

BCL NEWSLETTER

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TO OUR READERS

As we approach 2010, we may be relieved that the warmest decade since accurate records were started in 1850 will end with it but there is nothing to rejoice about! The weather wizards tell us that the next decade will be even worse. The global surface temperature has risen significantly over the last 150 years and keeps rising. The Copenhagen talks under the banner of the UN Framework Convention on Climate Change are the boldest attempt yet in a 17-year odyssey to turn back the threat of climate change through consensus. Over 130 heads of state/government and many leading climate scientists, thinkers and activists worked for two weeks to arrive at a consensus. Success of the conference would have been a significant step toward preserving the world as we know it. Sadly, the conference ended with a deal far short of expectation but we can agree with the UN Chief that it is an "essential beginning."

Next December another conference in Mexico will try to reach a binding international accord to limit the global temperature rise to 2°C or less. We look forward to its success.

I thank you on behalf of the management and staff of the company and myself for your continuing support. Wishing you a Happy New Year. ■

Mahub Haque
Mahub Haque
Managing Director

UJAR-YEVLA KH ROAD OPENED TO TRAFFIC

The Ujar-Yevlakh road, a 53 km section of the 440 km east-west highway M1 through Azerbaijan, was opened to traffic on 19 Nov, 2009 by the President of Azerbaijan HE Ilham Aliyev.

The road is located in central Azerbaijan (see map on page 5) and follows, in part, the ancient Silk Road. Today, it is a part of the important highway connecting Baku to Tbilisi, the capital of Georgia. The road had severely deteriorated but with its rehabilitation and upgradation to international standard, conditions have improved tremendously in terms of time, cost and safety which, together, will bring about positive impact in the socio-economic conditions in the three districts of Ujar, Aghdash and Yevlakh.

contd. on page 03

HYDROLOGICAL STUDY OF ESTIMA - MAGUE ROAD IN MOZAMBIQUE

Estima-Mague is an important road in the province of Tete in Mozambique. The road passes over highly undulated terrain in the north of the region and is unpaved, and with poor surface condition. Bridges, box culverts and drifts over the rivers and streams are the main drainage structures of the road.

contd. on page 03

CenTR News

The CenTR held an important seminar on "Earthquake Risk Assessment on Major Cities in Bangladesh" on 29 Oct. The keynote speaker at the seminar was Dr Maksud Kamal, a National Expert working in Comprehensive Disaster Management Programme under the Disaster Management Bureau. In his presentation Dr Kamal highlighted the activities of CDMP from the beginning of 2008. The programme has covered Dhaka, Chittagong and Sylhet and will



A view of Seminar on 'Seismic Risk Zoning' at CenTR

continue till 2014 to cover the entire country. The studies feature both deterministic and probabilistic seismic micro-zoning established through time predictable fault modeling, assessment of seismic hazards in terms of Peak Ground Acceleration, development of fragility curves for existing buildings, vulnerability of infrastructures and estimation of risks using Hazard US methodology.

In an accompanying paper Prof Syed Humayun Akhter of the Geology Department of Dhaka University presented a well documented paper entitled "Earthquake Hazard and Risk Reduction in Bangladesh" and provided an illuminating view of the plate movements in Bangladesh. His presentation described the recurring

earthquakes of varying intensities in the country and in particular the location of epicentres in Madhupur, Sylhet and Chittagong.

Prof AMM Safiullah, VC of BUET, Prof Tahmeed M Al-Hussaini of the NCEE, BUET, Mr Tanwir Nawaz visiting Architect and Urban Planner from Canada, Engr M Abu Sadeque, P.Eng, Deputy Secretary, MoFDM and Engr Tanveerul Haque Probal, President, REHAB participated from the podium in a lively discussion with both the contributors as well as the floor

members and made the seminar amply rewarding and significant. Prof Al-Hussaini raised some thorny issues confronting the geologists and the structural engineers and the audience were convinced that there is need for examining the validity of the relevant parameters of the BNBC.

Holding a national seminar soon on the subject involving the concerned authorities is being contemplated.

During the 4th Periodic Audit the Heads of Division of the company were briefed about the management control procedures under ISO 9001:2008 by the DNV team led by Mr Asoke Dasgupta. Within a year from now the ISO 9001:2008 would be in place at BCL. To meet the anticipated demands of the transition, a 4-day intensive training programme was conducted by Mr Dasgupta for selected staff members of the company.

