

## AJCE Activity 2012

### Young Professionals Exchange Programme 2012 -A Strong Partnership of CA and AJCE-

**Keiichi KANAI**

Vice Chair, Professional Development Committee, AJCE  
CTI Engineering Co., Ltd.



Australia and Japan have been strong partners for decades in the ever-rising Asia Pacific region, which is now leading the global economy with its vast market and excellent productivity. In the consulting engineering industry, AJCE has been keeping a strong tie with Consult Australia (CA) for many years. One of the greatest achievements by these two institutions so far is Young Professionals Exchange Programme (YPEP), which started in 1996 to promote good relationship and friendship between Australian and Japanese young consulting engineers. YPEP has offered precious opportunities for more than 130 young engineers to experience foreign corporate cultures and establish human network in the past 17 years. YPEP has been highly praised by FIDIC as a good example of international training program for young professionals.

In October last year, AJCE welcomed 11 young Australian engineers who would spend 3 weeks at 6 AJCE member firms. It was a good surprise for AJCE that we had so many trainees this time (eleven is a record), after the previous year's cancellation of the programme forced by the tragic Great East Japan Earthquake and Tsunami.

The schedule of YPEP2012 was as follows:

February	Selection of hosting firms
April	Selection of visiting Australian engineers
May	Start of Pre-visit dialogue
October 15	Orientation & Welcome Party
October 27-28	Trip to Kyoto & Nara
November 2	Young Summit Meeting & Farewell Party

AJCE, when accepting trainees, requires them to read a book introducing Japan in various aspects and make a report on it, and to learn some basic Japanese so they could introduce themselves in Japanese on the first day of visit. This time we had a second good surprise when many trainees spoke fairly good Japanese in the introductory session of the orientation meeting.

After the initial ceremonial events, the trainees started their training courses at host firms. The program was planned individually by each host firm, yet this time most firms incorporated in the program a trip to the stricken area in Tohoku region. It seems that seeing with their own eyes the devastated towns and the local people's effort for reconstruction has left strong

impact in their minds. In the meantime, the trainees worked hard at their host firms according to the programs, and made many Japanese friends through countless social events (Nomikai).

The weekend trip to Kyoto and Nara, former capital cities of Japan famous for their old shrines and temples, offered the trainees a chance to explore the rich history of Japan. Also they must have found another Japanese culture in the Japanese style dinner party (Enkai) at the Ryokan hotel and the subsequent late-night Karaoke party.

On the last day the Young Summit Meeting was held in Tokyo, in which all the participants from both countries got together to share the outcome of their 3 weeks of training, and to exchange their views and opinions on some interesting issues such as the difference of work environment and systems between two countries. It was a valuable and meaningful meeting for all participants, and one of the highlights of the entire YPEP program. We had more than 40 participants for this meeting and its heat was brought into the farewell party, which was held on the top floor of a skyscraper in Shinjuku.

While YPEP's primary purpose is to provide young engineers with opportunities to touch different cultures, to learn new engineering skills, and to create an extensive network, we hope that in the future this will be growing into close business relationship between the participating firms in two countries, as mentioned in the Memorandum of Understanding signed by CA and AJCE in 1995.

We have already started preparing for this year's YPEP, in which AJCE will be sending Japanese young professionals from its member firms to Australia, and we believe that it will be another success in YPEP's great history.



## AJCE Activity 2012

### YPEP 2012 - Engineering in the Land of the Rising Sun



**Jazper Blizzard**  
 YPEP2012 Trainee  
 URS Australia Pty. Ltd.

#### Introduction

I was fortunate to be provided the opportunity to work in the Oriental Consultants Tokyo office for three weeks in October 2012 as part of the Young Professionals Exchange Program (YPEP).

#### Brief Outline of YPEP

YPEP is an annual 3 week exchange program between Japanese and Australian consulting engineers and engineering firms. The exchange provides a technical, social and cultural introduction to the host company/country whilst fostering increased cooperation and business between Japanese and Australian consulting engineering firms.

