Australia, I have reported on the impact trenchless technology is increasingly having on the way SA Water conducts business. In future I propose to also report on the wider use of TT within SA.

SA Water owns and manages over 8,000 km of sewer mains throughout SA with sizes up to 2600mm and some dating back to the 1880s. In 2002 a risk assessment model was developed to manage these assets. Trenchless technology is a vital component on the ongoing management strategy, as outlined in the following examples:

- A comprehensive, prioritised 5 year program of CCTV inspection of the pipe systems began in June 2004. The work will be done using the latest equipment, digital recording and classification in accordance with the new WSSA Sewer Inspection Reporting Code.
- A rehabilitation strategy has been developed for the assets at greatest risk, ie large diameter concrete mains installed prior to 1939. A 10 year re-lining program commenced in early 2004.
- SA Water is developing an overflow abatement program. Trenchless technologies will be increasing used in the cleaning and rehabilitation of the smaller diameter mains that are the major cause of overflows.
- SA Water re-uses a significant portion of treated effluent for irrigation. The salinity level of this reclaimed water is always an issue and must be tightly controlled. The reduction of saline inflows in several key drainage areas is being pursued and Trenchless Technology will be used for the rehabilitation of the pipe networks.

The growing awareness of the availability and capability of Trenchless Technologies has resulted in them being increasingly employed in the creation of new assets. The rise is also being driven by third parties not accepting the disruption of conventional technologies now that TT is available. Some examples over the last year are:

- Directional drilling of gravity mains through significant high point to eliminate the need for pumping stations,
- Directional drilling in easements, particularly adjacent to trees where permission will not be granted to trench due to root damage,
- Directional drilling for crossing of roadways, railways and other infrastructure,
- In providing filtered, potable water to communities along the River Murray, directional drilling under the river to combine systems is more economic than providing filtration facilities on either side. A 250mm water main crossing at Tailem Bend is planned for the coming year.

### **6.3 Victoria – By John DeGrazia**

The main activity that the Victorian Councillor has been occupied with during the year has been the Organising Committee for the 6<sup>th</sup> ASTT National Conference.

In preparing this report, contact has been made with a limited number of members in order to ascertain the level of trenchless technology activity within various industries. Members have been co-operative in providing information but have had to contend with competing priorities and therefore their efforts are appreciated.

#### **Membership**

Membership for the last year has remained static with 29 members compared with the same number the previous year. The National Conference should raise the profile within the state and with it, an anticipated opportunity to recruit additional members.

#### **Water Industry**

Within the water industry the level of activity was similar to previous years with pipe –cracking being the most favoured technique being used. Pipe – cracking represents around 50% of the total trenchless

construction work undertaken. Directional drilling is the next most favoured technique and it represents around 30%. Sliplining, cured in-place liners, spirally wound liners, and GRP lining make up the remainder.

As would be expected, the pipe size range for the trenchless work deals predominantly with the smaller diameter sizes (ie 100mm – 450mm) and covers both the water supply, sewerage and stormwater drainage systems. The percentage of work dealing with larger diameter sizes up to 1800mm, is generally small. The main technique for new construction is microtunnelling and pipejacking.

There were several projects that have been undertaken during the year that are worthy of some note. These are summarised below.

Melbourne Water carried out a rehabilitation project of an ovoid sewer originally constructed in 1908. The project consisted of relining 265 metres of 1050 x 700 mm diameter brickwork pipeline that was up to 8m deep. The sewer traversed the site of the Commonwealth games Village that is currently under construction. The trenchless technique utilised was the installation of GRC structural liner segments.

South East Water has commenced the construction of the Hallam Valley Main Sewer Extension. The project will ultimately involve a 9 km extension at depths of between 5 and 12 metres and will be constructed predominantly by trenchless techniques. The first stage has commenced and at the time of writing, 658 metres of 1500mm RC pipe has been installed by pipe jacking using an earth pressure balance TBM. This project is the subject of a paper in the conference technical program.