Mr Giasuddin Ahmed, Senior Engineer shared his experience of working on the Detailed Design of Mohembo-Beetsha

Road project with his colleagues and fellow engineers at a seminar entitled "Lessons Learned from Projects" held at the CenTR on 16 Nov. In his presentation of the keynote paper, Engr M A Sobhan, Managing Director, Design Planning & Management Consultants, highlighted the emphasis placed on conservation of nature and protection of endangered wild life and plants in Africa. Animal barriers and conservation of the Baobab trees received serious consideration in the design of the subject road project in Botswana.

A 2-day structured training on "Prestressing of Concrete for Construction of Engineering Structures" was conducted by Engr M Shurruzzaman, a Senior Engineer at BCL on 8-9 Dec at the CenTR. Shurruzzaman demonstrated the construction techniques and application of prestressed concrete in structures, particularly in girder bridges. His initiatives at sharing his knowledge were appreciated by his colleagues and fellow engineers attending the seminar.

The author attended a seminar entitled "Effective Education for Employment and Prospect of BTEC Qualification in Bangladesh" which was held at Sonargaon Hotel on 07 Nov. Messrs Shahin Reza, Regional Operations, Manager and Sami Baig, Regional Director of Edexel addressed the seminar. Mr Md Abul Kashem, Chairman, BTEB was the Chief Guest at the Seminar. An active discussion followed highlighting the capacity of Edexel in organising courses for promoting employment opportunities for national youth.

The author also attended Corporate Launching of Pinnacle LLP at the Pan

Pacific Hotel Sonargaon on 6 Dec. The event was launched to announce the emergence of Pinnacle in Bangladesh for offering a range of training programmes for the Corporate, SME and various other sectors. The Pinnacle Management assured quality and range of services at reasonable price to the executives present at the launching.

Information on the training activities in the next quarter is available from the Head of CenTR at:

Tel : 9862713-16
 Fax : 9893321
 email : centr@bclgroup.com ■

Dr AAM Shamsur Rahman

UJAR-YEVLA KH ROAD OPENED TO TRAFFIC

[contd. from page 01]

BCL was commissioned for the consulting services for construction supervision for the project in July, 2005



The President of the Republic opening the Highway to traffic

through an international competitive bidding. BCL's first task was to carry out a review of the road design prepared earlier by a previous consultant and to prepare the detailed design of a 9 km long 4-lane dual carriageway Yevlakh town bypass and a 260m long bridge over the Kura River. BCL subsequently assisted in tender and award of

the construction contracts.

The construction work started in April, 2007 under a FIDIC 4 contract with BCL as the "Engineer". The project was completed at a cost of US\$ 67

million of which \$ 22 was financed by the Islamic Development Bank, \$ 6 by the OPEC Fund and the rest \$ 39 million by the GoA.

During supervision of the construction the Consultant had to overcome two major challenging issues:

- While preparing the sub-grade it was found that due to the presence of very soft clayey soils, saturated with high moisture, in-situ compaction was not possible. Suitable borrow pits were also not available within 20-25km of the project road. The only option was to maximize utilization of the existing embankment soils. This was done by excavating to a depth varying from 0.50 to 1.5 m, and processing the excavated soils to correct moisture condition and reusing it for building the embankment in layers to the sub-grade level.
- The other issue was the deficiency in the bitumen used for construction of the asphalt concrete pavement. The bitumen was a local product. This was overcome by modifying the bitumen with SBS polymer and at no additional cost.



Picture shows the recently constructed bridge on the river Kura

The construction works were originally planned to be completed by Feb, 2009 but was completed on 30 Oct 2009. A 250-day extension was granted to the contractors due to adverse winter weather conditions and due to the necessity to rehabilitate the 260 m long old Kura River bridge - a work which could be taken in hand only after completion and opening of the new bridge.