#### Brief Outline of my Training Program

During the program I was fortunate to have a combination of technical work and site visits. Technical work included creating and analysing a Finite Element Analysis model of Shin-Yokohama exit and entrance tunnel in WCMOD. The purpose of this was to perform a dynamic analysis of the structure under earthquake loading conditions. This was then compared to a static analysis of the structure that had been performed earlier.

Site visits included: A site walk of the Central Circular Shinagawa Route tunnel construction site at Ohashi Junction; Visiting the Yokohama circular northern route - Tajiri Construction site, Visiting Mito City to observe repairs to the Mito City Train Station elevated walkway and visiting the Tōhoku region to observe the recovery effort from the Great East Japan Earthquake.

#### Personal Reflections

Witnessing the destruction in the Tohoku region from the Great East Japan Earthquake and Tsunami was a somber experience that will remain with me for a long time. Although the sea walls and early warning system were not as effective as intended, it is sobering to think how much worse the damage would have been if it wasn't for the high level of earthquake design requirements of the Japanese design standards. Also, it was heartwarming to see the resilience of the local people, and the entire nation, as they continue the rebuilding process.

Other memorable moments of the trip have included: visiting the central circular Shinagawa route tunnel construction site at Ohashi Junction and the sightseeing trip to Kyoto and Nara.

#### Conclusion and Acknowledgement

Participating in YPEP 2012 has been a fantastic experience. Observing the Japanese approach to engineering has provided me with many techniques that I will take back to Australia and implement in my daily working life.

I would like to thank Oriental Consultants, the AJCE, Consult Australia and URS for the opportunity to participate in YPEP 2012. It has been an absolute privilege and I am extremely grateful to Oriental Consultants for all the hospitality and kindness that they have afforded me during this exchange. I would particularly like to thank Mr Suzuki-san, Ms Wang-san, Mr Fukuma-san and Mr Hayashi-san for their day to day assistance and for putting up with my atrocious Japanese language ability! I hope that one day I can repay your extremely generous hospitality. Dōmo arigatō gozaimashita.



## AJCE Activity 2012

### A Journey of Business and Pleasure

**(Andrew) Lap-Ley Ngo**

YPEP2012 Trainee  
Brown Consulting Pty. Ltd.



In 2012/10/13 I embarked on a journey to the "Land of the Rising Sun" departing from Australia. Onboard this flight was a group of Japanese high school students returning to their homeland from a visit to Australia. All were in high spirits and after 3 weeks of staying in Japan under the guidance of Soichiro HAYASHI, from my host firm, I return home with exactly the same feeling. I am very grateful and wish to formally express my gratitude to the AJCE, participating host firms, and my firm Brown Consulting for directly and indirectly supporting my endeavours in this program.

#### **Business**

During my stay, I have had the privilege of being exposed to a real life project driving positive change in the built environment. Specifically, Oriental Consultants are undertaking a pilot project launched by the Ministry of Environment (MOE) involving the development of an ion-lithium battery (SCiB) for Electrical Vehicles (EVs). This technology is planned to be implemented on buses in the public transport network. The exciting prospect is that this project stands to revolutionize transportation in Japan and is also adaptable for internationally application. This of course is true to form given that it has been a long standing view that Japan are one of the world leaders in the field of technology.

Hayashi San kindly took time out of his busy schedule to guide me through the planning, development and funding process. It was insightful to see this from the perspective of a successful Japanese firm.

We also discussed current strategies for renewable energy in Japan and solar power generation. I had the opportunity to visit a solar energy field facility in Kawasaki City which was a sight to behold and was given the opportunity to observe a Council committee meeting discussing renewable energy in Saitama City.

In a more solemn note, I am deeply touched by my visit to the regions devastated by the *Great East Japan Earthquake* and tsunami. Words cannot describe how I feel so needless to say that there are no words to describe how the people of

these areas and Japan feel. The manner in which Japan are united in their resolve is a great tribute to the strength of the Japanese people and the nation. I wish Japan all the best in the recovery efforts.

