

# NEWSLETTER No. 48

DECEMBER 2007

## INDEX

## Page

CHAIRMAN'S MESSAGE	1
NZSOLD NEWS	2
HUGH ROBERTSON	3
JOINT NZSOLD – ANCOLD CONFERENCE 2007	4
BUILDING ACT UPDATE - REGULATIONS FOR DAM SAFETY	5
HUNTER DOWNS IRRIGATION SCHEME PROPOSAL	6

Articles and letters for publication are invited. Correspondence to:  
The Technical Secretary  
**NZSOLD**  
P O Box 12-241  
Fax: 04 473 2324, e-mail: [ipenz@ipenz.org.nz](mailto:ipenz@ipenz.org.nz)  
WELLINGTON

## **CHAIRMAN'S MESSAGE**

---

NZSOLD has just completed another year full of activity and the Society benefits from the support of the voluntary time given by many on the Management Committee and financial support of our members and those who generously supported and sponsored the recently completed Conference and Workshop held in conjunction with ANCOLD at Queenstown.

Having the combined conference in New Zealand every six years is a challenge for our society to ensure good organisation and quality of papers. Queenstown was a great location and we reached the limits in respect of the pre-conference tour numbers and conference delegate numbers. The conference attracted a record number of paper submissions from New Zealand and Australian authors along with interest from the USA, Canada and Germany. I am grateful to the authors who put in the effort to produce a range of papers of significant interest and high technical standard. My thanks also goes to Stuart Read and GNS for their efforts in the planning and execution of the Conference. It is humbling when you receive very positive feedback for a well run conference, knowing that the success was not based on your own efforts but a whole team of others who dedicated themselves to achieving success.

The Society has prepared a draft Addendum to our Dam Safety Guidelines, which is under review by our Dam Safety Committee. The Addendum has been prepared to get better alignment for our Guidelines with the Dam Safety Provisions and Regulations associated with the Building Act 2004. NZSOLD has and continues to have an active role with the Department of Building and Housing in developing the Regulations which are yet to be enacted. We were successful in having the Building Act amended to draw a distinction between Dangerous, Flood Prone and Earthquake Prone dams. I anticipate the Addenda will be issued in mid 2008 and that a full revision of the Guidelines will be provided after a few years of experience of operating under the new dam safety provisions of the Building Act 2004.

The coming year I foresee will require work in the following areas:

- Encouraging engineers to be assessed as recognised engineers
- Developing training regimes to allow other engineers to progress to this area of competence
- Obtaining clarification on the liabilities that might be taken on in fulfilling the role of recognised engineer.
- Inputting into final development of the Regulations

To all members of NZSOLD and their families, we wish you a Merry Christmas and Happy New Year.

Peter Foster  
Chairman

## **NZSOLD NEWS**

---

### **Members Contact Details**

Members are reminded to advise the Society, through IPENZ, if their contact details change.

Please remember to advise if you have an **email address**. Both IPENZ and the Society are using this facility for communications, as it is immediate, positive and clean.

### **NZSOLD on the Internet**

Yes, we are on the Internet. The address is:

[www.ipenz.org.nz/nzsold/](http://www.ipenz.org.nz/nzsold/)

### **Publications and Forthcoming Events**

These can be viewed on the NZSOLD Website.

### **ANCOLD News**

The NZSOLD/ANCOLD 2007 Joint Conference was held in Queenstown in November 2007. Details are contained in this Newsletter:

### **Newsletter Contributions**

All NZSOLD members are invited to submit relevant articles, photographs or news items for inclusion in the Newsletter. All contributions are welcome and should be sent to the NZSOLD Technical Secretary.

### **NZSOLD Management Committee 2005 - 2011**

Nominations for the Committee will be called for early next year. The Committee will take office at the 2008 AGM in mid to late February.

---

## HUGH ROBERTSON

---

I first met Hugh Robertson in the 1950's. We were both deeply involved in the programme for electricity production which was urgently needed to overcome blackouts and shortages following World War 2. A design and construction team was being set up in the Ministry of Works to assist the New Zealand Electricity Department which was responsible for generation and supply of power to local power boards and municipal distributors.