### **Challenges for next year**

The preparation for the 6<sup>th</sup> National Conference has been the main focus for this year. Hopefully, the opportunity to develop and maintain a better communication network with other state members will also be generated as a result of the conference.

## **6.4 Tasmania - By Graeme McArthur**

### **General**

The benefits of a major works project such as the gas infrastructure rollout on a smaller community is most evident this year for the TT industry in Tasmania. The impact of the project alone combined with the side benefits it brings in terms of supporting development or alternative solutions are not usually available otherwise. Growing interest in alternative construction techniques due to this high profile project has TT firmly in the forefront of decision making in pipeline infrastructure in Councils, contractors and consultants alike.

### **e-Education**

It is most pleasing to be able to report that the three major educational institutions in Tasmania, The University of Tasmania, the Australian Maritime College and TAFE Tasmania have all agreed to utilize the ASTT provided TT CD package in their curriculums and as a resource for students in their engineering disciplines. One comment received was that “the CD has impressed everyone and will provide a yardstick for our other teaching material.” This means that the information will be available at about six locations around Tasmania. Congratulations ASTT.

### **Gas Rollout**

Powerco a New Zealand company has made steady progress with the first stage of the reticulation pipe network off the ex-Duke Energy installed trunk main in Launceston, Devonport and Hobart and has even installed its first private domestic customer in Longford a rural village just out of Launceston.

Three major river crossings at the Mersey, Derwent and South Esk rivers using HDD showed the local community the construction and environmental benefits of the No-Dig approach.

Numerous urban situations HDD was utilised on a smaller scale where major road , intersections and crossings where necessary. About 15% of TT is being utilized, as a policy wherever possible. With the older unreliable records , numerous water, sewer, electrical, telecommunication and previous gas pipelines evident the vast amount of work is being done by a concerted approach using trenched operations.

The installation of a new energy Utility on such a vast scale in built up areas clearly highlights the need for good records, intelligent detection systems and cooperative approaches between all road using service authorities.

Even though the first stage is not complete, the next stage involving residential reticulation will commence in October. The entry of new gas pipework into some of the oldest streets in Australia presents a challenge to the installer and will be watched with interest by all utilities.

### **Other utilization of TT**

The onsite contractors have from time to time been requested to do jobs for local communities and have enjoyed the interaction aside from their major objective.

In Launceston a sewer rising main approx 150m long was installed across the North Esk by HDD to replace a previously trenched pipeline that had scoured out and was starting to float. The benefits of HDD were soon apparent when the pipeline was installed some 3 metres deeper than previously, eliminating the chance of it further floating during the life of the pipeline.

Aurora, the Tasmanian electricity supply company recently utilized HDD to undertake a twin 200 dia., 800m long crossing of the Tamar River in Launceston to remove the usual unsightly over head wires and install a fibre optic cable in conjunction with the 22kva supply . A couple of redrills were necessary to achieve this but regardless the appropriate choice was still a trenchless crossing. The usual technique employed to install cables is plough-in technology but many uses of boring occur under highways creeks etc.

Hobart Council continue to let letting multi job contracts for the rehabilitation of sewerage pipelines using both spiral wound lining and pvc insertions as this municipality is largely CBD and with fully developed sites TT is the solution.

Clarence Council on the eastern shore of the Derwent River in southern Tasmania advise the use of 200, 450, and 600dia. laser bores totalling about 250m. The main purpose for this is the transport of wastewater effluent for reuse to the Coal River valley some 50 kms to the east.

A particularly difficult to access joint misalignment in a 900 dia. stormwater rising main discharging at low tide level under a Launceston flood protection levee was successfully repaired by the KRE Patch repair system undertaken by UAS

Other councils are using the usual small bore service boring for road crossings and are likely to increase this least disruptive method in the future.

### **New Products**

Theiss have introduced a small bore water service relining using a miniature lining that is pulled through the straight section of pipe particularly, to reline leaking copper pipes that have shown internal corrosion and pitting.

