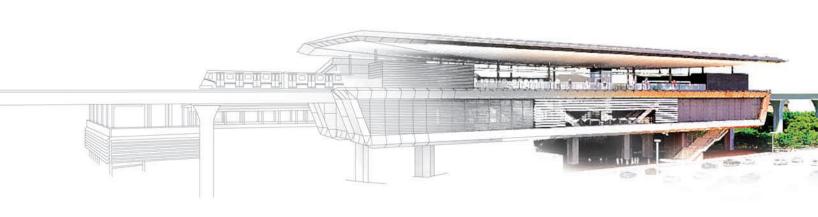
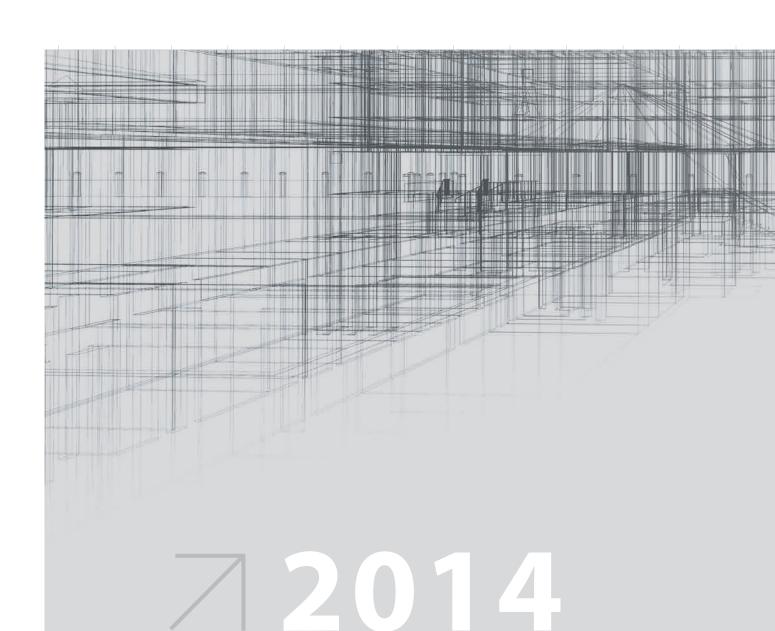




## annual progress report 2014







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>> MEGA MACHINE

The cutterhead of the tunnel boring machine being lowered into the Cochrane Launch Shaft to be fitted to the front and middle shield which were lowered earlier.





## 

MASS Rapid Transit Corporation Sdn Bhd (MRT Corp) is a special purpose vehicle set up by the Government of Malaysia to be the developer and asset owner of the Mass Rapid Transit (MRT) Project. The company is wholly-owned by the Minister of Finance Incorporated.

The company was set up in September 2011 and took over the ownership of the Klang Valley MRT Project from Syarikat Prasarana Malaysia Bhd (formerly known as SPNB) in October 2011.

MRT Corp's responsibilities include monitoring and tracking the construction of all elevated structures, stations and depots of the MRT Project. It also directly supervises underground works, which involves tunnelling and the construction of underground stations.

The company is also responsible for the contracts involved, the procurement process and dispute resolution, apart from ensuring the quality of delivery in terms of cost, scheduling, health, safety, security and environment requirements.

MRT Corp works hand-in-hand with other parties in the development of the project. They include MMC-Gamuda KVMRT (PDP) Sdn Bhd as its Project Delivery Partner (PDP) and Suruhanjaya Pengangkutan Awam Darat (SPAD) as the supervising agency.

# Vision

To be recognised as an integral provider of urban rail transport solutions

## 7 Core values

#### **OPENNESS**

We have mutual respect for one another, appreciate differences and embrace changes under one leadership

#### **TEAMWORK**

We work together effectively to achieve shared goals

#### **HONESTY**

We uphold trust and integrity at all times

# Mission

To engineer and deliver an effective, efficient and integrated mass rapid transit system; safely, on time and within cost

#### **EXCELLENCE**

We do the right things the right way, always

#### **RESPONSIBILITY**

We always act with sensitivity and stand accountable for all of our actions and outcomes



WELCOME to MRT Corp's Annual Progress Report for 2014.

I am pleased that significant progress had been achieved by the Klang Valley MRT Project during Financial Year 2013/2014.

I remember when I penned the previous Annual Progress Report's message, the progress for the MRT Sungai Buloh-Kajang Line – the first line of the project - was at 28%. We now end the financial year at 52%. I congratulate the management team on this commendable achievement.

For the individual sections, progress for the elevated section stood at 43% while for the underground works, completion was at 68.5% as at 30 September 2014. The figures for each of the sections from a year ago was 19.27% and 41% respectively. Just by comparing the two sets of figures, you can truly appreciate how much the project had progressed.

There were several highlights which took place during the financial year that had contributed to this good pace of progress which I would like to mention.

One is the completion of tunnelling through the challenging Kuala Lumpur Limestone Formation which lies beneath the eastern part of Kuala Lumpur. In June 2014, both the Inai 1 and Inai 2 Tunnel Boring Machines (TBM) which were excavating the MRT tunnels from the Inai to the Pudu Shafts, moved from excavating limestone to mining sedimentary rocks and sandstone, a geological formation called the Kenny Hill Formation. The location for this transition was at Jalan Bukit Bintang near the Pavilion Shopping Centre.

Completing the excavation of the 7.5km of tunnels through the Kuala Lumpur Limestone Formation meant that construction of the more difficult portion for the MRT Sungai Buloh-Kajang Line's underground alignment had finished.

This achievement was made sweeter by the fact that the incidence of sinkhole formation – a feared risk when tunnelling through limestone – was significantly minimized. This was the result of using the Variable Density Tunnel Boring Machine, which was specially designed by the MRT Project Underground Works



Contractor MMC Gamuda KVMRT (T) Sdn Bhd and TBM manufacturer Herrenknecht AG for tunnelling through limestone formation and used for the very first time in the project.

This innovation clearly paid off as the incidence of sinkhole formation for the MRT Sungai Buloh-Kajang Line was reduced by 95% compared with the Stormwater Management and Road Tunnel (SMART) Project. The MRT Project suffered two cases of sinkhole formation, both in the Bukit Bintang area, with 7.5km of tunnels built through limestone. The SMART Project experienced 41 cases during excavation of it 10km tunnel.

Another highlight worth mentioning is the arrival of the car bodies for our MRT trains beginning June 2014. This allowed assembly of the 58 sets of trains for the MRT Sungai Buloh-Kajang Line to commence.

The train car bodies are manufactured in China and shipped to the train assembly plant in Rasa, Hulu Selangor. At the plant, thousands of components manufactured

in various parts of the world – including from different parts of Malaysia - will come together to become the MRT train. The plant was purpose-built for the MRT Project by SMH Rail Sdn Bhd, which together with Siemens AG of Germany and Siemens Malaysia Sdn Bhd, formed a consortium to supply the rolling stock for the MRT Sungai Buloh-Kajang Line. The plant is also the first train assembly plant for Malaysia.

Set up as part of the MRT Project Offset Programme, the plant is a good example of Malaysia benefitting in terms of technology transfer and access into a high technology sector with the potential to assemble trains for the regional or even international market.

As we sail past the halfway point for the construction of the MRT Sungai Buloh-Kajang Line, a brand new chapter is about to begin with preparations to start development of MRT Line 2 which will serve the corridor from Sungai Buloh to Putrajaya via Seri Kembangan.

The Government had given its approval for MRT Line 2 to proceed in February 2014.

During the period under review, studies were carried out to determine the best option for the proposed alignment, which will ultimately be finalised once it is displayed to the public for feedback.

There were of course many more milestones achieved during the period under review which I have not mentioned. These are adequately covered in this Annual Progress Report.

At this pace of progress for the MRT Project, I am confident that our goal to create a world-class, modern and efficient urban rail network for the benefit of the people of the Klang Valley will soon be realised.

Thank you.

#### TAN SRI DR ALI HAMSA Chairman



FINANCIAL Year 2013-2014 is the third year of construction for the MRT Sungai Buloh-Kajang Line.

Significant progress was achieved during the year, enabling us to end the period surpassing the half-way mark in terms of construction progress. Starting the financial year at 28%, the pace of construction was good and this had allowed us to achieve within the year almost the equivalent progress of the two previous years, finishing at 53%.

In terms of the individual sections, progress of the elevated section was at 43.5% while underground works progress was at 68.5%.

I am happy to report that many milestones were achieved during the period under review.

As you will be able to see in detail in this report, considerable progress was attained in the elevated section of the MRT Sungai Buloh-Kajang Line. Piling was 90% completed while 75% of piers which support the MRT guideway and stations had been built.

Sections of the MRT elevated guideway had been built in all of the eight Viaduct Packages, with a total length of 20km or 44% of the total elevated guideway completed as at 30 September 2014. The completed guideways included four out of 25 special spans which were built over

highways, main roads and rivers. These special spans were wider than standard spans, thus requiring construction not with launch gantries but by other methods, such as cast in situ using form travellers or segment lifting using cranes.

By the end of the period under review, construction for all 24 elevated stations had started. Some of these had reached the stage where they were ready for equipment installation.

Included under the elevated packages is the Sungai Buloh Depot, which would house the trains for the MRT Sungai Buloh-Kajang Line. Construction of what would be Southeast Asia's largest train depot was progressing at a good pace, with equipment rooms being handed over by the civil works contractor to the system works contractors. Permanent track laying within the depot was 90% completed at the end of the period under review.

Significant progress was also achieved for the Underground Works Package.

