

CURRICULM VITAE

Name of Firm : Associated Consultants & Partners
Name of the Staff : A/Kareem Mohammed Zein
Profession : Geotechnical Consultant.
Nationality : Sudanese
Years with the Firm : Part time since 1990.

Membership in Professional Societies :

- Member of the Sudanese Engineering Society (MSES)
- Member of Sudanese Engineering Council
- Secretary and founder member of the Sudanese Society of Soil Mechanics and foundation Engineering (IISSMFF).

EDUCATIONAL QUALIFICATIONS:

- B.Sc. Honours, 2nd Class Division I in Civil Engineering (1975). Faculty of Engineering, University of Khartoum. .
- M.Sc. (Eng.) in Soil Mechanics and Foundation Engineering (1980); Civil Engineering Dept., Khartoum University.
- Ph.D. in Soil Mechanics and Foundation Engineering (1985); Strathclyde University; Glasgow; U.K.

EXPERIENCE:

Working: Experience

Occupation

- Aug. 1975 - Dec. 1975 Assistant Civil Engineer, Chief Engineer's Office; University of Khartoum.
- Jan 1976 - Dec. 1976 Teaching Assistant at Civil Engineering Department, of Engineering, University of Khartoum.
- Jan 1977 - Oct. 1980 Research Assistant at the Building and Road Research Institute (BRRI), University of Khartoum and Postgraduate Student for the Degree of M.Sc. in Civil Engineering.
- Nov. 1980 - Dec. 1985 Senior Scholar of Khartoum University at UMIST (Manchester) and Strathclyde University in Great Britain reading for Ph.D. Degree in Soil Mechanics and Foundation Engineering.
- Jan. 1986 - May 1989 Assistant Professor at Building and Road Research Institute (BRRI) University of Khartoum. BRRI, University of Khartoum.
- April 1994 –2000 On secondment from Khartoum University to work as Geotechnical consultant for Coyne et Bellier(French Consultancy Firm) in the post of material Engineer for Roseires Dam Heightening Project in Sudan.

Main Duties and Responsibilities:

As Teaching: and Research Assistant (1976 - 1980)

- Assistant the undergraduate students in the class tutorials, experimental testing in the Laboratory and field demonstration for various Civil Engineering subjects particularly Surveying and Soil Mechanics.
- Planning and undertaking several research projects in the field of Soil Mechanics and Foundation Engineering.
Planning and Management of site investigation works for various development projects in Sudan e.g. Jonglie Canal Project in Southern Sudan carried out in 1977- and 1978
- Training and supervision of soil technicians at the BRRI laboratory in performing various soil mechanics tests.

As Assistant Professor and Head of Soil Mechanics and Foundation Division at BRRI (Jan. 1986 - March 1994)

- Establishment of division policy.
- Undertaking various research activities in the field of Geotechnical and Highway Engineering Particularly on insitu testing of soils and the swelling behavior of expansive soils.
- Teaching the subject of "Soil Mechanics and Foundation Engineering" for Civil Engineering students and graduates at various levels e.g.
 - (i) B.Sc. (Honour) courses for final and semi-final students of the Civil Engineering Department, University of Khartoum for the academic years of 1987/88, 88/89, 89/90 and 90/1991.
 - (ii) Several special courses organized by BRRI for graduate civil engineers and geologists of variable duration (2 to 6 months).
 - (iii) Soil Mechanics course for High Diploma Degree in Earth Sciences at Wad Elmagboul Institute for the academic year of 1986/87.

Planning and management of site investigation works which included:

- (i) Drilling and sampling of soils and rocks for Civil Engineering purposes.
 - (ii) insitu testing of soils e.g. static and dynamic penetration tests.
 - (iii) bored piles and plate loading testing.
 - (iv) routine laboratory tests on soil and road construction materials such as classification test, shear strength test, swelling and consolidation tests, compaction, permeability and CBR tests etc.
- Supervision of B.Sc. final projects for Civil Engineering undergraduate students during academic years from 1986 to 1991.
 - Supervision of postgraduate student for the M.Sc. Degree in –Building Technology at BRRI, University of Khartoum.

- Coordination of large site investigating projects undertaken by BRR1 for British and French consultancy firms in Sudan. Examples are :
 - (i) Port Sudan, Phase III Development Project with Sir Alexander Gibb and Partners; 1987 - 1988.
 - (ii) Roseries Dam Heightening Project with Sir Alexander Gibb and Partners and Coyne et Billier of France; 1992/1993.
- Participation in various problem-oriented consultations relating to the design and/ or construction of foundations, particularly on potentially swelling soils. This included membership of technical committees formed by Government departments to investigate damage in several existing structures and propose appropriate solutions and remedial measures to such problems.
- Design and construction supervision for bored piled foundation of two multi-storey building in Greater Khartoum.