#### **Pleasure**

Tokyo is as fantastic as I remember from my original visit in 2004. I have become older, wiser and less wild since then and it has been great to see the progression that Japan has undertaken over this short period. There is no question that the people are kind and helpful, but the transport system during my first visit was not as friendly to me. With English now being prominent on the rapid transit system, this has come a long way to alleviating the challenges I had previously faced. It was also great to experience Japanese culture from a businessman's perspective. A lot of jovial conversations over my favourite Japanese cuisine accompanied with countless bottles of sake, beer and umeshu were rather enjoyable when discussing work life and worldly matters. My hosts from the AJCE were particularly helpful in educating me in the ways of discerning sake quality.

Hayashi San was kind enough to organize a motorbike ride to Mt Fuji where I was able to see the beauty of this natural treasure.

Once again I would like to extend my deepest gratitude to all the people who have helped me along this brief but enriching journey and I highly recommend that young professionals take on this opportunity in the future. I would especially like to thank Soichiro HAYASHI and the Oriental Consultants team for investing their time in me and this program. I look forward to reuniting with them in the near future for *business and pleasure*.  
*Domo Arigato Gozaimasu.*



## AJCE Activity 2012

### My YPEP 2012 Experience



**Claire Miller**  
 YPEP2012 Trainee  
 AECOM

#### Introduction

During my participation of the YPEP program organised by the AJCE, I was fortunate to spend my time with members of the substructure bridge design group at Chodai. I was excited to spend my time with Chodai as they specialise in long span bridge design, which I have not had much exposure to whilst working in Australia. During my time with Chodai I went on a site visit to Sendai, prepared and discussed differences between Australian and Japanese bridge design methodologies with the substructure team, partook in a homestay and was trained in how to evacuate the office building by exiting out the window. The photos included in this report show some of the fun I have had whilst in Japan.

#### Work Experience

Each work day in Japan I travelled on the Tsukuba express from Ueno to Tsukuba. I soon learnt the art, perfected by the Japanese, of sleeping on the train and waking up just in time for my stop. The main difference between Japanese and Australian offices that I noticed immediately was the noise level and the hours worked. My office in Australia is always busy and quite chaotic with the bustle of people going about their daily jobs, whilst in Japan the office has a serene silence to it. I also noted that my colleagues tended to work very late

Compared to the departure time of 5pm of most staff in Australia. I have learnt a lot of interesting information about bridge design over my three weeks with Chodai and am keen to share it with my colleagues when I return to Australia.

#### Cultural Experience

During my time off from work, I tried to experience as many cultural experiences and sights as possible. One of the most enjoyable experiences was staying at a traditional ryokan, which I was able to do in both Miyajima and on our YPEP trip to Kyoto and Nara. In particular I enjoyed trying the variety of Japanese cuisine at the Enkai experience, as well as the experience of the Japanese public baths and onsen.

#### Summary

I have had an incredibly enjoyable experience in Japan as a part of the YPEP program, filled with much laughter and learning. The kind hearted nature of the Japanese people has made it a country I would like to come back to and visit many times - especially when it is snowing! I would like to thank the AJCE and Consult Australia for organising such a rewarding program. Special Thanks to the staff at Chodai in Tsukuba and in particular my mentor Osamu Matsumoto san who was very patient when I was practicing my Japanese.





## AJCE Activity 2012

### YPEP 2012 Summary- Chodai Co Ltd

**Garrett Bray**  
YPEP2012 Trainee  
BG&E Pty. Ltd.

As a structural bridge engineer, I was fortunate to be partnered with Chodai Co Ltd, a top calibre design firm with a strong 40+ year history of impressive bridge structures including some of the longest suspension and cable stayed bridges in the world.

I was based in the Sendai Office where I was met with fantastic hospitality, engaged in many technical exchange activities and enjoyed sharing plenty of social and cultural occasions with the friendly team there.

Due to its location in Northern Honshu, the effects of the 2011 Great Eastern Japan Earthquake and Tsunami have dominated the project work of the Sendai branch over the last 18 months. As part of the program I had a full day site visit to some of the most affected areas between Sendai and Kesenuma City where I inspected several severely damaged bridge structures as well as site locations and plans for improved replacement structures.