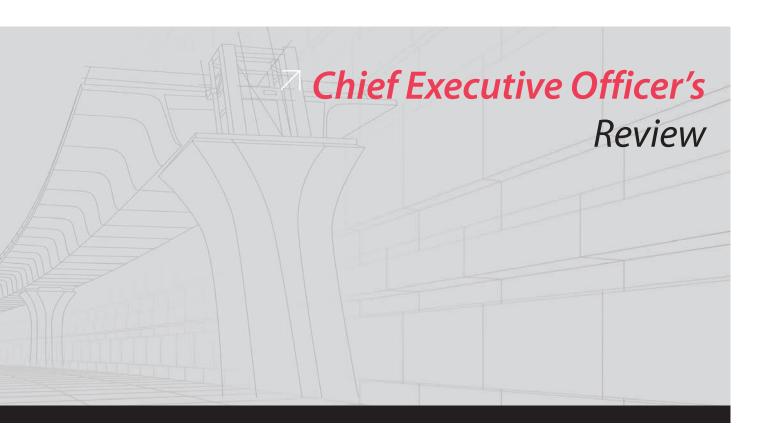
Construction of permanent structures for all seven underground stations had begun by 30 September 2014. Excavation was on-going for four stations, namely Pasar Seni, Bukit Bintang, Tun Razak Exchange and Maluri. The usage of the top-down method had allowed excavation of the station box and permanent structure construction to be carried out simultaneously.

The most interesting and challenging among the seven underground stations is the Bukit Bintang Station which is being built beneath Jalan Bukit Bintang in front of BB Plaza. For the whole of 2013, Phase One was carried out where we excavated and constructed the roof slab of one half of the station. This required the diversion of Jalan Bukit Bintang. In January 2014, Phase Two began where Jalan Bukit Bintang resumed its original alignment and excavation to enable the construction of the second half of the roof slab, followed by the excavation and construction of the rest of the station, began.

The other component of the Underground Works Package is tunnelling works. Excavation of the twin tunnels for the 9.5km underground alignment of the MRT Sungai Buloh-Kajang Line progressed very well during the year under review.

Tunnelling works, which began in mid 2013, had reached 81% completion by 30 September 2014. We expect to complete all tunnelling work within the first quarter of 2015.

From the northern end at the Semantan Portal, our tunnels had passed the Muzium Negara Station and were approaching Pasar Seni MRT Station. From the southern end at the Maluri Portal, tunnels had been excavated past Maluri, Cochrane, Tun Razak Exchange and Bukit Bintang Stations, and were approaching Merdeka Station.



The Variable Density Tunnel Boring Machine, which was specially designed for tunnelling through limestone formation by our Underground Works Package contractor MMC Gamuda KVMRT (T) Sdn Bhd together with world-renowned tunnel boring machine manufacturer Herrenknecht AG, performed very well by minimising the incidences of sinkholes. Only two sinkhole incidents occurred at the intersection of Jalan Imbi and Jalan Bukit Bintang after almost 7km of tunnel had been excavated through unpredictable limestone geology. This was a 95% reduction in incidence of sinkhole formation when compared with what was experienced by the same contractor during the construction of the city's SMART Tunnel Project where around 40 sinkholes had occurred.

The third area I wish to touch on is our System Works Packages where we had achieved tremendous progress.

The period under review was extremely exciting as we saw the arrival of our train car bodies, delivered by our contractor's manufacturer in China. The first two train car bodies arrived in Westport on 29 June 2014. By 30 September 2014, another eight car bodies had arrived.

From Westport, the train bodies are transported to our contractor's train assembly plant in Rasa, Hulu Selangor where they will be fitted out with

components to become full trains. They will then be transported to the Sungai Buloh Depot where they will undergo dynamic testing.

Trackworks was also progressing well. As mentioned earlier, the laying of permanent tracks for the Sungai Buloh Depot was nearing completion while sections of the completed elevated guideway had been handed over to our trackworks contractor for it to start laying tracks for the mainline, expected to begin at the start of 2015.

A non-project area that I would like to mention is MRT Corp's Bumiputera Agenda. I am very pleased to report that to date with 77 work packages awarded, 50% have been awarded to Bumiputera contractors in terms of value. Based on forecasts, we believe we will be able to maintain this percentage when the remaining eight work packages are awarded.

This is above the original target set by the Government which required the MRT Project to award at least 43% of the value of all contracts to Bumiputera contractors.

In an effort to ensure small Bumiputera companies also get a share of the MRT Project construction pie, MRT Corp has also set aside 250 work packages for Grade G1 to G4 contractors. As at 30 September 2014, 121 work packages worth a total RM82 million had been awarded to these companies.

These contractors were also trained in project and financial management to ensure they were equipped with the non-technical skills to manage their packages. This training, conducted by MRT Corp and our Project Delivery Partner, would serve them well as they manoeuvre the challenges as entrepreneurs.

At the same time, we are running our Young Graduates Entrepreneurship Programme where MRT Corp and our Project Delivery Partner had trained 20 young Bumiputera graduates to become construction contractors. I am glad to see that they have all graduated and four of them had already set up companies which were awarded contracts by our main contractors.

What I have mentioned is merely a summary of the MRT Project's progress and achievements during the past financial year.

The details are available in this Annual Progress Report which I have the pleasure of presenting to you.

Thank you.

**DATUK WIRA AZHAR ABDUL HAMID** *Chief Executive Officer* 

#### >> MRT JAKARTA VISITS THE PROJECT

sites on 24 October 2013. The 25-man delegation included



## ☐ The Year at A Glance

2013 - 2014



#### << BREAKTHROUGH BY WORLD'S FIRST VARIABLE **DENSITY TUNNEL BORING** MACHINE

THE world's first Variable Density Tunnel Boring Machine (TBM) to be successfully operated completed its 1km drive from Cochrane and broke through at the Tun Razak Exchange Station on 9 January 2014.



THE first permanent tracks for the MRT Sungai Buloh-Kajang Line were laid at the Sungai Buloh Depot in January 2014.





FIRST kilometer of the elevated guideway for the MRT Sungai Buloh-Kajang Line was laid in January 2014 inside the former Rubber Research Institute in





#### << MRT CORP AWARDS WORK PACKAGES TO BUMIPUTERA CONTRACTORS

WORK packages for the MRT Project were awarded to 50 Bumiputera Contractors from Grades G1 to G4 on 4 December 2013.



BORING MACHINE
BREAKTHROUGH
THE first TBM breakthrough
for the Project took place on
24 December 2013 at Muzium
Negara Station. The TBM
excavated 1.5km of tunnel
from Semantan Portal.



## << SEMANTAN 2 TUNNEL BORING MACHINE BREAK THROUGH

THE Project saw its third TBM breakthrough by the Semantan 2 TBM at Muzium Negara Station on 16 January 2014.



#### << DEPUTY FINANCE MINISTER VISITS MRT SITE IN KAJANG

DEPUTY Finance Minister Datuk Ahmad Maslan visited the MRT site at Jalan Reko in Kajang on 15 March 2014. The Kajang MRT Station, which will integrate with the Kajang KTM Komuter Station will be located there.

## >> SOUTHERN ELEVATED SECTION COMPLETES FIRST KILOMETER OF GUIDEWAY

CONSTRUCTION of the first kilometer of guideway for the southern elevated section was completed in April 2014 near the Sungai Balak Interchange of the Cheras-Kajang Highway.





#### << MALURI 1 TBM BREAKTHROUGH

THE Maluri 1 TBM broke through at the Maluri Portal on 8 April 2014. This was the second Variable Density TBM to successfully complete its drive.

#### >> KICK-OFF FOR THE MRT EMPLOYEE VOLUNTEER PROGRAM

PROGRAM
AROUND 80 staff from MRT Corp
and companies associated with
the MRT Project participated in the
first activity of the MRT Employee
Volunteer Programme on 7 June
2014, which was to clean up the
surroundings of Kampung Masjid,
Sungai Buloh.



# 100

#### << LIFE-SIZED TRAIN

A LIFE-SIZED mock train was displayed for public viewing at the KLIA Ekspres Arrival Area in KL Sentral for three months beginning 7 May 2014.



#### >> ARRIVAL OF THE FIRST TWO CAR BODIES FOR THE MRT TRAIN

THAIN
THE first two car bodies for the
MRT train arrived at Wesport,
Port Klang on 29 June 2014.
The train bodies were transported
to the country's first train assembly
plant in Rasa, Hulu Selangor.



#### << GRADUATION CEREMONY FOR THE YOUNG GRADUATES ENTREPRENEURSHIP PROGRAMME

FOURTEEN participants of the MRT Project Young Graduates Entrepreneurship Programme graduated on 10 April 2014 after going through a year-long course.



#### >> MALURI 2 TBM BREAKTHROUGH

THE southern-most section of the MRT Tunnel between the Cochrane Station and Maluri Portal was completed with the breakthrough of the Maluri 2 TBM on 24 April 2014.



#### << MRT CORP PRESENTS TRAIN MODELS TO SCHOOLS

MRT Corp presented SRK and SMK Convent Kajang as well as SJK (C) Jalan Davidson with train models as part of efforts to promote the MRT to future users. The schools are located along the MRT

#### >> BUMIPUTERA

CONTRACTORS BALLOTTING 26 Bumiputera contractors were awarded contracts at MRT Corp's third ballotting session on 13 August 2014.





## << SURUHANJAYA PENGANGKUTAN AWAM DARAT VISIT

THE Members of Commission of SPAD, led its Chairman Tan Sri Dato Sri Syed Hamid Albar, visited the Muzium Negara Station and Sungai Buloh Depot on 8 September 2014.



#### TAN SRI DR ALI HAMSA Chairman

TAN Sri Dr Ali Hamsa, 59, is currently Chief Secretary to the Government of Malaysia.

Prior to his appointment to the post in 2012, Tan Sri Dr Ali was appointed Director-General of the Public Private Partnership Unit (UKAS) at the Prime Minister's Department in 2009. Before that, he served at the Economic Planning Unit. He was also the Director of the Disbursement Division and Deputy Director-General of the National Transformation and Advancement Programme.

Tan Sri Dr Ali joined the Administrative and Diplomatic Service in 1981 as an Assistant Director at the Ministry of Trade and Industry. He was then made Senior Project Manager for the Economy and Public Policy Management Centre (PUTERA) at the National Institute of Public Administration (INTAN).