In situ lining or cipp technology availability has been given a boost by the acquisition of a licence by a Hobart based company Underground Asset Services to manufacture and install the European FRP CIPP product Multiliner.

Trials of the product have been done in both Launceston and Hobart and the results are more than acceptable and should become a very worthwhile alternative in the Australian TT in situ lining scene. This company will be exhibiting at the 6th National Conference.

Swagelining- Hobart City Council have let a contract for the relining of some 3500m of 450dia. rising main in Hobart using Swageliner, a polyethylene lining reduce then re-expanded after insertion with UK equipment by local company Collex.

## **Membership**

Currently membership has maintained a steady level around 6only.

## **New Developments**

- The commencement of the next phase reticulation to households, of the gas distribution network by New Zealand company Powerco involving new installation by both trench and trenchless methods.
- Multiliner frp, cipp and the acceptance and use of this product.
- Patch liner further use of this product for leaking joints.
- The use and performance of Swage liner on the Hobart rising main.
- Statewide contracts are mooted yet again to be setup by joint council agreements with the economies of scale obtaining the benefit of the reduction in cost from contractors being guaranteed a sizeable amount of work and contract period.
- The use of lining methods in water service repairs.
- The influx into the industry of TT devotees from the universities.

In closing, often the 'hdd solution for one service provider delivers a bonus for the other as there are many instances where an additional drill or placement even in trenches occurs with the original contractor supplying and additional conduit or laying a cable such as fibre optics telecommunications for other utility operators.

Trenchless Technology is "*seizing the day*" in Tasmania.

## **6.5 Queensland - By Andy Krumins**

Major activities of the past year can be summarised in three categories:

1. The year saw more enquiries direct to/through myself than ever before. Many requests for technical advice, contractors in the business and recognised technical experts for contract dispute resolutions indicated a heightened level of activity within the field.

2. Directional drilling had many projects in the state with major infrastructure delivered at minimum social and environmental impact.

### **River crossings**

A good example was the 400mm sewer connection across the Brisbane river linking trade coast north and south.

The 755 metre long drill at a depth of RL – 50 was completed by co-drilling p/c as part of an alliance providing services to the industrial land at the mouth of the Brisbane River.

Sewer relining was carried out by nearly most councils on the East Coast. A new development where councils package their work is most welcome and I again propose to try a joint packaging with the SECROC councils. This can achieve economies for both councils and the industry and may be better received than my last effort 2 years ago.

Also, the range of relining techniques has increased and now options that guarantee water tightness and structural integrity for 20 years or more have been successfully used.

### **6.6 Northern Territory – By Ian Wight**

Sewer lining has again been the predominant form of trenchless technology activity in the Northern Territory. Substantial directional boring work for undergrounding of power lines has also been undertaken.

Sewer lining has principally occurred in Darwin, with a few pipelines lined in the other major urban centres of Alice Springs, Katherine and Tennant Creek. All pipeline lining has employed the cured-in-place pipe technique.

Approximately 6000 m of sewer was lined for 2003/4. Largest sewer lined to date in Darwin is 450mm diameter. A high percentage of deteriorated concrete and asbestos cement sewers as well as deteriorated rubber seals at joints is driving the program.

For undergrounding of power lines, directional boring is being used for property connection lines and road crossings. Grundomat and Ditch Witch boring machines are being used. Approximately 100 bores for 20 to 30m long property connection lines have been undertaken to date. The largest bore for road crossings so far constructed has been 650mm diameter.

### **6.7 Western Australia – Ken Walter**

#### **General**

The general trenchless market has been a bit slow in recent times but with the Perth to Mandurah railway construction there is an expectation of micro-tunnelling and a section being constructed within the Perth central business district of 2 x 7m Ø tunnels, a significant project under any terms.