In another site visit to the severely damaged Wakabayashi Ward in the East part of Sendai, I observed the current construction of new 7m high tsunami walls proposed for approximately 32km of coastline with a core composed of tsunami debris. My exchange also included a visit to Hachinohe Institute of Technology where I presented to a class

of final year undergraduate students, PhD students and university lecturers. I was treated to a tour of the laboratory facilities and ongoing tsunami modelling experiments and their results.



In the office, we discussed differences between Australia and Japan in bridge design processes, contract arrangements and structural detailing.

I was also treated to a range of social and cultural experiences including sampling different Japanese delicacies over many meals with co-workers, an office family BBQ by the river, a homestay at the Sendai director's house, games of futsal, sightseeing around Sendai and Matsushima Bay as well of course the Cultural weekend visiting Kyoto and Nara.

YPEP 2012 has been a amazing cultural, business and technical experience and I thank the kind people of Chodai Sendai branch and of the AJCE for this opportunity.

## AJCE Activity 2012

### Summary of YPEP 2012: Pacific Consultants

**Ashleigh Chambers**  
 YPEP2012 Trainee  
 Beca Pty. Ltd.



#### Introduction

During my YPEP in Japan I was fortunate enough to work with Pacific Consultants (PCKK) based in their Shinjuku office. During my time with PCKK I was able to learn about technical engineering applications and experience Japanese culture.

#### Work Experience

After a very warm welcome to Japan with welcome parties with the AJCE and PCKK, I was given the opportunity to attend many site visits which allowed me to witness some of the impressive and unique engineering works in Japan relating to water and environment, river management, hydraulics and disaster planning and management.

I visited Lake Inbanuma, which has the poorest water quality in Japan, where I was able to see aquatic plant restoration, a working windmill, the Kaga-Shimizu Spring and a stormwater turbidity treatment area.

I travelled to the Chiba Prefecture to see Gaikaku Housuiro, which is used for flood mitigation and is the largest underground water discharge tunnel in the world. Here I was able to explore the 70m high underground reservoir.

I participated in a Machi Aruki (town walk) in Kiryu City with local community representatives to identify the best evacuation route from the town.

I visited the beautiful town of Hakone, and witnessed many examples of Sabo, techniques used to mitigate damage cause by sediment related disasters, including large Sabo dams, driftwood and debris screens, training dikes and river bank reinforcement.

I attended presentations on hydrodynamic techniques used in Japan and Thailand and witnessed how these techniques were implemented to minimize riverbed erosion at the Asagawa and Tamagawa rivers.



I visited the new science town of Tsukuba, where I saw the many hydraulic models used for river flow analysis at the PCKK laboratory, a 200m long 1:60 scale model of the Tenryugawa river and a tsunami model at the

Department of Land Conservation and saw the VLBI Antenna which is used to precisely measure movement in the tectonic plates at the Museum of Mapping and Surveying.

#### Cultural Experience

I was very fortunate to experience and learn so much about Japanese culture during my training. I visited many shrines and temples in the Tokyo area including Naritasan, Meiji-jingo and Senso-ji and visited Asakusa, Ueno, the Imperial Gardens and Odaiba where I saw Tokyo from the top of the Pallet Town ferris wheel.



I was also fortunate enough to travel to Kyoto where I was able to see the amazing Kinkakuji, Nijo-jo, Sanjusangendo and the Kiomizu temple to name a few. I also visited Nara where I fed the cute deer and saw the very large statue of Buddha at Todaji Temple.

I have also gone to a baseball game, played pachinko, eaten at many izakaya and tried so many delicious Japanese foods and sake, been to a traditional onsen, seen a traditional Japanese dance, sung at karaoke and went to a traditional Japanese barbeque on the banks of the Tamagawa with my PCKK workmates and their families.