Tan Sri Dr Ali obtained a Bachelor of Arts (Honours) from the University of Malaya before furthering his studies at Oklahoma State University, the United States of America where he obtained a Master in Economics in 1986. This was followed by a PhD in Environmental Sciences and Economics in 1997.

He has been unanimously elected as the President of the Commonwealth Association for Public Administration and Management (CAPAM) 2014–2016 and is also the Chair of the Malaysian Integrity Institute (IIM), the Chair of the Special Taskforce to Facilitate Business (PEMUDAH) and Deputy Chairman of Johor Corporation (JCorp).

## **DATUK WIRA AZHAR ABDUL HAMID** *Member*

DATUK Wira Azhar Abdul Hamid, 53, is currently Chief Executive Officer of Mass Rapid Transit Corporation Sdn Bhd.

Prior to taking up the position, he was Managing Director of Sime Darby Plantation Sdn Bhd. Concurrently, he was Divisional Director of the Plantations and Food Division of Sime Darby Bhd. He also served as Chairman of the Malaysian Palm Oil Association, Board Member of the Malaysian Palm Oil Board and the Malaysian Palm Oil Council. Datuk Wira Azhar served as Managing Director of Tractors Malaysia Holdings Bhd and was appointed Group Chief Executive Officer of Pernas International Holdings Bhd in 2001.

He is a Chartered Accountant by profession. He is a Fellow of the Association of Chartered Accountants in the United Kingdom and Member of the Malaysian Institute of Accountants.

He is also shareholder and founder of Chelsea Capital Sdn Bhd, an investment holding and corporate advisory company focusing on the oil palm, property and food sectors.

#### TAN SRI DR MOHD IRWAN SERIGAR ABDULLAH

Member

TAN Sri Dr Mohd Irwan Serigar Abdullah, 57, is currently Secretary-General to the Treasury.

Prior to his appointment, he has held various positions in the Ministry of Finance including Deputy Secretary-General (Policy), and in the Economics and International Division from 2003 to 2008 where he was Under Secretary, Head of Multilateral Relations, Head of Econometrics Section and Principal Assistant Secretary. In the Economic Planning Unit of the Prime Minister's Department from 1987 to 1999, Tan Sri Dr Mohd Irwan was the Senior Assistant Director in the Privatisation Division and Senior Assistant Director in the Energy Division.

He holds a PhD in Economics from the International Islamic University of Malaysia; Master of Science in Energy, Management and Policy from the University of Pennsylvania; and a Bachelor in Population Studies (Honours) from the University of Malaya.

He also serves as a board member of notable organisations including Malaysia Airline System (MAS), Petroliam National Berhad (PETRONAS), Regional Corridor Development Authority (RECODA), Bank Negara (BNM), Razak School of Government (RSOG), Tabung Haji (TH) and the International Islamic University of Malaysia (IIUM). He is also the Chairman of the Retirement Fund Incorporated (KWAP), Inland Revenue Board (LHDN), Prokhas Sdn Bhd and Cyberview Sdn Bhd.



## **DATUK DR RAHAMAT BIVI YUSOFF** *Member*

DATUK Dr Rahamat Bivi Yusoff, 57, is currently the Director-General of the Economic Planning Unit in the Prime Minister's Department (EPU).

She has served in the Government for over 30 years, starting as Assistant Secretary (Tax Division) and then Assistant Secretary (Contract and Supplies Division) in the Ministry of Finance. She was also the Project Officer in the National Institute of Public Administration, Assistant Director and subsequently Deputy Director in the Macro Economics Section of the EPU, Principal Assistant Director of the unit's Industry and Services Section and Director of the Industrial Development Department of the Energy Commission.

She holds a Doctorate from the Australian National University, Master in Economics from the University of Western Michigan, Bachelor of Social Science (Economics) (Hons) from Universiti Sains Malaysia and a Diploma in Public Administration from the National Institute of Public Administration.

Datuk Dr Rahamat Bivi is also a member of the board of agencies such as the Malaysia Thailand Joint Authority (MTJA), Federal Land Development Authority (FELDA) and Malaysia Deposit Insurance Corporation (PIDM). She is also a council member of the Iskandar Regional Development Authority (IRDA), Sabah Economic Development and Investment Authority (SEDIA), Sarawak Corridor of Renewable Energy (SCORE) and the East Coast Economic Region Development Council (ECERDC).

## **DATO' SRI SHAHRIL MOKHTAR** *Member*

DATO'Sri Shahril Mokhtar, 42, is currently Group Managing Director of Prasarana Malaysia Bhd.

Before being appointed to the position, he was Chief Operating Officer of Suruhanjaya Pengangkutan Awam Darat (SPAD). Prior to that, he was attached to RapidKL as its General Manager of Corporate Planning. He was seconded as an Adviser to the Economic Planning Unit in the Prime Minister's Department where he was involved in drafting the Suruhanjaya Pengangkutan Awam Darat Act 2010 and the Land Public Transport Act 2010. He was also involved in the laboratory for urban public transport improvement which was held as part of the Government Transformation Plan.

Among the other positions he has held were General Manager of Corporate Services in Penerbangan Malaysia Bhd, Manager at PricewaterhouseCoopers Malaysia and Senior Executive in the Maybank Group.

He holds a Master of Management (with distinction) from the University of Malaya and a Bachelor of Science in Industrial and Organisational Psychology from the University of Missouri.

Dato' Sri Shahril is currently a Board Member of several of Prasarana's subsidiaries, namely Rapid Rail Sdn Bhd, Rapid Bus Sdn Bhd, Prasarana Integrated Management & Engineering Services Sdn Bhd and Prasarana Integrated Development Sdn Bhd. Besides the board of MRT Corp, Dato' Sri Shahril is also a member of the MRT Executive Committee which is chaired by the Chief Secretary to the Government.

#### DATUK CHE MOKHTAR CHE ALI Member

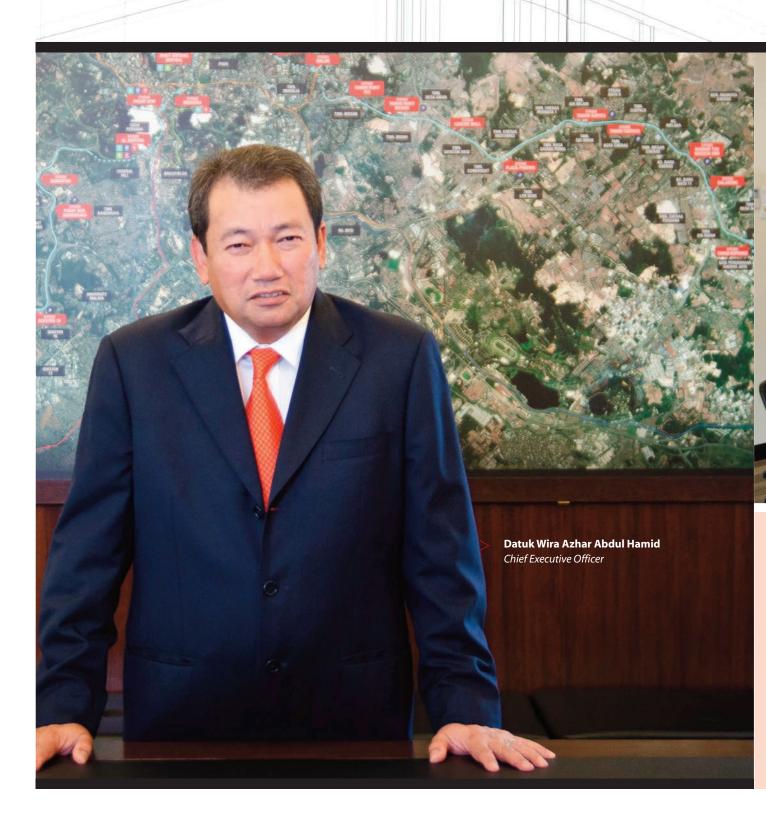
DATUK Che Mokhtar Che Ali, 58, is the founder partner of Messrs Che Mokhtar & Ling, a legal firm based in Kuala Lumpur.

With almost 30 years of experience as a legal practitioner, Datuk Che Mokhtar has served as a member of the Disciplinary Committee Panel of the Advocates and Solicitors Disciplinary Board and acted as the Chairman of the Committee. He was also appointed as a Notary Public by the Attorney General of Malaysia. As an advocate and solicitor, he has acted for various private and public companies, banking institutions, developers and statutory bodies such as Datuk Bandar Kuala Lumpur.

He holds a Bachelor of Arts (Political Science and Public Administration) and a Bachelor of Law from Victoria University of Wellington, New Zealand. He was admitted as a Solicitor and Barrister of the New Zealand Supreme Court in 1980 and was later admitted as an Advocate and Solicitor of the High Court of Malaya three years later. He has also served as a Magistrate and Deputy Public Prosecutor.

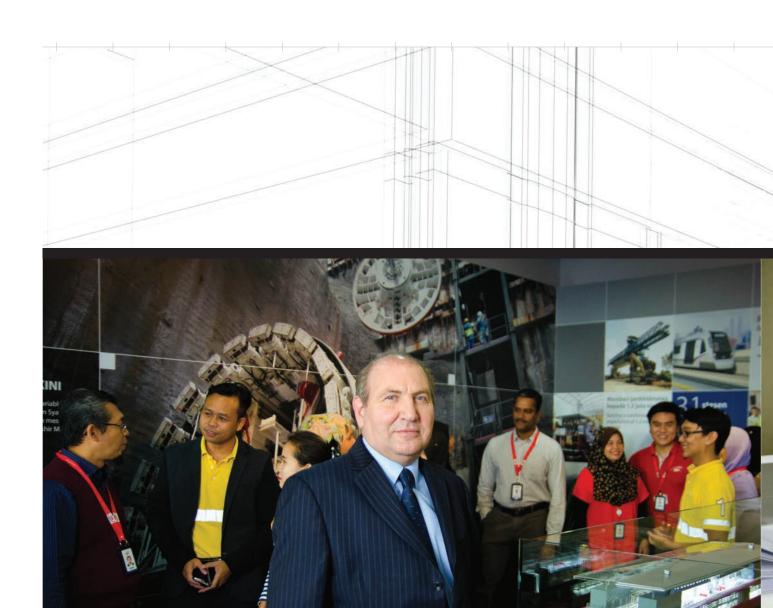
He also sits on the board of public and private companies including Sumatec Resources Bhd and KYS College Sdn Bhd. He was formerly a Director of Eco World Development Group Bhd (formerly known as Focal Aims Holdings Bhd), Idris Hydraulic (M) Bhd and Idaman Unggul Sdn Bhd.