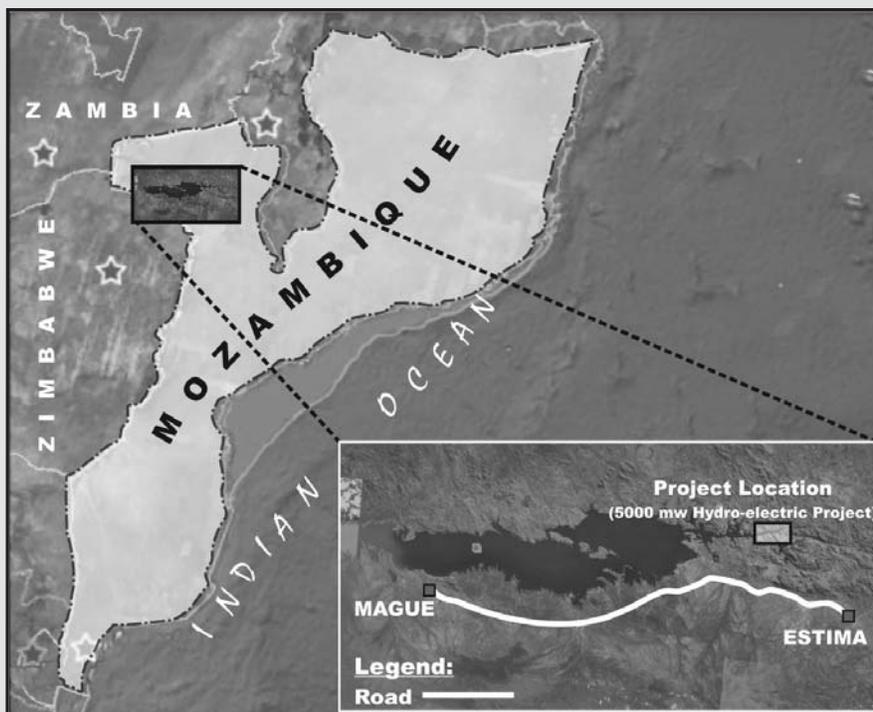
The author was the Team Leader of BCL's project team. ■

Abdul Hoque

HYDROLOGICAL STUDY OF ESTIMA - MAGUE ROAD IN MOZAMBIQUE

[contd. from page 01]

Beside these structures, there are hundreds of pipe culverts for cross drainage of the area. The main rivers carry considerable flow with high velocity at peak flood. All drainage structures, particularly the drifts and many of the culverts were reported to be overtopped during flood due to inadequate hydraulic condition. Other drainage structures used as equalizers have little or no hydraulic problem, having adequate waterway opening. The road is shown in the figure.



Map showing location of the Mague-Estima Road and the proposed Hydroelectric Power Plant

Civil and Planning Group (CPG), an engineering consulting firm from Zimbabwe, was engaged for the design and supervision of the road. The work was awarded in June 2004 and CPG submitted the Final design report in February 2005. The execution of the work has already started under the supervision of Technica Engineers and Consultants Ltd (Technica), who have been engaged as the Consultant for supervision of construction of the project. During the design phase, the previous consultant made a drainage study where a detailed inventory of all drainage structures was done but the required detailed calculations for computing the capacities of the proposed structures were not furnished in the report. In addition, drawings of the proposed drainage structures, particularly for the drifts, at river crossings are not detailed to the extent suitable for execution.

Under this circumstance, the Supervision Consultant Technica requested BCL to conduct a fresh hydrological study for

the project road as the existing report was considered inadequate to make any conclusion about the adequacy of the drainage structures. The author, a Senior Hydrologist from BCL, who was conducting a hydrological study for Gurue-Magige road in Mozambique at that time, was deputed for the undertaking hydrological study of Estima-Mague road on completion of his earlier assignment on 07 Apr, 2009.

On assuming the assignment, the Hydrologist, Mr Kamal, went through the previous reports and drawings prepared by the CPG followed by a 2-day field visit to the project road in mid April. He inspected all the important drainage structures and carefully examined the existing hydraulic condition of these structures. In total about 75 structures including the drifts at river crossings were inspected.

The drainage structures on these rivers are mostly low drifts with or without any culverts or pipes underneath to allow the low level discharge. On three major

rivers, namely the Daque, the Nacapiriri and the Domba there are no structures at all. The width of these three rivers ranges between 130-180m. Beside these three major rivers, there are three lesser rivers, namely the Tsaghoue, the Dirisana and the Nhamwezi, widths of which range between 40-80m. Other rivers are comparatively small, having widths between 20-30m with flow only during rain. The main river which crosses the project road is the River Daque at km 89.66. Its width is about 150m and carries a discharge of about 900 m³/sec with flow velocity more than 4m/sec. The structure across the river was washed away during the last flood in 2007.