#### Summary

This has been an amazing experience being immersed in the wonderful culture of Japan with such generous people and would like to thank AJCE and Consult Australia for organising YPEP 2012. I would like to say a special thank you the awesome, hard-working and kind friends I have made at PCKK who have taught me so much, especially my patient mentor Hiromi Kurosaki. It has been a 'sugoi' experience that I am very grateful for and look forward to visiting Japan again soon.



## AJCE Activity 2012

### My Japanese Experience with PCKK

**Robert Hickey**  
YPEP2012 Trainee  
AURECON



For the YPEP 2012 program I was given the amazing opportunity to work with Pacific Consultants (PCKK) in their Water Environment section. Pacific Consultants is a multi-disciplinary company very similar in size to my own company, Aurecon. To introduce me to the different topics that are important to water engineering at PCKK (and Japan in general) my mentors Yuasa-san and Kirihara-san set me several assignments as part of my pre-training dialogue. These assignments required me to research and compare the history, legislation and current state of water pollution in Australia and Japan and this process was invaluable to my preparation for the training.

For the training program, PCKK had organised a comprehensive set of field trips to demonstrate both projects that PCKK are involved in and projects that are significant to the industry. Each trip was organised by a different working group within the section and it showcased the breadth of expertise residing at PCKK. Our first trip was to the Lake Inbanuma area to look at the lake and its watershed.

There the team had implemented some novel measures to improve the water quality in the lake. The measures included reducing first-flush sediment in a stormwater reservoir and restoring near-extinct plant life to a section of the lake shore. This 'whole of watershed' approach to the problem was very impressive.

We also travelled to the Tokyo Metropolitan Area Discharge Channel where we took a tour of the pump facility and main surge tank. The immense size of the system is both an engineering marvel and a very visible indication of the size of the flooding problems that affect Japan.

Other field trips included Kiryu-city where we observed the engagement with the local community in disaster planning; the Hakone area to see examples of Sabo Dam usage (and gain some extra life courtesy of kuro tamago!); and

Tsukuba city where we visited both the PCKK and National Institute of Land Management hydraulic laboratories. At the hydraulic laboratories it was amazing to see the scale of the river, tsunami and other hydraulic models that are developed for physically testing ideas.

PCKK members in the River Planning group also presented us with elements of their research into varied topics including improved methods of calculating cross-sectional velocity and numerical modelling of large stones in river flows.

In addition to the technical aspects of the training my hosts also introduced me to a myriad of Japanese food and culture. Soba, okonomiyaki, takoyaki, yakisoba, nihonshu, schochu, izakayas and karaoke were all enjoyed immensely. While I think my Japanese language skill is still very poor, my understanding of the word 'Nomikai' is now excellent.

Throughout the whole experience I found all of the PCKK members (and Japanese people in general) to be extremely generous, hard-working, fun and in many cases hilarious. The hard-working nature of the consultants at PCKK is easily seen in the long hours spent at the office, much longer than many Australian consultants.

Overall I have an amazing time on this exchange and have made many friends, both Australian and Japanese that I hope to stay in touch with. I would like to thank the AJCE and Consult Australia for creating this invaluable opportunity and even more I would like to thank PCKK and its members for their generosity and hospitality.



## AJCE Activity 2012

### YPEP Program 2012 Report

**Sean Keown**  
YPEP2012 Trainee  
Arup



#### Introduction

For the 2012 YPEP program, I was lucky enough to be hosted by CTI Engineering in Tokyo.

#### Pre-training program

The pre-training dialogue helped me prepare for the program and assisted in initiating relationships with CTI staff. CTI instructed me to prepare a report and presentation on water resource management and water related disasters in Australia and Japan. This was a great way to initiate discussions between myself and CTI about the differences between the two countries water industries and water related issues.

#### Program

CTI prepared a fantastic schedule for my 3 week program that was incredibly informative and rewarding. I received a great introduction to the operations of the CTI office and the structure of water resource management in Japan.