## ✓ Senior Management Team





> Mohd Hairul Abdul Hamid Chief Financial Officer



> Marcus Levon Karakashian Director Project

## → Senior Management Team



Haris Fadzilah Hassan
 Director
 Stakeholder Relations and Land Management

## ✓ Senior Management Team



> Syed Mahdhar Syed Hussain Director Standard and Compliance



> Zainudin Ismail
Director
Strategic Human Resource



#### > Mahmood Abdul Razak

Director Strategic Communications and Public Relations

## → Senior Management Team



> Zaharudin Sa'at General Manager Property Development

## ✓ Senior Management Team



> David Loo Kean Beng Company Secretary

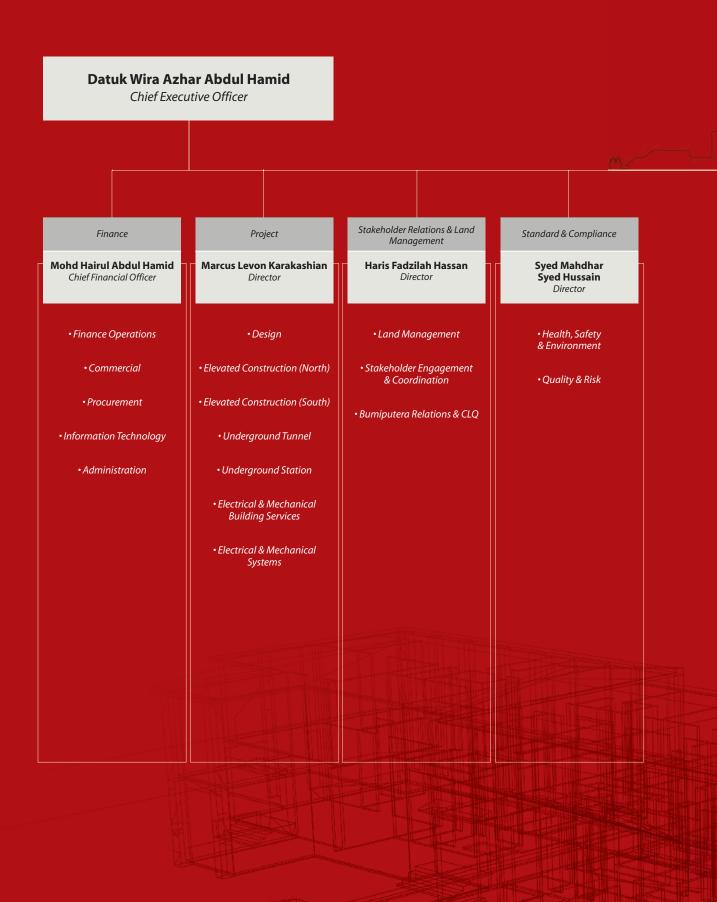


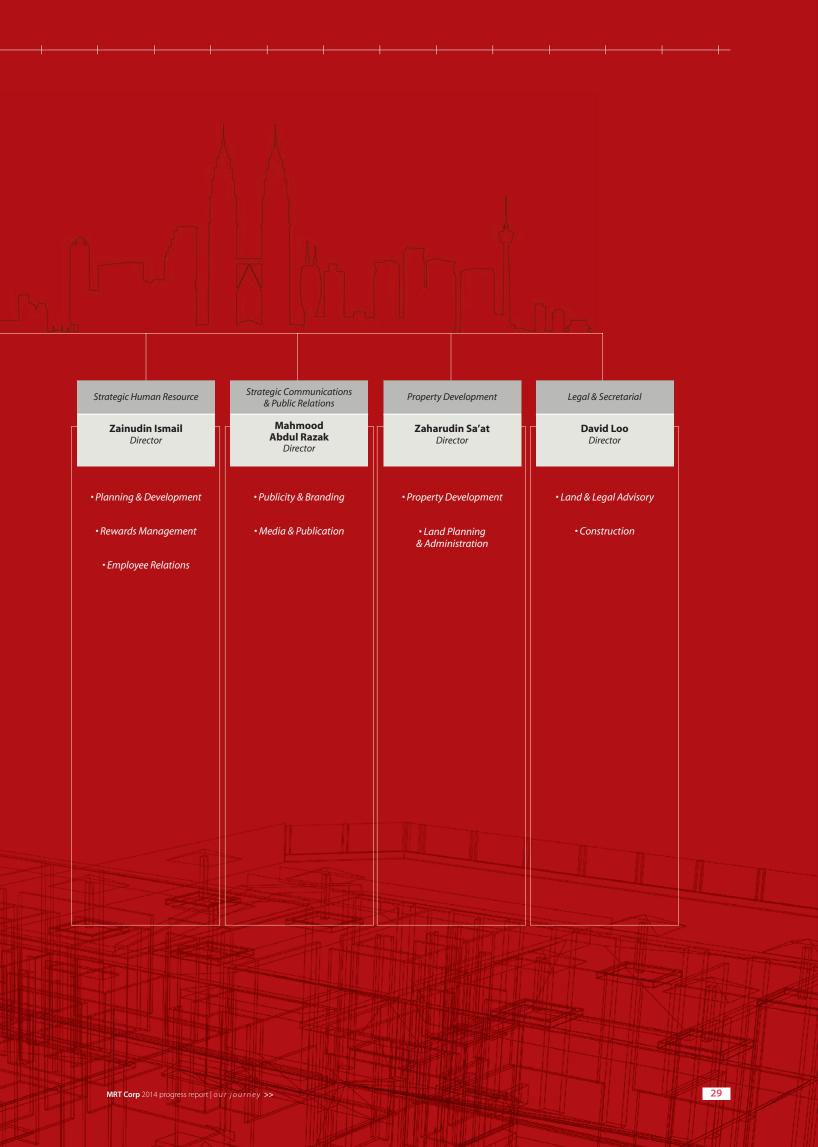
PRECISION <<

An MRT car body being loaded onto a trailer at Westport, Port Klang.

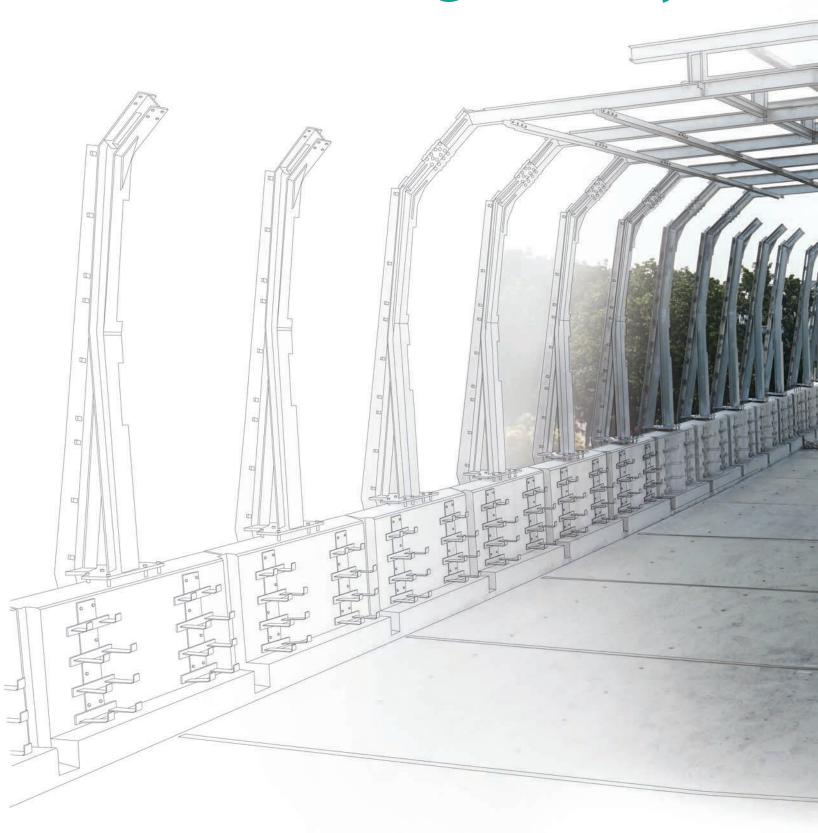


## Senior Management Team





# 7 The Klang Valley





# The Klang Valley MRT Project

THE Klang Valley MRT Project involves the construction of an urban rail network which, together with the existing light rail transit (LRT), monorail, KTM Komuter, KLIA Ekspres and KLIA Transit systems, will form the backbone of the Greater Kuala Lumpur/ Klang Valley's public transport system.

The project was approved by the Government in December 2010 and was made an Entry Point Project of the Economic Transformation Programme (ETP) under the Greater Kuala Lumpur/ Klang Valley National Key Economic Area (NKEA). The ETP is driven by the Performance Management and Delivery Unit (Pemandu) of the Prime Minister's Department.

The project was initially proposed to the Government by a private-sector consortium in early 2010 and consisted of three MRT lines.