Hugh was at Canterbury University College from 1937 to 1940, and graduated as a mechanical engineer. A notable achievement during his time at C.U.C. was the installation of the billiard room at Rolleston House Hostel. This was largely Hugh's own work, for which R.H. men will be eternally grateful. Following graduation he was employed on defence assignments in the DSIR. This work called for high standards of precision and technical competence. Hugh's ability in this area must have been well known, because he was recruited into the Ministry of Works by Frank Askin. Frank was Chief Design Engineer in the Hydroelectric Design Office, engaged, amongst other things, in setting up a design organisation capable of handling the work ahead. Hugh Robertson was appointed Assistant Chief Design Engineer with the primary task of establishing a mechanical group to handle the design and procurement of mechanical items such as control gates, screens, cranes, bulkheads, essential for operation of hydroelectric powerstations.

The mechanical design group of the Hydroelectric Design Office (later known as Power Design Office) was established and successfully carried out its function over a period of 40 years. During that period about 18 new hydroelectric stations and 5 control dams, all incorporating mechanical items designed and procured by this group, were commissioned. The work was large in scale, of high quality and precision, and embodied improved features as the state of the art progressed.

Hugh held the title of Assistant Chief Design Engineer throughout most of his career, but his ability and knowledge was not confined to his competence as a mechanical engineer. He became involved with the staffing and organising of the design office as the work load changed. He also dealt with a number of difficult aspects of the power projects such as effects on local communities and environmental impacts. The Tongariro Power Development was particular example. He was always conscious of the effect that large construction projects had locally, and was always considerate and understanding in these matters. His reports to the client department, to other government departments, and government ministers were exemplary. If there is such a person as a "Gentleman and a Scholar", Hugh Robertson must have come pretty close to it.

Hugh and Sheila lived at Eastbourne for most of their time. During the last few years, during which Hugh's health declined, they moved out to Kapiti Coast. Old friends and colleagues will have fond memories of earlier times and will join in extending condolences to Sheila and the Robertson family.

Bill Duncan

(Formerly Chief Power Engineer, Ministry of Works)

## JOINT NZSOLD – ANCOLD CONFERENCE 2007

---

During November 2007, the three yearly joint conference was held in New Zealand's South Island and centred at Queenstown. The conference attendance exceeded the most optimistic estimates with some 250 registered for the main technical conference and 150 for the dam safety workshop.

The events commenced with a two day pre-Conference tour (17<sup>th</sup>-18<sup>th</sup> November) starting at Christchurch with an overnight stay at Twizel and concluding at Queenstown. An extra bus was needed to cope with the additional numbers accepted for this very successful tour and feedback was that the tour and organisation was excellent.

A welcome cocktail party was held at the conference venue (Millennium Hotel) on the evening of the 18<sup>th</sup> November to set the scene, and Queenstown was at her best for this day. Our visitors were suitably impressed by the spectacular setting for the conference.

The technical conference was held over two days (19<sup>th</sup> and 20<sup>th</sup> November) and included 32 papers delivered orally in 8 sessions and 12 poster papers.

A spectacular conference dinner was held at Walter Peak Station with travel on the TSS Earnslaw on Lake Wakatipu.

The workshop held 21<sup>st</sup> November covered "Promoting and Ensuring the Culture of Dam Safety" in four sessions and 15 presentations/papers. Again the workshop was a well attended forum for discussion on dam safety and included perspectives from USA, ICOLD, Australia and New Zealand. The workshop was received very enthusiastically by the audience and reflected the importance of Dam safety in society.

ANCOLD advised that the 2008 Conference will be held at the Marriott Resort on Gold Coast of Queensland between 12<sup>th</sup> and 14<sup>th</sup> November 2008. The theme will be "Dams and Water For The Future" and includes a workshop on 12<sup>th</sup> and a post conference tour 13<sup>th</sup> to 14<sup>th</sup> November. We look forward to what promises to be another most interesting conference.