During the study Mr Kamal made a detailed hydrological study along with hydraulic design of all the bridges and drifts across the major and lesser rivers. The assignment was completed within a period of 1.5 months of which 3 weeks were in Mozambique and the rest at home office in Bangladesh. Recommendations were made for replacement of 34 structures with adequate openings. Among those structures are 14 drifts (causeways), 18 box culverts and 2 bridges. Detailed outline drawing for all those structures including their maximum flow capacity were furnished in the final report. The Final Report was submitted on schedule in June 2009 to the full satisfaction of the Client. ■

M M Kamal

HIGHWAY IMPROVEMENT IN AZERBAIJAN

The East West Highway M1 in Azerbaijan is a primary artery of the country connecting Azerbaijan to Tblisi

in Georgia on the west and Russia in the east. On completion in Nov, 2009 of the 52 km long 2-lane and partly 4-lane Ujar Yevlakh Highway including a new 300 m long road bridge over the Kura

completed in about two years. Once in service, the roads will establish a comprehensive land transport link between Baku and Georgia.

passenger transport and the second major mode of freight transport. ■

M A Aziz



Map showing location of the Project Roads in Azerbaijan

River with IDB and OPEC co-financing, BCL signed contracts with a German Consulting firm, Kocks, for joining them in the consultancy services contracts for three roads in Azerbaijan. The roads are, Yevlakh to Ganca new 2-lane road (50 km) funded by KFAED, Gazakh to Georgia Border Road (including Ganca by-pass (74 kms) and about 160 km of three feeder roads under WB funding . Additionally BCL signed a separate contract with the Korean Contractor Ultra Azerco for providing them engineering service on the rehabilitation of existing 50 km long Yevlakh-Ganca highway. Ganca is the second largest city in Azerbaijan after the capital city Baku. Ganca stands at a key location on the East West trade corridor. Azerbaijan's all external trades with the world except that with Russia passes through this road.

the national government initiated improvement to the transportation system with its limited resources at that time. Now with its own money and with financial assistance from the major donors, most of the roads have been taken up for rehabilitation and improvement. Under the Second Highway Improvement project the Government has been taking up construction and reconstruction of the remaining highway sections and rural roads. BCL has recently been invited to submit offer for consultancy service for rehabilitation of 102 km long Hajigabul-Bahramtepe section of Highway M3 connecting Azerbaijan to Iran. The project includes another 200 km of rural roads and a major bridge over the Kura River.

The country's entire road network comprises a total of 25,000 kilometers and is considered the dominant mode of

Although these above constitute the principal trade route, the roads are in severely deteriorated condition due to heavy traffic load. The roads built mostly during the Soviet era by the then government now require total reconstruction. Since its independence in the early 1990's,

HYDROTHERAPY CENTRES IN TURKMENISTAN INAUGURATED

The Hydrotherapy Centres at Archman and Yili Suw in Turkmenistan, completed at a cost of US\$ 18.5 million, were inaugurated by the President of Turkmenistan on 26th Nov 2009. More than a thousand senior citizens of the country were invited to attend the ceremony and avail water therapy at both centres as guests of state.

Archman and Yili Suw have underground hot water. The mineral rich water is believed to be therapeutically potent, particularly for treating stomach, kidney and skin diseases. Soaking in this water is popular in Turkmenistan and the neighbouring CIS countries and patients from as far as USSR and some even from East Europe, the EU and North America come here for treatment. With the functioning of the new modern facilities the Centres will attract more medical tourists in increased numbers from the country and outside .

Archman and Yili Suw are located respectively about 130 and 100 km west of the capital Ashgabat and are well connected by road and rail with the capital. The new Hydrotherapy Centres have provision of 420 beds at Archman and 80 beds at Yili Suw. Both Centres are equipped with swimming pools and baths for taking hydrotherapy treatment. In addition one exclusive VIP suit comprising accommodation, swimming pool, steam-bath and massage facilities



A view of the completed Archman Hydrotherapy Centre

is included in the Yili Suw unit. Both the Centres have also provisions for normal medical treatment including ophthalmologic, dental and gynaecological. Besides medical and hydrotherapy treatment, provisions for physiotherapy and magnetic therapy are also available.