The Government conducted a study on the proposal and gave the approved for the MRT Sungai Buloh-Kajang Line as the first MRT line to be developed. Construction of the 51km Sungai Buloh-Kajang Line was officially launched on 8 July 2011 by the Prime Minister of Malaysia Dato' Sri Mohd Najib Tun Abdul Razak

In February 2014, the Government gave its approval for the implementation of MRT Line 2. It will serve a corridor which had been determined by the Suruhanjaya Pengangkutan Awam Darat (SPAD), stretching from Sungai Buloh to Putrajaya via Serdang. In view of this, MRT Line 2 has been named the Sungai Buloh-Serdang-Putrajaya Line.

During the period under review, studies were being carried out to determine the best option to be the proposed alignment of the line.

The corridor for MRT Line 3 has also been determined by SPAD based on its Urban Rail Development Plan. The alignment of MRT Line 3 will be a circle and intersect with all existing radial rail lines. Construction of MRT Line 3 will take place in the future after approval from the Government is given.





**EXTENSIVE <<** Aeriel view of the Centralized Labour Quarters located next to the Kajang Depot.



## ☐ The MRT Lines

#### THE SUNGAI BULOH-KAJANG LINE

THE MRT Sungai Buloh-Kajang Line is the first line of the Klang Valley MRT Project to be implemented.

The line begins from Sungai Buloh, which is located to the north-west of Kuala Lumpur, and runs through the centre of Malaysia's capital city before ending in Kajang, a fast developing town to the south-east of the city.

The line serves a corridor with an estimated population of 1.2 million people.

The line will run underground for a distance of 9.5km beneath the centre of Kuala Lumpur while the rest of the alignment is elevated. The line will

have 31 stations of which seven will be underground.

Phase One of the Line, from Sungai Buloh Station to Semantan Station, will be operational by the end of 2016. The remainder of the line from Semantan Station to Kajang Station will be operational by July 2017 under Phase Two, allowing trains to run the entire alignment from Sungai Buloh to Kajang.

Each train set serving the line will have four cars with a total capacity of 1,200 passengers. The daily ridership is estimated to be about 400,000 passengers. Trains will run at a frequency of 3.5 minutes.

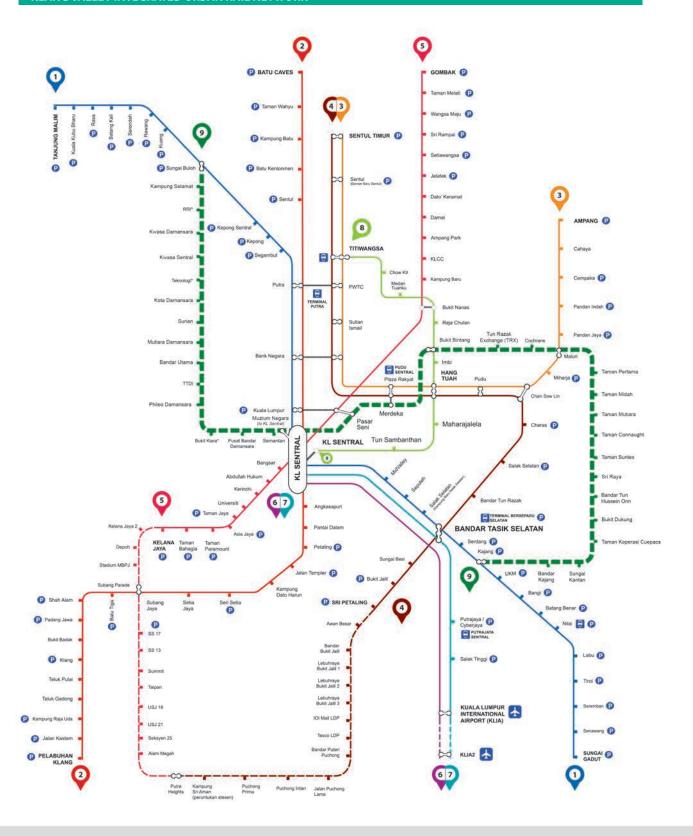
#### THE SUNGAI BULOH-SERDANG-PUTRAJAYA LINE

MRT Line 2 will serve a corridor stretching from Sungai Buloh to Putrajaya via Serdang. As such, MRT Line 2 has been named the Sungai Buloh-Serdang-Putrajaya Line.

The corridor had been determined by the Suruhanjaya Pengangkutan Awam Darat (SPAD) under its Urban Rail Development Plan which forms part of the Greater Kuala Lumpur/ Klang Valley Land Public Transport Master Plan.

Studies were being carried out during the period under review to determine the best option to be the proposed alignment of the line. The length of the proposed alignment is expected to be about 60km and served by 40 stations. The proposed alignment will be finalised after undergoing public display, a requirement under the Land Public Transport Act 2010.

#### **KLANG VALLEY INTEGRATED URBAN RAIL NETWORK**





## Project Structure

#### **SUPERVISING AGENCY** S U R U H A N J A Y A PENGANGKUTAN AWAM DARAT SPAD LAND PUBLIC TRANSPORT COMMISSION · Authority over corridors and alignment • Develop integrated masterplan Approve railway schemes · Interface with working agencies **PROJECT COMPANY Funding Company** · Advise, manage and raise funding for infrastructure projects · Project and asset owner **Independent Consulting** • Submission of all key project documents **Engineer** (railway scheme, land acquisition plan, environmental impact assessment etc) · Design compliance · Appoint Project Delivery Partner · Payment vetting • Verify PDP target cost and target time • Platform for payment disbursement • Joint-management of procurement process · Undertake property development potential **Auditor General PROJECT DELIVERY PARTNER DESIGN CONSULTANTS** ✓ MMC-GAMUDA ☐ (CIVIL/SYSTEMS) · Design civil works · Joint-management of the procurement process (except Underground Works) Quality, performance and supervision of Work Package Contractors · Obtain local authority approvals UNDERGROUND WORKS MMC GAMUDA KVMRT (T) **SYSTEM WORKS ELEVATED/DEPOT** SDN BHD

(Work Package Contractor)

(Work Package Contractors)

# 

# STEERING COMMITTEE CHAIRMAN

- PRIME MINISTER
- Overall policies and direction Strategic issues resolution
- Big decisions
- Progress reporting
- Meeting frequency: Quarterly

#### MRT EXECUTIVE COMMITTEE

# CHAIRMAN CHIEF SECRETARY TO THE GOVERNMENT

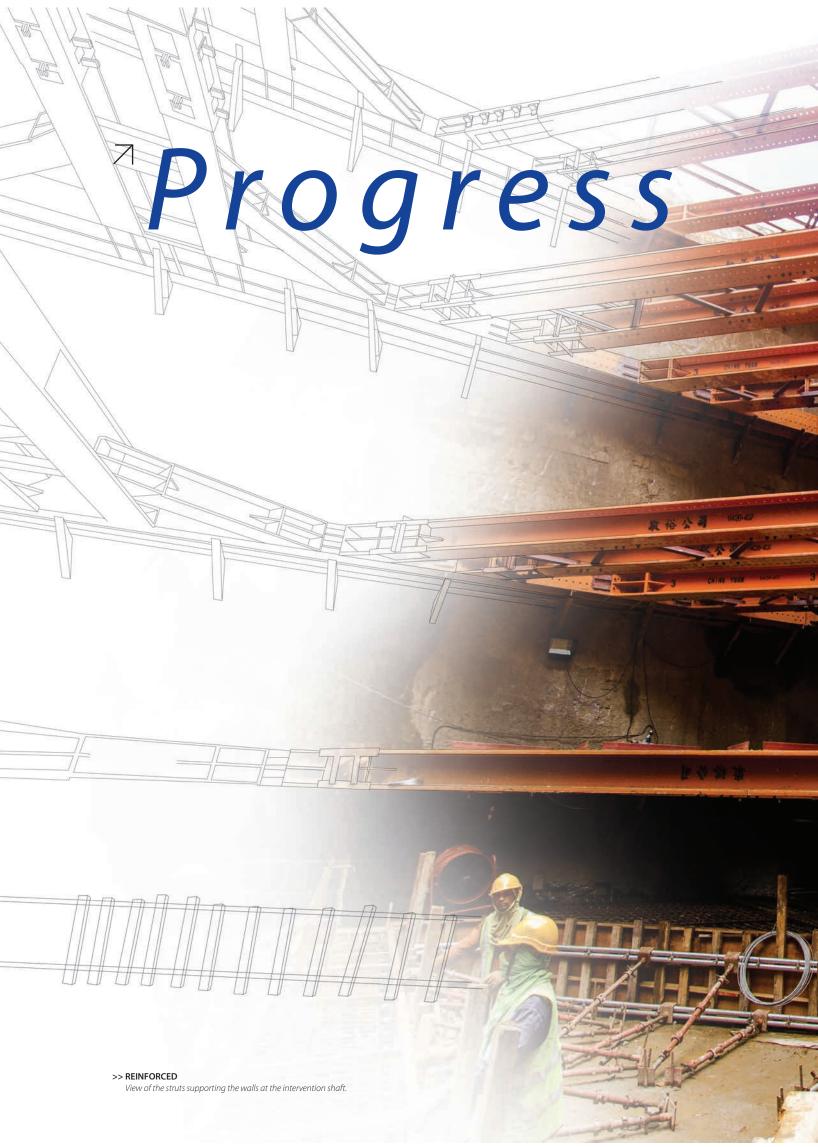
- Complex inter-agency issues resolution
- Medium-high impact decisions
- Progress reporting
- Meeting frequency: Fortnightly

#### MRT TECHNICAL COMMITTEE

## CHAIRMAN SURUHANJAYA PENGANGKUTAN AWAM DARAT

- Progress monitoring and tracking
- Operational and technical decisions
- Project issues resolution
- Meeting frequency: Weekly/ Fortnightly

#### **IMPLEMENTATION PLAYERS**





# *☐* Construction

CONSTRUCTION of the MRT Sungai Buloh-Kajang Line involves building the elevated and underground sections of the alignment as well as the System component of the project.

