

# Tun Shwe Zan

Senior Geotechnical Engineer at Hock Lian Seng Infrastructure Pte Ltd.

[Singapore](#)

[Civil Engineering](#)

## Current

1. [Hock Lian Seng Infrastructure Pte Ltd.](#)

## Previous

1. [SoilBuild Pte Ltd,](#)
2. [CS Bored Pile System Pte Ltd,](#)
3. [Swee Hong Engineering Construction Pte Ltd](#)

## Education

1. [Asian Institute of Technology](#)

## Background

### Summary

My depth experience have in field of soil investigation, geotechnical instrumentation installation and monitoring for earth retaining/stabilizing structures (ERSS), geophysical investigation, site investigation, geotechnical design activities, deep foundation works (especially diaphragm wall, bored pile, contiguous bored pile, secant pile, barrette pile, micropiling, precast concrete driven pile), slope stabilization(soil nail, rock bolt, shotcrete ,guniting), in-situ testing (standard penetration test(SPT),cone penetration test(CPT), pressuresmeter test(PMT), field vane test and permeability test), laboratory work (soil and rock tests) ,Civil works especially large-scale infrastructure projects, underground deep excavation of top down and bottom up constructions, earth- related structure such as dams, mass transit, underground deep excavation, tunnelling (slurry tunnel bored machine, earth pressure balance tunnel bored machine, NATM, rock blasting, spilling/forepoling and ground freezing),ground/soil improvement works(especially deep soil mixing, wet speed mixing, Tam(cavity) grouting and jet grouting),engineering geological mapping, rock mass classification (rock mass rating system, Q system, rock quality designation (RQD%) and NATM classification), soil classification, rock slope engineering, Structural works especially reinforcement concrete (RC structures) work for underground structures constructions, diaphragm wall and contiguous bored pile capping beam, tie beam, pile caps, parapet wall, water tank and pump rooms constructions.

I am also responsible for resolving all technical and engineering issues on site and liaising with the client representative and structural/geotechnical consultant.

### Experience

#### [Senior Geotechnical Engineer](#)

##### [Hock Lian Seng Infrastructure Pte Ltd.](#)

May 2015 – Present (1 year 6 months)Contract T223 Construction of Maxwell Station for Thomson Line

## **Senior Engineer (Civil,Structure,Geotechnical)**

### **SoilBuild Pte Ltd**

October 2014 – April 2015 (7 months)Assisi Hospice, Thomson Road

Review design, technical issue and method of statement for structure, civil and geotechnical engineering. Open cut deep excavation for basement, civil work for ERSS especially installation of sheet piles, secant bored pile's capping beam construction, installation of waler, diagonal struts,raker struts and structural works for basement slab, Pile cap, Column,beam, slab and skin wall construction, geotechnical monitoring and instrumentation, preparation for planning, implementing and monitoring site progress schedule accordance to construction programmes, liaise with consultant and sub contractors, quality control.

## **Senior Geotechnical Engineer**

### **CS Bored Pile System Pte Ltd**

2012 – 2014 (2 years)2 Tanjong Penjuru Crescent, 608968

Preparation design and analysis of geotechnical capacity, negative skin friction, ultimate skin friction, end bearing and ultimate geotechnical capacity of kallang formation, residual soils of Bukit Timah Granite and Jurong Formation and Old Alluvial soils deposits for Deep bored piles,Diaphragm wall and barrette Pile,and construction of Secant Bored Piles,Contiguous Bored Piles,and liaising with the client representative and civil & structure/geotechnical consultant.

## **Senior Geotechnical Engineer**

### **Swee Hong Engineering Construction Pte Ltd**

2011 – 2011 (less than a year)LTA C9081A, Sewer Diversion and Ancillary Works (Package A), Kallang Bahru

LTA C9081A, Sewer Diversion and Ancillary Works (Package A), Kallang Bahru  
Preparation and reviewed for Method of statement, microtunnelling and Pipe jacking works (Dia600mm-1500mm),reviewed method statement for Double tube Jet grouting, soil improvement of jet grouting(cement grout, sodium silicate grout) for Caisson shaft and sheet pile shaft constructions ,Geotechnical Instrumentation installation & Monitoring works of the existing utility services, structure and roads, caisson shaft construction for excavation, pipe jacking and microtunnelling works and interpretation and review of geotechnical instrument monitoring reports and soil investigation report.

## **Senior Civil Engineer**

### **Koh Brothers Building & Civil Engineering Contractor (Pte) Ltd**

2009 – 2011 (2 years)Punggol Waterway Part-1 and Part-2, HDB Projects, Singapore

Review for method of statement of Jet grouting , piling, Diaphragm wall and deep soil mixing, Supervision of Diaphragm Wall, Deep Soil mixing work & Jet Grouting works for

Soil Improvement, Soil Investigation, and Cone Penetration test, Bored Piles, quality assessment of deep mixing and Jet grouting for in situ testing, coring (core Sample), UCS strength Test, soft pile installation works and Geotechnical instrumentation and monitoring, Tie beam construction, Deep excavation for diaphragm wall rectification, Pump room and balancing water tank construction, parapet wall , Reinforcement Concrete structures and review geotechnical& structural designs, the method statement for geotechnical instrumentation, deep soil mixing and jet grouting.