Although there are some projects, the pilot micro-tunnelling market has really slowed down. This is due mainly to the reduced funding in the infill sewerage work. Although there are a few small businesses operating little pilot machines for their own work with a couple of owner operators doing bits and pieces of infill and other installations.

Western Power has recently released several large underground power projects for the installation of new power cables to replace the existing overhead power cables. The installation of these cables will be completed primarily by guided drilling using drills between 7,000 lb to 30,000 lb pullback capacity. These contracts have been a godsend for companies with guided drilling machines as the work has

been scarce with many contractors competing for the work. This project is expected to continue for a few more years.

Auger boring machines are slowly disappearing with their work mainly going to the pilot machines, directional drills and the slurry shield operators.

Pipe refurbishment has been steady with Drilline/Enviroliner undertaking works for Alcoa, Water Corporation and Parliament House.

Shieldliner, a local WA company has been fully subscribed on the Stock Exchange and is claiming new innovations in the pipe lining market

A major thrust for next year will be further contact with the universities to include the education package in the Engineering courses. Contacts so far have not shown a lot of enthusiasm.

### **Projects**

#### **➤ Refurbishment of 225mm and 300mm AC pipelines at Parliament House water Fountains.**

Parliament House was without its water fountain, a great tourist attraction, for many years due to failure of the water pumping system as a result of extreme leakage of the water supply pipelines.

#### **➤ Unique Aspects**

The Enviroliner system was a structurally safe way of renewing the deteriorated AC pipes. This method proved to be cost effective, as the Enviroliner allowed Drilline to negotiate 90 degree bends which formed part of the pipeline under the fountain structure.

#### **➤ Central Avenue Collection Sewer Refurbishment – Inglewood**

- ◆ Rehabilitation of 300 metres of 380mm reinforced concrete pipe
- ◆ Rehabilitation of 416 metres of 305mm badly gas-attacked concrete pipe using the Enviroliner system
- ◆ Reconnection of all incoming lines
- ◆ CCTV Survey
- ◆ High pressure jet washing
- ◆ Installation of 11 new corbels, brickwork and gatic covers to access chambers

#### **➤ Unique Aspects**

The Enviroliner method allowed Drilline to reline through a very busy commercial and residential area. Drilline had to take into consideration traffic and pedestrian management so as to not disrupt any businesses such as the TAB and petrol station located in front of the access chambers.

#### **➤ Kingsway Collection Sewer Refurbishment - Nedlands**

3.8km of the Kingsway Collection Sewer was rehabilitated using the Enviroliner system. The problem characteristic of this area was severe with extensive corrosion of the concrete sewer due to hydrogen sulphide attacks exacerbated by high operating temperatures during Perth's hot summers. This section of the sewer was located in a dense residential area surrounded by a major hospital and many local businesses.

### ➤ **Unique Aspects**

The Enviroliner method allowed Drilline to reline a 280 metre section under Hollywood Hospital in one inversion from one access chamber. This eliminated the need to enter the hospital wards and provided the opportunity to delete inaccessible access chambers within the building.

This project was nominated for an Engineering Excellence Award with the Institution of Engineers.

### ➤ **Enviroliner Installation - ALCOA Alumina - Pinjarra**

Rehabilitation of root infiltrated and fractured vitreous clay sewerage pipes including the reinstatement of all incoming lines, CCTV Survey and high pressure jet washing.

### ➤ **Unique Aspects**

Alcoa stipulated the use of an acid resistant continuous joint free lining system to harness the high concentration levels of chemicals used within the mine site and eliminate any leaching into the environment.

Drilline's method of inverting the liner secured the integrity of the host pipe and reduced the risk of collapse.

### ➤ **Water Corporation's Pipeline Refurbishment and Inspection**

The Water Corporation's Pipeline Refurbishment and Inspection Team has been progressively refurbishing the Goldfields pipeline for eight years.