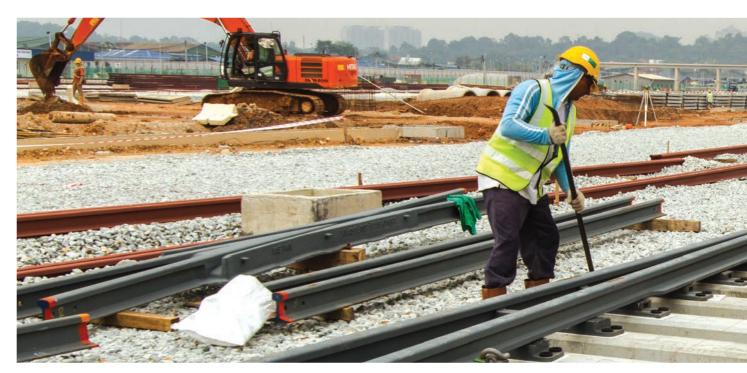
The overarching role of MRT Corp's Project Department is to manage the construction of the MRT elevated guideway, depots, tunnels and stations including their electrical/ mechanical (E&M) and system fit-out, leading to a fully approved and authorised operating railway.

The project team covers two main roles. With regard to the elevated guideway, E&M and system fit-out, the team has an overseeing brief as the works are being directly supervised by the Project Delivery Partner (PDP).

However, for Underground Works, MRT Corp provides direct supervision of the works, in particular addressing the safety, quality and progress of the works.

The elevated works consists of eight elevated guideway work packages covering over 52km of single and double-track guideways. This includes 24 elevated stations and two depots, one at Sungai Buloh and the other at Kajang. The construction of multi-storey park and rides which are attached to stations are also regarded as Elevated Works.

The Underground Works consist of 9.5km of twin bored tunnel and seven underground stations.



>> HEAVY WORK

The first tracks for the MRT Sungai Buloh-Kajang Line were laid in January 2014 at the Sungai Buloh Depot.

#### ELEVATED

AS at the end of September 2014, Elevated Civil Works were 43.52% completed. This put the programme 12.5 weeks behind early but one week ahead of the late date.

Works were concentrated on completing the elevated guideway structure and handing over stations for E&M fit-out works. At the Sungai Buloh Depot, work concentrated on completing areas required for delivery of two trains for dynamic testing.

As at the end of September 2014, piling was 98% completed, guideway piers were 79% completed and over 22km or 44% of elevated guideway had been erected.

In Sungai Buloh Depot, all the main buildings were completed and trackwork was well underway and 72% completed. Several areas of the depot has been declared "Defined Areas" with limited access with work-trains in operation. The main substation had been energised and sections of the depot were subsequently being energised and tested.

#### UNDERGROUND

AS at the end of September 2014, the Underground Works were 68.53% completed. This put the programme 1.5 weeks behind the early date and 7.5 weeks ahead of the late date.

On the underground stations (see Table 1), cofferdam installation works were completed for all seven stations, except for the plant rooms at Muzium Negara Station.

Excavation was completed for the main Muzium Negara Station box, Merdeka Station and Cochrane Station, and nearing completion at Pasar Seni Station (which was 74% completed), Tun Razak Exchange Station (99% completed) and Maluri Station (79% completed).

At the Bukit Bintang Station, excavation under the completed roof slab had commenced and was progressing well.

With regard to the tunnelling, at the end of September 2014, 83% of the tunnels had been constructed, with the drives from Semantan Portal to Pasar Seni, Bukit Bintang to Tun Razak Exchange (TRX), TRX to Cochrane, Cochrane to Maluri and Maluri Station to Maluri Portal all completed.



#### **UNDERGROUND STATION CONSTRUCTION STATUS STATION CONSTRUCTION METHOD PROGRESS STATUS** MUZIUM NEGARA Top down Excavation of main station box completed Roof concourse slab and base slab cast Temporary works for plant rooms second stage adjacent to main station box in progress PASAR SENI Bottom up and top down Excavation works at Klang Bus Station, Plaza Warisan and UO Superstore area 75% completed Excavation under roof to concourse level in progress MERDEKA Bottom up Excavation works completed Concourse and plant room level slabs in progress **BUKIT BINTANG** Top down Excavation under roof to concourse level of station box in progress • Phase 1 diaphragm wall construction (in front of Yayasan Selangor) completed for subway beneath Jalan Sultan Ismail-Jalan Bukit Bintang junction TUN RAZAK EXCHANGE Bottom up Excavation works of station box 99% completed Earth mat blinding concrete and base slab reinforced concrete work in progress COCHRANE Bottom up Casting of upper plant room slab 45% completed Casting of external wall to platform level in progress and 85% completed MALURI Bottom up Excavation works at station and crossover in progress and 85% completed Base slab works commenced and 29% completed

 Table 1 • Underground Station Construction Status

#### SYSTEMS

AS at the end of September 2014, progress of the System Contracts was 42.44%. Work concentrated on completing the system design, manufacturing of equipment and developing the necessary software.

For the Electric Trains Package, four full train sets had been delivered to Malaysia for fit out during the period under review. Of the four, two were being fitted out and prepared for static testing prior to delivery to the Sungai Buloh Depot.

For the Depot Equipment Package, nine locomotives and 12 flat wagons which will be used as work trains had been delivered to the Sungai Buloh Depot and were undergoing testing.

For the Signalling and Train Control Package, equipment had been delivered to SMH Rail Sdn Bhd for installation to Trains No 1 and No 2.Track-side equipment was being installed along the Sungai Buloh Depot test track. Development of the software was in progress.

For the Power Supply Package, the main substation had been fully energised and made operational. Sections of the Sungai Buloh Depot were being systematically energised and tested.

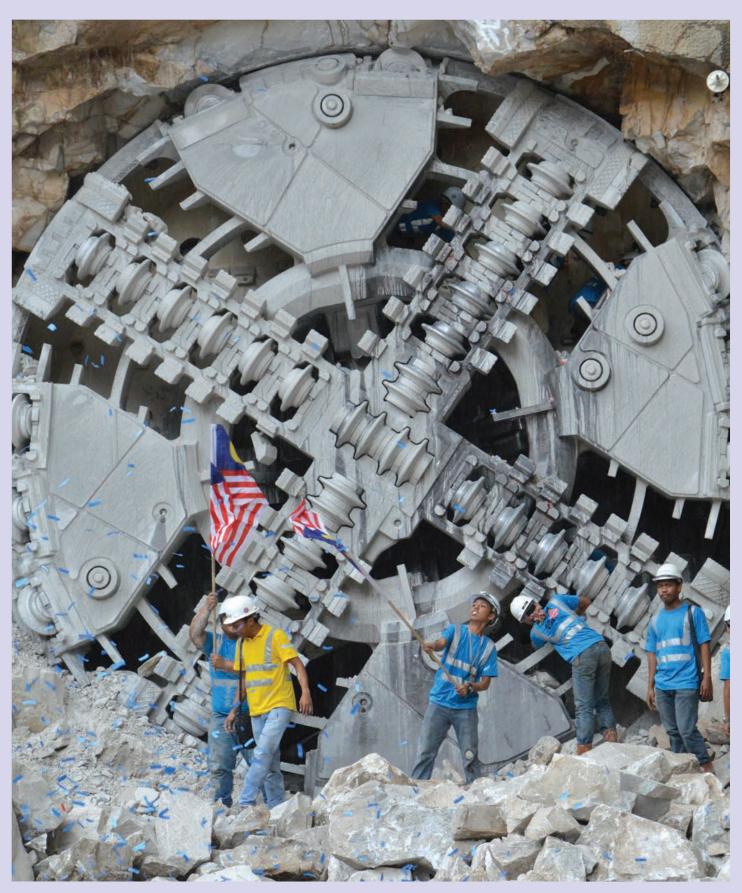
For the Platform Screen Doors Package, the design had been completed and the one million cycle test of the product had commenced.

For the Trackwork Package, laying of tracks with 78 units of turnouts was completed within the Sungai Buloh Depot. At the end of the period under review, trackwork at the depot was 72% completed.

All other systems packages, including Building Management System (BMS), SCADA, Electronic Access Control (EAC) and the Government Integrated Radio Network (GIRN) were in progress with no major issues.



**DRILLING DOWN <<** View of the bore pilling machine in action.



>> SUCCESS

The Cochrane 2 Tunnel Boring Machine was the world's first Variable Density TBM to complete its tunnel drive when it broke through at the Tun Razak Exchange Station site on 9 January 2014.

### 

TUNNELLING under Kuala Lumpur is regarded as one of the most challenging by tunnelling engineers because of the extreme karstic characteristic of the Kuala Lumpur Limestone Formation which lies beneath the eastern half of the city.

Excavating a tunnel through the extreme karstic characteristic of the limestone bedrock can result in sinkhole formation or slurry blowouts.

Learning from the experience from excavating the Stormwater Management and Road Tunnel (SMART), the MRT Sungai Buloh-Kajang Line Underground Works Contractor, MMC Gamuda KVMRT (T) Sdn Bhd had worked hard with world-renowned tunnel boring machine (TBM) manufacturer Herrenknecht AG of Germany to design a new TBM to overcome such difficulties.

The joint effort resulted in the development of the Variable Density TBM, which was used for the first time on the MRT Sungai Buloh-Kajang Project. This TBM is able to work in Slurry Shield mode, Earth Pressure Balance mode or Hybrid Slurry mode using a screw conveyor for removal of excavation material.

The Variable Density TBM allows for the density of the slurry which it uses to be thickened, which allows for better control of the slurry face pressure when excavating through karstic limestone, thus minimising the risk of slurry blow-outs and sinkhole formation.

The success of the Variable Density TBM – five were used to excavate the tunnels for the MRT Sungai Buloh-Kajang Line - was proven as it resulted in a 95% reduction in the incidence of sinkhole formation when compared with tunnelling for the SMART Tunnel under the same geological conditions.

The Variable Density TBM earned MMC Gamuda the Technical Innovation of the Year Award by the International Tunnelling and Underground Space Association.