CTI led me on a two day tour of the disaster affected region around Sendai that was a shocking but rewarding experience. From an engineering perspective, the large scale levees that are being built and the rehabilitation work taking place were rewarding to see. Learning about the disaster management strategies and the work being undertaken to return life to normal in the area was also a valuable experience. On a personal level, it was amazing to see the resilience of the locals in such tough conditions and I had a brilliant time with the welcoming people of Tohoku.

CTI took me to see the Koraku DHC sewer pump station that uses the thermal energy of sewerage to power heating and air conditioning for buildings in the Koraku-1 area in central Tokyo. This innovative technology has allowed a significant reduction in the energy usage and carbon emissions for the area. I also visited the 'Kuramae Mizu no Yakata' where I found it particularly interesting to learn about combined sewer and stormwater systems and the

stormwater-wastewater separation techniques. I was also intrigued to learn about the advanced tunnel rehabilitation technologies used in Tokyo.

CTI took me to visit their very impressive Tsukuba Hydraulics Laboratory facility. At this facility CTI has the capacity to carry out large scale experiments to find solutions to problems such as sedimentation build up, pollutant distribution and flooding issues. I think this is a fantastic way of ensuring the effectiveness of engineering solutions and a valuable tool for finding solutions to unique problems.



One aspect of CTI's business I found particularly interesting was their disaster management strategy expertise. This is an area that is new to me so it was interesting to learn about disaster evacuation plans and the logistics involved with rehabilitation. I also got the chance to visit Odaiba where I learnt about the interesting work CTI is currently undertaking there following the issues experienced in the last tsunami/earthquake.

I found the weekend trip to Kyoto and Nara a fantastic experience. I learnt a lot about Japanese history and culture and had a lot of fun. Staying at the traditional Japanese hotel was a great experience and the food, sake and karaoke were all spectacular!

#### Thank you

Thank you to CTI and AJCE for this fantastic and rewarding opportunity. The staff at CTI were incredibly welcoming and hosted a brilliant program. The kindness, hard work and expertise of the CTI staff made this program a truly valuable experience.





## AJCE Activity 2012

# My Experience in Japan with CTI Engineering

**Samantha Passmore**  
YPEP2012 Trainee  
AECOM



### Introduction

The River and Water Resources Division of CTI Engineering, based in Saitama City, has been a great host during my three week program here in Japan. During my time with them I received a number of introductions to each group within the department, and was able to compare Australian and Japanese water issues and solutions. I also was very lucky to attend numerous site visits.



Hijikata San making me feel at home



Tohoku Branch party with Tago San and Kato San

### Experience in the Office

On my first day we held presentations comparing work life in Australia and Japan. I could not believe a 1am finish is not unusual here! I then received introductions to different groups in the Saitama office, including Flood Mitigation, Sediment Management, Water Quality Management, River Administration, Coastal Engineering, Water Resources, Water Infrastructure, and Adaptation Strategy for Climate Change. In the Tokyo Main Office I was introduced to the Asset Management and Disaster Mitigation groups.

I enjoyed comparing common methods of dealing with issues in each country. For example large levees are not as popular in Australia, and River Law exists across a number of documents, not just one. I was also surprised to hear that there are water shortages in Japan as well, despite few droughts, due to the large population.

Within the office I quickly learnt about the culture of bringing a gift to share with colleagues upon return of a trip away. This is a great tradition as I got to try many delicious sweets from various regions in Japan.

### Experience out of the Office

Throughout my training, CTI was very generous with their time and took me on many interesting site visits. I was able to see the tsunami affected areas around Sendai and along the southern coasts of the Iwate and Miyagi prefectures. I am still unable to comprehend the speed and size of the tsunami, despite seeing the damage, images and videos. I also went on a boat tour to see the bridges of Tokyo city, the CTI Experiment Institute in Tsukuba, the Metropolitan Outer Area Discharge Channel, the levees, superlevees and Watergates along the Ara River, and to the Edo Museum (I feel I was very lucky to have this one included).

The YPEP trainees and their mentors visited Kyoto where we experienced an Enkai Party. The number of parties we have had, and the number of sunrises I have seen, showed me the Japanese definitely know how to party!