Before planning a season of refurbishment, the pipeline is inspected using the Corporation's Challenger Inspection Vehicle. This 320kg vehicle has an array of four 3.1 mega pixel cameras capable of taking four pictures every second as the vehicle tows its fibre optic umbilical 2.5km into the pipe. Special xenon lighting illuminates the 75 year old lining and poor areas can be clearly identified. The Challenger is a very powerful and robust platform that can operate submerged and be equipped with other diagnostic tools.

The latest innovations include the development of a fully automated cement mortar lining machine which should be in operation next year. This machine will be able to continuously apply a quality controlled cement mortar lining at distances of up to 200 metres, all by remote control.

## **6.8 New Zealand - By Grant Binns**

### **Background**

This has been a very busy year and unfortunately since February ASTT duties have had to take a back seat as our business and the Manawatu region have recovered from the floods. This recovery work is still going on and in many cases, businesses are still trying to recover from the down stream effects of the flood damage to property and equipment.

### **The Trenchless Market in New Zealand**

In the past I have reported that the use of Trenchless Technology has been growing slowly but steadily. I believe that it is now fair to say that the growth is consistent and looks like continuing for some time. We are also seeing an increase in the demand for more complex technologies on a regular basis such as

micro tunnelling, large diameter auger boring and long distance or on grade directional drilling. It appears that the good work done by the contractors who survived the drilling boom and bust is now starting to prove that TT is a viable technology.

The way some TT contracts are packaged (too small) by Local Authorities is probably restricting growth in these areas because there is a reluctance to invest in these TT areas without a significant workload on the horizon. I believe however that these areas of the market will develop with time and we will see a change in the way business is done.

The current issue now facing the industry is the lack of knowledge in the client and consulting areas about what TT is capable of. We now consistently see documents that do not match the capabilities or good practices of the industry. However we need to think through the solutions to this issue very carefully because the wrong solution will cause bigger problems than we have at present.

## **Training**

InfraTrain NZ (Contracting Industry Training Organisation) has developed a National Certificate in Directional Drilling and I was a member of the Training Advisory Group that developed the list of unit standards required for the qualification. This certificate will have three strands, Drill operator, Drill Tracker and Site foreman.

I am happy with the unit standards we have developed but I have some doubt about the need for all of these unit standards to be combined into a national certificate.

I have found it difficult to get the ASTT training package out into the education market place. Letters were sent to all of the teaching Institutions with only one interested response. After a follow up the reaction level was still very poor so I have obtained assistance from InfraTrain NZ to get the package into the market. This is a very slow (and frustrating) process and will not be completed until a meeting in October of this year at a Heads of Department meeting for all of the institutions involved.

## **ASTT at the NZWWA Conference**

The highlight of the year for me was running an ASTT conference stream at the NZ Water & Wastes Association conference in Auckland. We had a TT stream running in parallel with three other conference programmes, we also had one keynote address to the entire conference and we included a no-dig equipment demonstration, an industry breakfast and a golf tournament.

The ASTT were invited to participate in this conference after we held an ASTT Trenchless Technology workshop as part NZWWA conference in 2002. Our association with the NZWWA has to be a major bonus and I believe something we need to foster and develop because we have much in common.

Our attendance at this conference exposed the technology to more than 600 people from the Local Authority and Consulting industries. Our technical papers programme averaged 40 participants with a maximum of 100 for two sessions and over 300 at the keynote address.

I need to acknowledge a number of people who assisted with this project:

- To Menno for attending the event and supporting it with a number of presentations and speeches including a Keynote address on contract relationships.
- To Jeff for attending the programme and manning the ASTT Booth. Also for providing technical assistance with the planning process.

- The committee who helped put together the technical programme, Don Berry, Philip McFarlane and Andy Spittal.
- To Murray Keys who assisted with the No-dig display
- To Len Clapham, Liz Alexander and the team from NZWWA for creating the opportunity to be involved and for organising the event.
- To those that prepared and presented papers.
- And a Special thanks to our sponsors and exhibitors.

Without all of these people the event wouldn't happen and certainly wouldn't have been the success that it was.