The Centres are fully equipped with natural gas heating, central air-conditioning, ventilation and fire fighting systems and standby diesel generator for the full load in emergency. The surrounding areas of the buildings are extensively landscaped with sprinkler irrigation, walkways, sitting areas, outdoor flood lights and decorative illumination.

The structures, being located in the one of the world's most seismically active regions, have been designed to withstand a seismic load of 9 on Richter Scale as required by the TOR. The exteriors of the buildings are clad with white marble. The external walls are provided with rock wool insulation for moderating extreme temperature of Central Asia winters.

The contract for Consultancy with BCL was signed on 24th September, 2005. The works were substantially completed at the end of October, 2009. The rectification of defective works along

with some minor remaining works, testing and commissioning of electrical and mechanical works are in progress and will be completed within the next 12 months of defect liability period.

The total cost of US\$ 18.5 million of the project includes supply of medical equipment and furniture. The project is funded by the Government of Turkmenistan jointly with Islamic Development Bank (IDB) and the OPEC Fund for International Development. The author is the Consultant's Resident Engineer for the project. ■

AKM Fazlul Haque

RESETTLEMENT OF PAPs AT BARAPUKURIA COAL MINE

High quality low sulphur content coal deposit was discovered in the mid 1980s



A view of meeting with the Project Affected Persons

at Barapukuria in Dinajpur in northern Bangladesh. Development of an underground mine started in 1996 and the commercial mining operation began in Sep 2005. The mine is presently extracting coal from 13 faces of the topmost seam. The production seam lies some 450ft underground. There are other seams at further depths, which will be mined in the future. The total coal reserve of the mine is estimated to last 50-60 years at the present rate of extraction.

A large scale subsidence of the land has been observed in the mining area, houses/homesteads have developed cracks and some are even destroyed beyond repairs. The people in the affected area are frightened and live in insecurity.

The total affected area is about 263 ha distributed in seven villages and comprise some 198 ha of agricultural land, 14 ha of household and highland and 51 ha of land containing common property resources. The project has so far affected 600 households, 260 commercial establishments including rice flour husking mills with six chatahs (rice drying yards), six mosques, one high school/ college, two primary schools, two madrasas, a community clinic, a post office, two bank branches and nine family graveyards.

The Bangladesh Coal Mining Company Ltd, a State-owned enterprise and the owner of the mine, has realized the gravity of the impact and genuine security concerns of the people for their land, properties, resources, lives and livelihoods and taken on

hand a project to prepare a comprehensive Resettlement Action Plan (RAP) to address the issues and restore the lives and livelihoods of the Project Affected Persons (PAPs). In addition to giving regular compensation packages, the Government is mulling over a plan to build a mining city nearby where apartments of different sizes with floor areas of 600, 800 and 1000 sft would be constructed and distributed free of cost to the affected households.

BCL was commissioned as the Consultant to the project in mid Dec 2009 to conduct the socio-economic surveys, inventory the property damages and loss, conduct studies and prepare the RAP and LAP (land acquisition plan). The surveys have been completed and the studies and RAP and LAP are in progress and expected to be ready by 31st Jan 2010. The author is the Consultant's Team leader and Resettlement Specialist for the project. It may be mentioned here that the Barapukuria mine is the first and the only operating coal mine in the country. ■

Md Rezaul Karim Chowdhury

ICE PRESIDENT VISITS BANGLADESH

It was during the Asia Pacific Conference in Hong Kong early this year I learnt that the ICE President Jean Venables and the Director General Tom Foulkes would visit India late in September. A few days later I was delighted to learn that she had acceded to my request to extend her tour to Bangladesh. The last ICE President to visit Bangladesh was Roger Sainsbury in 1999.



ICE President with the author at Majher Char

The flight from Delhi arrived Dhaka two hours late on 03 October. A reception had been arranged for the President and her party to meet ICE members and other guests. In spite of what turned out to be a rather long and tiring journey from Delhi for Jean, Roger and Tom they all made the best of the reception in interacting with the guests.