CTI Members showing us reconstruction works in Sendai



CTI Members at the Edo-Tokyo Special Study Cruise

### Summary and Acknowledgements

I feel so grateful to have had this exchange experience, and I can't wait to share everything I have learned with my colleagues in Australia. I thank all the staff at CTI, and all the strangers on the street who helped me when I was lost, for speaking English with me, or for being patient with my Japanese. I particularly want to thank Mr. Naoki Fujiwara for having me in his team and for giving me his employee's time, Ms. Chie Kato for being an amazing and patient mentor and Mr. Kengo Shibata, for being a good Japanese teacher and for his entertaining karaoke skills.

## AJCE Activity 2012

### My Japanese Adventure

**Greg Holland**  
YPEP2012 Trainee  
MWH



#### Introduction

I was forwarded information on YPEP 2012 by a colleague and following a discussion with my manager, I jumped at the chance to apply. I was delighted to be accepted on to the exchange, as I thought it would be a great way to experience Japan. I was given my first choice placement at Nihon Suido Consultants (NSC), in the domestic wastewater section.

#### Knowledge Sharing

One of the main aspects of the exchange was the opportunity to share knowledge and experiences with the engineers at NSC. Several workshops were organised with young engineers, the overseas business department and general discussions about odour control techniques and wastewater treatment.

I was lucky to be able to go on several site visits during my stay. These included state of the art underground Ariake Water Reclamation Facility in Tokyo and Chiba Nogiku no sato Water Treatment Facility in Chiba Prefecture.

I was taken on a three day trip to the Tohoku region to see the devastating effects of the 2011 earthquake and tsunami. In Kesennuma City we visited the completely destroyed Kesennuma Wastewater Treatment Plant and the temporary treatment plants that have been installed in the area. I could not believe the impact that the tsunami had on the area.



Stranded ship in Kesennuma City

After Kesennuma City I travelled to Kooriyama City to visit Kenchu Sewage Treatment Plant where, as a result of the Fukushima Daiichi nuclear disaster, radioactive sludge is being currently produced on site.

The sludge incineration facility at the treatment works is currently running at capacity and careful management of the waste is critical to ensuring minimal impact on the surrounding environment.

#### Cultural Experiences

As part of my preparation for the exchange, I started to learn the Japanese language and find out about the culture. This served me well in Japan, although my Mancunian Japanese accent definitely needs some more work.

During my time in the Japan I have experienced the unique contrasts that Japan has to offer, from the beautiful autumn colours and breathtaking temples of Kyoto and Nara to the bright lights and busy streets of Tokyo.

The Japanese food has been eye opening and mostly delicious but I quickly learnt that the attitude of 'eat first, ask questions later' is required.

My new found love for sake would probably add another page to my report, so I have left this out.

#### Conclusion

My time in Japan has been extremely rewarding and I have been left with great memories. I have made many friends and business contacts both from Japanese companies and the other YPEP participants. I hope that the relationships made during these three weeks can be maintained and that they will lead to more mutually beneficial opportunities in the future. I have decided to continue to study and plan to return one spring to see the cherry blossom.

I would like to take this opportunity to thank both the AJCE and Consult Australia for organising the exchange. I would like to personally thank the staff at NSC for hosting me for the three weeks, with a special mention to the NSC mentors Kazuhiro KISHI and Riota ADATI.

## AJCE Activity 2012

### An Australian in Japan



**Eleanor Chan**  
PEP2012 Trainee  
Aurecon Australia Pty Ltd

#### Introduction

I am a process engineer in the water and wastewater industry and was fortunate to be placed in the Water Supply team at Nihon Suido Consultants Co. Ltd.

During my three week placement, I partook in knowledge and cultural exchange discussions, site visits to water, reclamation and sewage treatment plants, a cultural trip to Kyoto and Nara.

#### Knowledge and cultural exchange discussions

We had open discussions and talked freely to find out about Japan and Australia's cultures. Learnings that I took away were that in Japan, a 10 hour working day is normal, design considerations for disasters are concerned with earthquakes, female representation in engineering is still low and that Japan places high importance on Overseas Development Assistance.