Our initial plan was to run the event for a financial break even and we always maintained that the exposure would be worth the effort. The event made a profit which allowed all of the ASTT costs to be reimbursed plus we have retained the sum of \$2,833.87 in an account at NZWWA which will be used for ASTT promotion and travel within New Zealand.

We are planning to repeat this event in 2005 in Auckland and are publishing a call for papers at this conference. The Auckland event will also be a good place to promote the International No Dig event in Brisbane in 2006.

### **Association with the NZWWA**

Over the last 2 years we have developed an association with the NZWWA which we hope to advance further. We currently have two goals;

1. To prepare and run a series of Trenchless Technology workshops, probably in the three main centres within the next 6 months.
2. To be associated with the 2005 NZWWA conference in Auckland.
- 3.

The NZWWA are able to assist us greatly because of their network of contacts throughout the industry.

### **Other Activity**

While it would be nice to create more activity for the association members, it reality this is difficult to do because everyone is busy. I hope that we can create more activity for the members during the next 12 months as I believe it is essential that we meet at least once a year at a local level to discuss industry issues.

## **7. Business Plan – Progress of Initiatives**

### **7.1 Business Direction**

The Society is currently renegotiating with NZWWA, a “ Memorandum of Understanding” for the next combined Conference and Expo similar to Environz 03, that will be held in Auckland over 28 – 30 September 2005.

We have successfully negotiated a very good arrangement with Pipeline Publications Australia (PPA) for the quarterly issue and distribution of the ASTT official magazine. The agreement we have with PPA is for an initial 3 year trial period. Distribution will be to all members and other interested parties with a approx 1500 – 2000 magazines being sent out each quarter. (refer also item 4.5)

### **7.2 Standards and Guidelines**

Previously covered at item 4.

### **7.3 Training and Education**

The ADITC and ANTA have now endorsed the HDD and Rehab competencies developed by CCF. At the present time, CCF is working on writing the learning materials for the three HDD competencies. This will provide a resource to commence training delivery once the new competencies and qualifications are declared. Funding for this component is again from ASTT, ANTA and CCF.

All Councillors have been charged with the task of arranging for the distribution of the educational training package to the relevant tertiary institutions throughout Australia and New Zealand. To date the take up has been slow, but I am delighted to be able to report that University of Tasmania, the Australian Maritime College and TAFE Tasmania have embraced the package. Several presentations have also been carried out in New South Wales.

### **7.4 Promotion**

The Society has developed a one page colour flyer that provides the reader with some general information about the ASTT. This is being mailed out to prospective members and also handed out at relevant Exhibitions.

This year only 1 colour Newsletters was produced because we have now established an Agreement with Pipeline Publications Australia (PPA) for a quarterly magazine. (refer also item 4.5 and 7.1)

The first international promotion for the Brisbane International Conference was undertaken last April at Trenchless Asia in China. Further promotional work will continue at Hamburg in November, Ozwater 2005 in Brisbane and Environz 05 at Auckland.

## **8. Conference Updates**

### **8.1 The 6<sup>th</sup> National Conference**

The main area of focus over the majority of last year has been the preparation and organisation for the National Conference to be held in Melbourne from 27 –29 September 2004. The event will be held at the Melbourne Conference and Exhibition Centre.

The Organising Committee comprises individual and corporate members. They are:

John De Grazia (Victorian Councillor) – Melbourne Water Corporation

Stewart Burn – CSIRO

Chris Geehman – South East Water

Tony Norrish – GHD

David Harrington – Sideliner Pty Ltd

David Collins – Sideliner Pty Ltd

David Dodemaide – Interflow

Ahmet Hashim – City West Water

Chris Frangos – Kembla Watertech

Peter Archibald – Vermeer

Mike Breen – Ditch Witch Australia

The Professional Conference Organiser (PCO) appointed is International Conferences and Events (ICE). The PCO is the same company that arranged the 5<sup>th</sup> National Conference in Sydney.