>> COMING UP

Aerial view of the Cochrane MRT Station facing northwards.



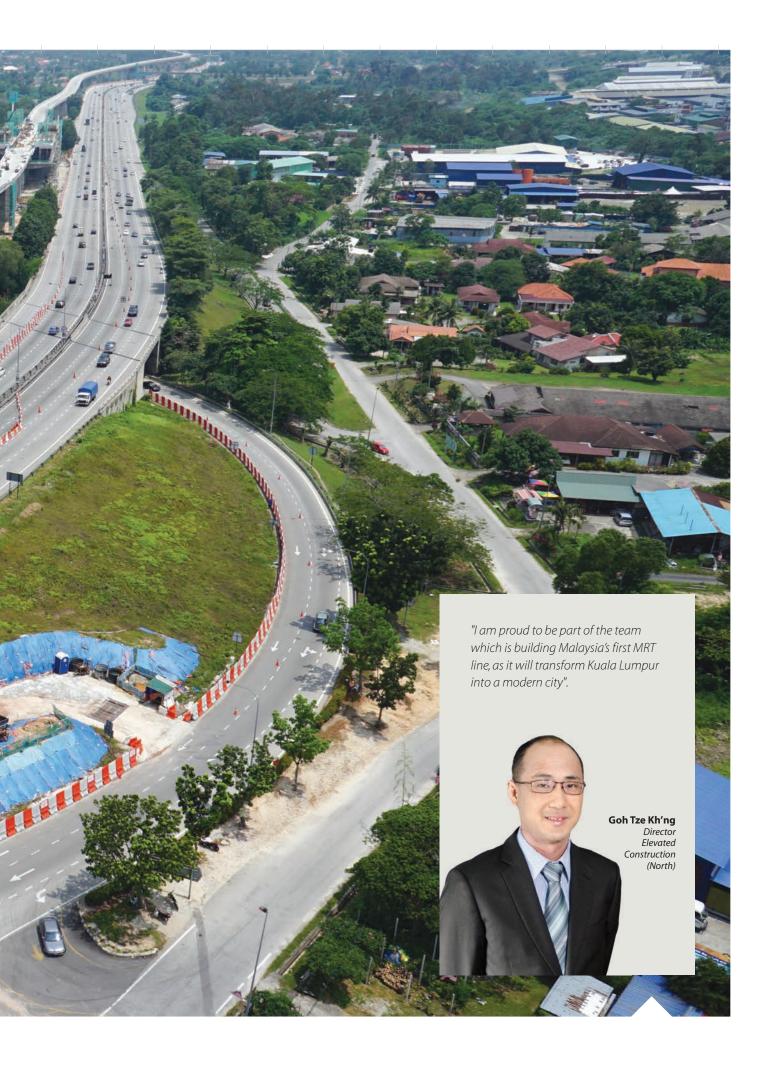
>> GOOD PROGRESS

View of the completed tunnel.



>> LONG SPAN

Construction of the special span over the Cheras-Kajang Highway at Bukit Dukung in progress.



# Procurement

AS at 30 September 2014, a total of 77 work packages presenting 90% of all work packages for the construction of the MRT Sungai Buloh-Kajang Line had been successfully awarded (See Table 1 for list of awarded work packages). The total value of work packages awarded was RM21.02 billion.

During the financial year, nine contracts with a total value of RM627 million were awarded. These contracts were for the Multi-Storey Park and Ride (MSPR), System Works and Centralised Procurement (see Table 1).

All of the MSPR Work Packages and two tenders from Centralised Procurement were under the Bumiputera Category whereas the remainder were under the Open Category.

There were eight remaining work packages to be tendered out at the close of the period under review. The estimated schedule for the tenders are shown in Table 3.

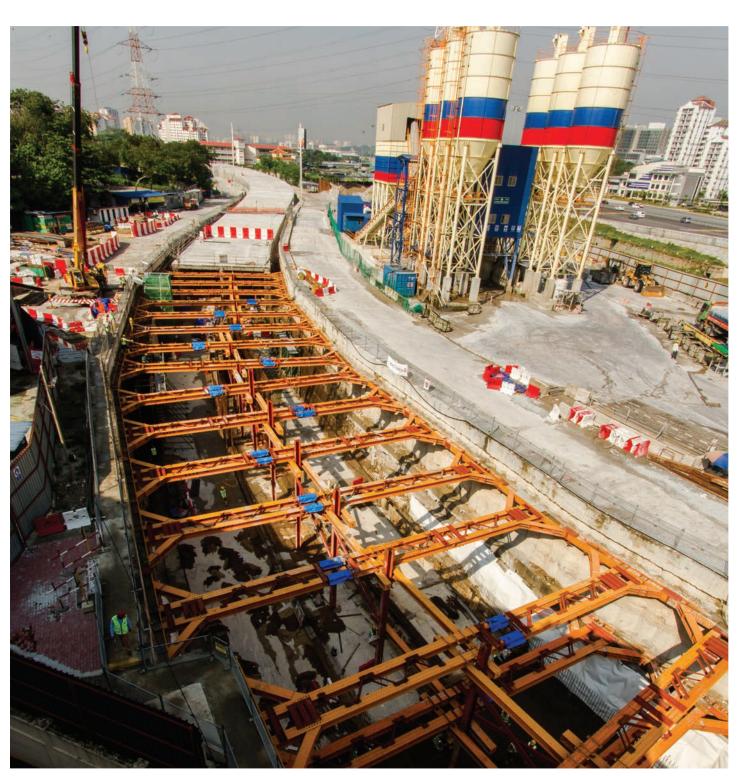
All procurement of work packages for the MRT Sungai Buloh-Kajang Line adhered strictly to the KVMRT Procurement Policies and Procedures (3P). The process is briefly depicted in Table 4.

A total of 34 meetings were organised to deliberate and subsequently approve all tenders for the project during the period under review, comprising 25 working committee meetings, five One-Stop Technical Committee (OSTC) meetings and four One-Stop Procurement Committee (OSPC) meetings (comprising three OSPC 3 meetings chaired by the Secretary-General to the Treasury and one OSPC 2 meeting chaired by the Minister of Finance II).

#### STATUS OF WORK PACKAGES AWARDED

NO.	CATEGORY OF WORK PACKAGES	WORK PACKAGES AWARDED FROM 1 OCT 2013 TO 30 SEPT 2014	TOTAL WORK PACKAGES AWARDED AS AT 30 SEPT 2014
1.	Underground	-	1
2.	Advance Works	-	22
3.	Elevated - Guideways	-	8
4.	Elevated - Stations	-	8
5.	Depots	-	2
6.	Multi Storey Park and Ride	4	6
7.	Systems	1	13
8.	Centralised Procurement	4	17
	TOTAL	9	77

 Table 1 • Status Of Work Packages Awarded



**ABOVE THE TUNNEL <<** Construction of the cut and cover section of the Maluri Portal.

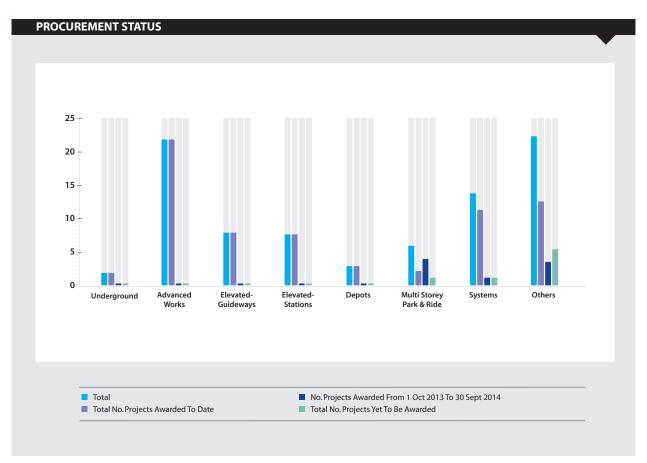


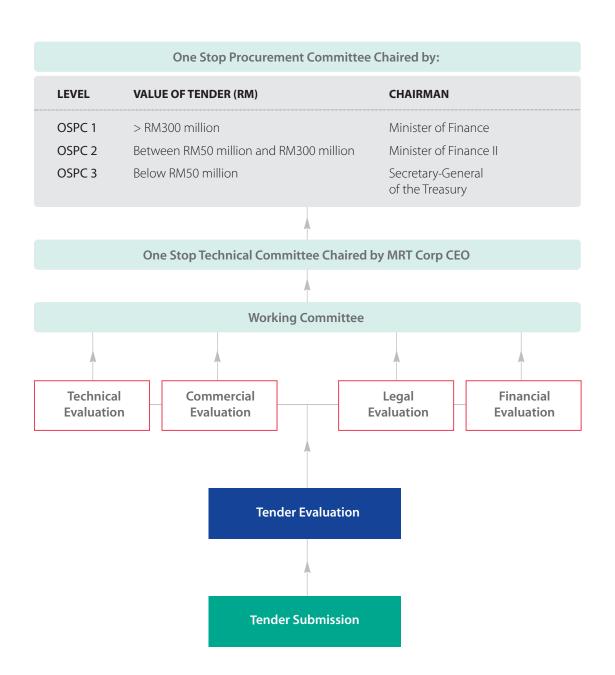
Table 2 • Procurement Status

#### ESTIMATED TENDER SCHEDULE FOR REMAINING WORK PACKAGES

NO.	TITLE	TARGET TENDER DATES
1.	Uninterruptible Power Supply (Underground & Ancillary Buildings)	4th Quarter 2014
2.	LED for Underground (KL Sentral-Bukit Bintang)	4th Quarter 2014
3.	LED for Underground (Pasar Rakyat-Maluri)	4th Quarter 2014
4.	Commercial Mobile Telecommunication	4th Quarter 2014
5.	Office Equipment & Furniture	1st Quarter 2015
6.	Signage (Elevated)	1st Quarter 2015
7.	Signage (All Underground)	1st Quarter 2015
8.	MSPR 7	1st Quarter 2015