#### Site visits

Site visits included trips to the Ariake Water Reclamation Centre, Chiba Nogiku no Sato Water Treatment Plant, Kesenuma City and Kenchu Sewage Treatment Plant. Recycling is the norm rather than an innovation. In the wastewater treatment plants that I visited, there was 100% recycling and zero waste. Treated wastewater is recycled for toilet flushing and for industrial reuse.

#### Design improvements to mitigate against disaster

Having seen the devastation caused by the earthquake and tsunami when I visited Kesenuma City, it is heartening to see that Japan doesn't intend to be as vulnerable in the future. Key design innovations being implemented are key infrastructure and roads being built above the flood water levels, the use of super levees to prevent flooding, emergency public taps installed at the water treatment plants.

#### The water industry's response to radioactive sludge

At the Kenchu Sewage Treatment Plant, the sludge will continue to be captured and stored on site for at least the next 30 years until the levels of radioactivity have decayed to acceptable levels. Seeing the bags of sludge impressed upon me that the impacts of the Fukushima disaster will be long lasting and there is never an easy answer.

#### Kyoto and Nara cultural trip



My favourite part was visiting Nara and Kyoto. I enjoyed learning how the capital of is determined by where the Emperor lives, seeing Kyoto's famous pottery and learning about the children's festival.

#### Recommendations

I believe that Japan as a whole needs to work towards better work-life balance and increase diversity in the workplace and more actively support the increase female representation in engineering.

#### Acknowledgement

Thank you to NSC and the AJCE for this wonderful opportunity to experience Japan. I have made lots of new friends and I hope to work in Japan in the future. I would also like to personally thank my mentors Riota Adati and Kazuhiro Kishi.

## AJCE Activity 2012

### YPEP 2012

**Zisis Plakas**  
YPEP2012 Trainee  
URS



Being a railway engineer, my placement was with Nippon Koei in the international railways division. In my first few days I was welcomed to the office in Yotsuya and I was briefed on the company's line of work and active projects. It was a pleasant surprised finding out that we have worked on common international projects in the past. In the next few days I was introduced to the history of Japanese railways and the technology used today. I was also taken on 3 site visits. One in Sendai to visit the tsunami effected areas, one at Nippon Koei's Research & Development center and one at Toyama to visit the Hokuriku Shinkansen development.

Sendai was an eye opener to say the least. It was quite devastating to see the damage that was done in the coastal areas. We visited a number of locations to see damaged structures and buildings as well as the sorting sites of material collected from the effected areas. Finally we visited the tsunami defence dykes which are being reconstructed and upgraded along the coast line.

In my first weekend I was very kindly welcomed at the Shimizu's residence for homestay. There I sampled the Japanese family lifestyle and I was given my 30th birthday cake!

In the second week of my stay I visited the Nippon Koei R&D center in Tsukuba. There I was briefed on the line of work undertaken by the centre and was taken on a tour of the site.

My third site visit was in Toyama for the construction of the Hokuriku Shinkansen and the developments at Toyama station.

The 2 day visit to Kyoto and Nara was remarkable. My personal highlights of the trip were the visit to the Sanjusangen-do, Kinkaku-ji

(Golden Pavilion), Big Buddha and the deer park at Kasuga-taisha.



The YPEP has been a very valuable experience both on a personal and a professional level. It has given me a unique flavour of Japan, its people and the Japanese culture. I have made some excellent professional contacts and most importantly new friends. I would like to thank the AJCE, Mr Hidekazu Konishi, Mr Tetsuto Nakano and the Shimizu family for taking time off work and their families to make me feel welcome and I hope to return the favour in the near future.

This is my fourth time in Japan. The thing I came to love most about Japan is its versatility and its people. There is such a range in personalities, lifestyles, weather, scenery, styles.... Beach in the summer vs skiing in the winter, Tokyo city lights vs the beautiful countryside, tradition vs modernisation. Somehow Japan makes it fit together.