They have established a Melbourne office and have provided great support and assistance throughout the process. The experience gained from exposure to the previous ASTT conference has helped enormously.

The technical program will be complemented by optional workshops preceding the conference. There will be ample opportunity for networking and socialising through the Welcome reception at the Melbourne Aquarium, Golf day, optional dinner and Conference dinner.

At the time of writing this report the registrations have been promising and it is anticipated that registrations will meet budget. The number of exhibitors has also met expectations and sponsorship has been strong with two Gold Sponsors as well as Silver and Bronze sponsors. Only two sponsorship packages remain uncommitted, those being the Welcome Reception and the Conference Dinner.

The time and effort voluntarily contributed by the members of Organising Committee is greatly appreciated. I am sure that the quality and commitment of the Organising Committee will prove to be a successful combination to produce a conference and trade exhibition that will be of a high standard.

Preliminary estimates indicate that the event will raise a profit of around \$10 - \$20k.

## **8.2 Brisbane - International NO-DIG 2006**

Andy Krumins briefed the meeting on progress to date.

A contract with the Intermedia group has been signed after an exhaustive selection process starting with seven bids. Work on the logo and media material is well underway.

The conference will be called "NO-DIG Downunder 2006"

A selection committee has met and a full committee will be consolidated after negotiations at ASTT Melbourne.

## **9. Council Business**

### **9.1 Election of Council**

A call for nominations for election to council was sent to all members on July 14, 2004.

There were no other nominations received by close of business on August 27, 2004.

On August 31 advice was received from SA Water that Tom Galek's role of SA Councillor was to cease and that SA Water have nominated Rob Burnell to replace Tom. This renomination has been accepted.

Council for 2004/2005 is as follows:

<b>Western Australia</b> <b>Ken Walter</b>	<b>Tasmania</b> <b>Graeme McArthur</b>	<b>Queensland</b> <b>Andy Krumins</b>	<b>New Zealand</b> <b>Grant Binns</b>
<b>New South Wales</b> <b>John Monro</b>	<b>Victoria</b> <b>John DeGrazia</b>	<b>South Australia</b> <b>Rob Burnell</b>	<b>Northern Territory</b> <b>*Ian Wight</b>

**\*Advice received on September 30, 2004 from Ian Wightn advising that he is transferring to another State and therefore the position of Northern Territory Councillor is now VACANT.**

## **9.2 Election of Federal President.**

One nomination was received and that was from Menno Henneveld. As there were no other nominations put forward, Menno Henneveld was re-elected unopposed by Council.

## **9.3 ASTT Representative to ISTT Board.**

One nomination was received and that was from Menno Henneveld. As there were no other nominations from Council, Menno was once again re-elected. By Council.

## **9.4 Election of Vice President.**

In accordance with the Constitution, a Vice President may be elected from Council if considered necessary. There were no nominations received.

## **9.5 Appointment of Secretary Treasurer.**

As there were no expressions of interest received from Councillors, Jeff Pace will continue to be the Society's Secretary Treasurer.

## **9.6 Appointment of Auditor**

Chartered Accountant Gary Ogden has undertaken the Society's Audits since 1992.

As Council had no objection to his continuing with the auditing, he has once again been appointed as the Society Auditor.

## **10. General Business**

Sudipta Basu raised the issue on how training packages are introduced into the European Universities. Menno Henneveld responded and advised that success has been achieved because they have champions in the institutions to continually promote the training. The universities in Australia are generally reluctant to modify their existing curriculum's. In Europe, there are dedicated schools set up to deal with Trenchless technology.

## **11. Next Meeting**

The next meeting will be held in conjunction with the combined ENVIRONZ 05 Conference and Exhibition, which is to be held at the Aotea Centre in Auckland over 28-30 September in 2005

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Minutes compiled by:  
Jeff Pace  
Federal Secretary  
September 30, 2004

Minutes Confirmed by:  
Menno Henneveld  
Chairman ASTT  
October 1, 2004