In the Field of Construction Materials

- Undertaking consultancy assignments as materials Engineer in the field of construction materials for roads, airports and large dam projects carried out by private Engineering Consultant for various governmental departments. The input comprised the planning and supervision of soils and materials surveys, writing technical reports and recommendations for the design, construction and maintenance of roads and airport payments.
The most significant and interesting of such assignments is the participation among the Design Consulting Engineers in supervision of construction works for Roseires Dam Heightening Project which has started in January 1994. This project aims at raising the dam by 10m which requires the placement of about 18 million cubic meters of different compacted fill materials on top of the existing embankment. The design and supervision of the projects is jointly carried out by Sir Alexander Gibb and Partners (Reading, U.K.), Coyne et Billier (Paris, France) and the Sudanese Associated Consultants and Partners (ACP) as a subcontractor for the above two internationally known consultancy firms.
Also given below are examples of other geotechnical assignments undertaken in Sudan and Uganda as a "Material Engineer" for the following projects:
 - (i) The airports and access roads at Elfasher, Nyala and Elgeneina town in Darfur State, Western Sudan for Newtech Industrial and Engineering Group Ltd (Khartoum) in 1989/1990.
 - (ii) Elfasher - UmmKaddada Portion (172Km) of the Western Salvation bitumen road in Western Sudan for the Associated Consultants and Partners (ACP) Ltd (Khartoum) in 1991/1992.
 - (iii) El Gedaref-Doka" 75 Km long bitumen road, in the Eastern State of Sudan for SA Consultants Ltd., Khartoum, 1991/1992.
 - (iv) BADEA Rural Feeder Roads Maintenance Project for gravel and earth roads with a total length of 1800 Km in four Uganda districts (Mpigi, Mukono, Mubende aIld Kiboga) surrounding Kampala city. This project was jointly carried out by SA Consultants Ltd (Sudan); Scott Wilson Kirkpatrick Consulting Engineers (UK) and the Associated Consulting Engineers (Uganda) in 1992/1993. :
 - (v) Doka - Galabat Road, 78 Km long Bitumen road, Eastern state of Sudan for SA Consultants Ltd. Khartoum 1993.

Technical Committees Membership

- Geotechnical and construction materials specialist and member of the steering committee for follow-up and evaluation of the feasibility study carried out by Monenco Consultancy Firm of Canada for the proposed multi-purpose Merawi High Dam on the River Nile, Northern State.
- Member of the technical committee for Soba Brick Factory of the University of Khartoum.

Training Course Attended.,

- Course on static cone penetration testing and interpretations of CPT data for design of shallow and pile foundation at Delft Geotechnics (Formerly Delft Soil Mechanics Laboratory, DSML) in the Netherlands; Oct. 1978 May 1979.
- Course on "Roads on Soft Soils" held at Delft Technical University in Holland, March May 1979.
- Course on "Building Technology for Developing Countries organized by the Building research Establishment (BRE), Garston, United Kingdom in Sept 1983.

Visits

- Delft Geotechnics and Delft Technical University in the Netherlands.
- Building Research Establishment, in the United Kingdom.
- Central Building Research Institute (CBRI) of Roorkee in India.
- Visiting Professor, School of Civil Engineering, Purdue University, India USA; March-June 1991.

Conferences Attended

Sixth International Conference on Expansive soils, Dec, 1987, New Delhi, India.

Publications

BRRRI Publications

- Zein AK.M and Ismaiel H.A.E. (1981); Use of static cone penetration test soil classification. BRRRI Current paper CP1/81.
- Ismaiel H.A.E and Zein A.K.M (1981); Correlation between SPT and CPT for some local soils. BRRRI current paper CP2/81.
- Ismaiel H.AE and Zein A.K.M (1982); Correlation between core resistance and undrained shear strength of cohesive soils, BRR! current paper CP1/82

Conferences

- Zein AK.M (1987); Comparison of measured and predicted swelling behaviour of a compacted black cotton soil. Proc. 6th Int. Conf. on Expansive soils, New Delhi, Vol. 1 pp 121-126.
- Ismaeil H.A.E and Zein AK.M (1987); Prediction of undrained shear strength and SPT using the static CPT data. Proc. 9th Africa region Conf. On Soil mechanics and Foundation Engineering, Lagos, 1987.

Languages:

	<u>Reading</u>	<u>Writing</u>	<u>Speaking</u>
Arabic:	Excellent	Excellent	Excellent
English:	v. Good	v. Good	v. Good
French:	Fair	Good	Good

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these Biodata correctly describe my qualifications, my experience and myself.

Signature



A handwritten signature in blue ink, consisting of a stylized name and the date 11/16/06 written below it.