### **Senior Geotechnical Engineer**

#### **Tiong Seng Contractors (Pte) Ltd**

2006 – 2009 (3 years) Marina Business and Financial Centre at Marina Boulevard/Central Boulevard

Preparation, calculation and analysis deep foundation design of Bored piles(Dia:700mm-1800mm),supervision and coordination with sub contractors and consultant for Deep foundation of Piling works (Bored Piles, contiguous bored pile and Secant Piles), Earth Retention System and Ground Improvement Works (Deep Cement Mixing and Jet grouting),undertaking and supervision geotechnical design, site investigation and instrumentation works, analysis calculation of Geotechnical capacity, negative skin fraction, Ultimate skin fraction, End bearing and Ultimate Geotechnical capacity of Kallang formation and Old Alluvial Soils deposits for Deep Bored Piles, contiguous bored pile and Secant bored Pile, review of geotechnical capacity of pile calculation, assessments and Deep excavation work for Geotechnical instrumentation & monitoring data processing and perform geotechnical and foundation design reviews.

### **Geotechnical Engineer**

#### **Woh Hup Pte Ltd**

2005 – 2006 (1 year) LTA C855 WH-STEC-AM JV, Holland Station, Buona vista station, One North Station,

LTA C855 WH-STEC-AM JV, Holland Station, Buona vista station, One North Station, NUH Station and Tunneling works (Slurry Tunnel Boring Machine, EPB and Forepoling/NATM), Circle Line Project

Review method of statement for tam & JGP grouting for utility gas and method statement of secondary proof drilling and grouting, geotechnical Instrumentation, Monitoring & interpretation of result for Bored Tunnels of Inner and Outer Bound TBM, Earth pressure balance and Slurry TBM Cutter head/Face Surface Inspection and Face Surface mapping (Face Logged) for soils(Kallang formation) & rocks(Jurong formation and Bukit Timah Granite), review of instrumentation scheme, ground stability assessment, review the TBM mining operation condition, and conduct site checks and investigate on the construction effect on surrounding building and NATM& Forepoling Tunneling work and Tam& Jet Grouting.

### **Geotechnical Engineer**

#### **Penta Ocean Construction Co., Ltd, Singapore**

2003 – 2005 (2 years)LTA C859A Harbour Front Interchange Station, Circle line Project

LTA C859A Harbour Front Interchange Station, Circle line Project

Deep basement excavation and Underground excavation in rock (Jurong formation) and soil(kallang Formation), inspection Ground condition for effect on existing MRT structures and surrounding buildings, Tunneling (NATM& Forepoling) and Rock slope engineering, Slope stabilization, Rock mass classification (Q system), Rock Quality Designation (RQD%),Geological mapping (excavation face surface), Underpinning works, Soil & Rock interpretation, Geotechnical instrumentation & monitoring works and reinforcement concrete structure for top down and bottom up construction.

### **Geotechnical Engineer**

**Ryobi Geotechnique Pte Ltd, Singapore.**

2001 – 2004 (3 years)58A Sungei Kadut Loop, Ryobi Industrial Building,Singapore

PUB Projects, LTA Projects, HDB Projects, Infrastructure projects, Residential &Condominium Housing Projects

Geotechnical Instrumentation & Monitoring works, Geotechnical monitoring data interpretation, and Soil interpretation & reporting, method of statement for geotechnical instrumentations, Soil investigation, Micropile, Slope Stabilization for ground anchor, rock bolt, soil nail installation for drilling,shotcrete/guniting, Retaining Wall structure, Geophysical Exploration especially seismic reflection and refraction test, electrical imaging/resistivity test, ground penetrating rader, borehole radar and Geo-environmental Engineering.

### **Geotechnical Engineer**

**V-Pile Svstem Pte Ltd**

1998 – 2000 (2 years)Singapore

Civil and Foundation Engineering Construction, Soil Investigation, Bored Pile, Driven Pile and Piles load testing.

### **Geotechnical Engineer**

**Fielab Railroad Engineering and Geotechnical Services Pte Ltd, Singapore.**

1994 – 1997 (3 years)Offshore&Onshore Geotechnical Engineering,Loyang Offshore Supply Base,Singapore

Offshore & Onshore Geotechnical Engineering, Earthworks,Quality Control, Soil & Materials Testing for soil property, site Investigation,soil Improvement and Vibrocore, soil mechanics and rock mechanics,rock mass classification.

## **Education**



## Asian Institute of Technology

Master's Degree, Geotechnical Engineering (Research), School of Civil Engineering, Bangkok Metropolitan Area, Thailand

1999 – 2001

Master degree in Geotechnical Engineering, School of Civil Engineering.

## Yangon University

B.Sc (Hons), Geology

1976 – 1981