The next day i.e 04 October the Presidential party flew by seaplane to see the Majher Char transformation project in which I have been involved as Project Co-ordinator. Unfortunately owing to inclement weather we could not stay for very long at the island but the President and her party managed to see the newly constructed ferry terminal, the raised embankment, houses with their solar panels and water harvesting system, pond filtration and restoration of livelihoods like supply of fishing nets and fishing boats. The President was much impressed with this work and made reference to it in her speeches including the one during dinner with the Acting British High Commissioner the same evening.

On 05 October the President and her party visited Chittagong where they first went to

see the Third Kanaphuli Bridge, which is nearing completion and was designed by a British Consultant - High-Point Rendel. Then they went to the Asian University for Women where they had extensive interaction with the students and staff of the University. It is a unique and

impressive institution which when fully functional should produce women scholars of the highest calibre and this in turn should contribute to empowerment of women in Asia.

The final event on the same day was inauguration of the new ICE Centre by Jean Venables. Formal signing of a bilateral agreement of co-operation between the ICE and IEB took place thereafter and then a dinner for 400 guests. The warm welcome and generous hospitality accorded to ICE is a clear sign of the strong and cordial relationship, which exists between the two Institutions. Enthusiasm for the ICE visit is clearly apparent. ■

I A Khan OBE

ICE Representative in Bangladesh

BCL PREPARES FOR TRANSITION TO ISO 9001:2008

BCL has been recertified as an ISO 9001:2000 compliant company after an



Mr. Asoke Dasgupta conducting class test at the conclusion of training



BCL NEWSLETTER

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audit by its external auditors in Nov, 2009.

The company is now preparing for transition to ISO 9001:2008 which it hopes to achieve by Apr, 2010. For this, a number of staff members underwent training at CenTR to obtain an understanding of the new/additional requirements of the updated standard. The same staff members also received refresher training in internal audit.

ISO 9001:2008 has been developed in order to clarify some grey areas in the existing requirements of ISO 9001:2000 and to improve compatibility with ISO 14001:2004. ISO 9001:2008 does not introduce additional requirements nor does it change the intent of the previous standard.

The four-day training was conducted by Mr. Asoke Dasgupta, an auditor from Det Norske Veritas, BCL's ISO auditors. ■

Kazi M Huque

JOINING BCL FAMILY

Our heartiest welcome to:



(1)



(2)

(1) **Engr Aminur Rahman Khan**, Senior Engineer (Materials) and (2) **Engr Md Shamsul**

Huda (Sanitation) on their rejoining BCL on 26 Oct and 24 Nov, respectively.

Their return is a welcome addition to the professional resources of the company.

OBITUARY

Begum Rabeya Khatun, 92, mother of Ms Hasina Khatun, Senior Socio-Economist at BCL passed away on 8 Nov at her family home in Alamnagar, Rangpur. We at BCL pray for eternal peace of her departed soul.

IN MEMORIAM



The 8th Anniversary of death of BCL founder **Engr Mohibul Majid** was observed with due solemnity at BCL. The company staff and the family and friends recalled Mr Majid with profound respect and gratitude as a person who was richly endowed with both professional and human qualities.

Both his daughters, Farida and Fahmida, recalled their father's loving nature and eulogized him.

IN THE COMPANY

Dewan Jahangir, 52,



has a Diploma in Building and Architectural Drafting from Dhaka Polytechnic Institute (1973). He worked in several architectural firms before joining BCL in 1990. Jahangir assisted with the drafting on Cyclone Shelter and several other projects at the Head Office where he is rated as the best CAD Operator.

CONGRATULATIONS

We congratulate:

M Muraduddin, Manager (Training) for successfully completing a TOT on MFIs held at the Institute of Microfinance (InM) from 25-29 Oct and winning the InM accreditation as a Trainer in Accounting.



Iftikhar (Tim)

Ahmed Khan on the conferment of OBE on him at the investiture ceremony held on 12 Dec at the Buckingham Palace, London. He was recognized for his



contributions to UK/Bangladesh trade development and corporate social responsibility during his 21 years of service in Bangladesh and significant leadership in rebuilding Cyclone SIDR-hit village of Majher Char in south Bangladesh.