John Grimston  
Tonkin & Taylor Ltd



## **BUILDING ACT UPDATE - REGULATIONS FOR DAM SAFETY**

---

NZSOLD representatives continue to attend meetings of the Regional Authority Working Group and participate in discussions with the Department of Building and Housing regarding regulations for the dam safety provisions of the Building Act.

Key points are:

- The Amendment to the Building Act was introduced to Parliament in mid 2007 and NZSOLD along with IPENZ made a submission to the Select Committee regarding the contents of the Bill. A copy of this submission is attached to the NZSOLD Website.
- The contents of the Amendment were similar to that described in the June newsletter. It is expected that this Amendment will be passed early in 2008.
- Assuming that the current Amendment is passed without substantive change further regulations will be required to set thresholds for earthquake and flood prone dams. NZSOLD is currently discussing this issue with the Department.
- The Department of Building and Housing continues to work on drafting the first set of regulations and a draft is expected to be available early in 2008. It appears that these regulations will be promulgated in March-April 2008 and come into force two years after that date. It is anticipated that a second set of regulations resulting from the current amendment to the Act such as earthquake and flood prone dams will be promulgated in late 2008.
- The Department is also in the process of producing general guidance documents. NZSOLD is drafting an addendum to the NZSOLD Dam Safety Guidelines to complement and provide more detailed guidance for implementation of the Act and regulations.
- Regional Councils and Unitary Authorities have been reviewing their role and functions as Regional Authorities under the Act. Only three Councils have applied to become accredited for Building Consent Authority (BCA) Functions for consenting construction of new dams and alterations to existing dams. These Councils include the Otago Regional Council, Environment Canterbury and Environment Waikato. As they are already accredited for BCA Functions under their Territorial Authority role the Unitary Authorities will also fulfil this function for dams. At this stage it is our understanding that the remaining Regional Councils will take up the option to transfer these functions to these accredited Councils.
- Further work on standards and criteria for dam owner accreditation is ongoing.

Peter Mulvihill  
NZSOLD Representative Regional Authority Working Group.

## **HUNTER DOWNS IRRIGATION SCHEME PROPOSAL**

---

The Hunter Downs Irrigation Scheme is a community proposal to irrigate up to 40,000 hectares in South Canterbury. The area stretches from the Waitaki River in the south, through the Waihao Downs and Waimate area reaching north to Otipua, just south of Timaru.

This project would boost the local economy and increase the supply of water to irrigate a drought prone area. The scheme is expected to provide an additional 1,200 jobs and bring an extra \$117m per year into the area. South Canterbury Irrigation Trust and Meridian Energy developed the proposal and lodged water-only consents in October 2006. The South Canterbury Irrigation Trust (SCIT) was formed by the mayors of Waimate, Timaru and Mackenzie District Council to promote sustainable irrigation and economic development in South Canterbury.

The proposal seeks to take water up to 20.5 cumecs from the Waitaki River and divert it into an irrigation intake located approximately 35 km downstream of the Waitaki Dam. The intake would be located near Stonewall at the existing site of the Morven Glenavy Ikawai irrigation take. The distribution network would be a series of pipes and canals.

Detailed scheme design will not be developed until the irrigation proposal has resource consents for the water take and use. The scale of the proposed irrigation scheme and the need to provide potential users with a reliable service means water-only consents have been sought in the first stage of the proposal. Scheme costs cannot be finalised until detailed design and land use resource consents are granted. At that time, farmers would be asked to indicate the irrigable area on their farms. The scheme distribution network would then be designed to deliver water to the identified areas and scheme costs could be calculated. The costing methodology would be an annual charge with two components – a connection charge per hectare and a water delivery charge. Once those costs were known, SCIT would ask farmers to sign a water supply contract.

The Hunter Downs Committee held open days throughout the region and consulting with stakeholders, farmers and business leaders over the eight months leading up to the submission period. The submissions closed with Environment Canterbury on Monday 25 June. The hearings were expected to start in mid August 2007.

**Meridian Energy Ltd.**