 Table 3 • Estimated Tender Schedule For Remaining Work Packages

#### PROCUREMENT PROCESS FLOWCHART

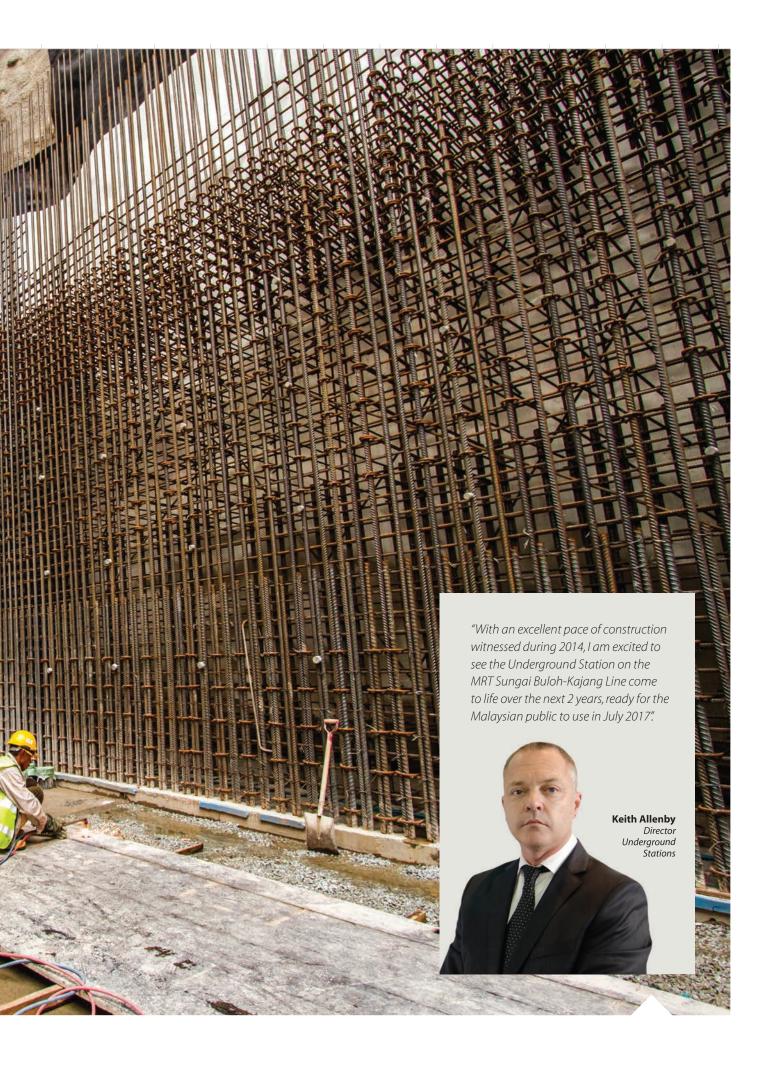


**Table 4 •** Procurement Process Flowchart



>> TUNNEL OPENING

 $Construction \ of \ the \ Tun \ Razak \ Exchange \ external \ wall \ in \ progress \ in \ front \ of \ the \ south-bound \ tunnel \ opening.$ 



# Bumiputera Participation



>> FOR THE ALBUM

MRT Corp CEO Datuk Wira Azhar Abdul Hamid with the successful Bumiputera contractors after the ballotting session on 4 December 2013.

THE Government had set a target for MRT Corp requiring at least 43% of the value of all contracts for the MRT Sungai Buloh-Kajang Line to be awarded to Bumiputera companies. As at 30 September 2014, MRT Corp had awarded over RM10 billion of contracts to Bumiputera companies, or 50% of the total value of contracts for the project. Taking into consideration the eight remaining contracts which have not been awarded, MRT Corp is confident that the 43% target will be exceeded.

The breakdown of Bumiputera participation in the various work categories are shown in Table 1.

Besides main contractors, MRT Corp has also drawn up a programme to ensure that Bumiputera contractors belonging to Grades G1 to G4 (formerly known as Class D, E, F contractors) get the opportunity to participate in the project.

Experience with the project would enable these contractors to improve their business performance and participate in future construction and rail industry projects locally and internationally.

A total of 250 work packages worth RM200 million was allocated for these contractors. As at 30 September 2014, a total of 121 contracts were awarded to Bumiputera contractors with a total value of RM82 million.

The work packages were awarded to the contractors by way of balloting. Successful companies have to go through the G1, G2, G3 and G4 Bumiputera Contractors Training Course organised by MRT Corp in collaboration with the Contractors'



#### >> CONGRATULATIONS

Participants of the MRT Young Entrepreneurship Programme at their graduation on 10 April 2014.



#### >> FULL ATTENTION

The successful Bumiputera contractors undergoing training session at MRT Corp headquarters.

Service Centre of the Works Ministry, Unit Peneraju Agenda Bumiputera (Teraju) and Ikram Sdn Bhd.

During the period under review, ballotting sessions were held on 4 December 2013 and 13 August 2014 where 50 and 26 work packages respectively were awarded. The breakdown according to categories of companies receiving these contracts is shown in Table 2.

#### MRT YOUNG GRADUATES ENTREPRENEURSHIP PROGRAMME

MRT Corp created the MRT Young Graduates Entrepreneurship Programme as part of its Bumiputera Agenda to provide access to young Bumiputera graduates to become entrepeneurs in the construction sector.

The programme, which is carried out jointly with Perbadanan Usahawan Nasional Bhd (PUNB) as part of its continuous efforts to create new entrepreneurs among Bumiputera graduates, will enable them to gain hands-on experience in managing a company and projects.

As at 30 September 2014, four companies set up by these young entrepreneurs had been awarded RM1.04 million worth of contracts.

NO.	DESCRIPTION		MENT TARGET MIPUTERA (A)	TO DAT	GES AWARDED E (B)		GES AWARDED E (OPEN) (C)	TO DAT	GES AWARD E TO JTERA (D)
		NOS	RM (MIL)	NOS	RM (MIL)	NOS	RM (MIL)	NOS	RM (MI
1.	Advance Works			22	0,174	12	0,076	10	0,097
2.	Guideway	3	1,350	8	7,366	4	3,565	4	3,800
	i Stations	3	0,490	8		1		7	
	ii Centralised Procurement			14		8		6	
3.	Non-Civil Works		1,800	13	4,054	13	2,750		1,305
4.	Depot	1	0,400	2	0,619			2	0,619
5.	Multi-Storey Park and Ride	9	0,270	6	0,623			6	0,623
6.	Underground Works	0.5	4,250	1	8,192	0.5	4,096	0.5	4,096
7.	Centralised Procurement			3		2		1	
	TOTAL	16.5	8,560	77	21,028	40.5	10,487	36.5	10,540

 Table 1 • Bumiputera Participation Status

DESCRIPTION

NO.

a.

b.

#### BREAKDOWN OF WORK PACKAGES AWARDED TO BUMIPUTERA CONTRACTORS FROM GRADES G1 TO G4

1. Awarded Packages         121         59         35	27	25			
		33	121	Awarded Packages	1.
2. Balance to be Awarded 129 79 34	16	34	129	Balance to be Awarded	2.
TOTAL 250 138 69	43	69	250	TOTAL	

<sup>\*</sup> Note: The new grading was only introduced at the end of 2013. As a result, separate data for Grade 3 and Grade 4 is not available.

Packages Awarded To Date To Bumiputera vs Packages Awarded To Date (D/B)

Packages Awarded To Date To Bumiputera vs Government Target To Bumiputera (D/A)

 Table 2 • Breakdown Of Work Packages Awarded To Bumiputera Contractors From Grades G1 To G4

NO (%)

47%

221%

AMOUNT (%)

50%

123%



**SHAFT CHAMBER <<** View from inside of the tunnel at the Inai Launch Shaft.



# 

THE MRT Offset Programme plays a significant role in promoting knowledge and technology transfer into Malaysia.

Managed by the Malaysian Industry-Government Group for High Technology (MIGHT), the MRT Offset Programme provides the platform for technology and economic development in Malaysia by requiring technology transfer from successful overseas contractors of the MRT Project to Malaysian offset recipients.

Besides technology transfer, the other benefits of the programme are in the areas of parts and component manufacturing, design and development, global market access, local work packages and foreign investment in Malaysia.

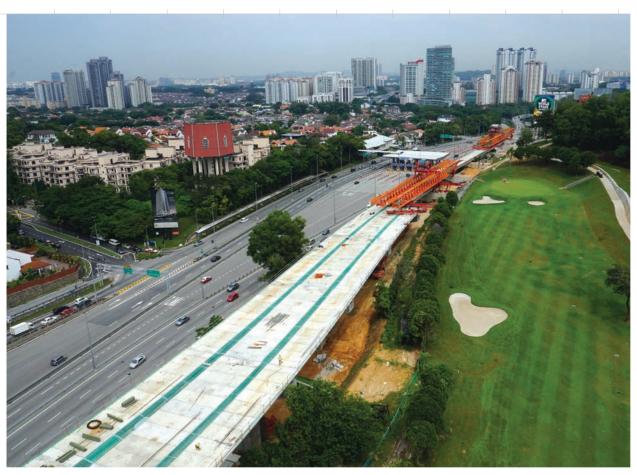
The MRT Project Works Packages which were identified for the MRT Offset Programme were:

- Tunnelling and underground works
- Rolling stock
- Signalling and train control
- Trackworks
- Automatic fare collection
- Power supply and distribution

As at the end of the period under review, a total of 33 offset projects have resulted from the MRT Offset Programme, benefitting 23 offset recipients, which range from local small and medium-sized entrepreneurs to universities.

Projects resulting from the MRT Offset Programme have generated 482 jobs in Malaysia. A further 792 people have undergone training in various areas under the offset programme. Total investment stood at RM81.3 million while total value of business generated as a result of the programme was RM946.07 million.

# BENEFIT OF THE MRT OFFSET PROGRAMME AT A GLANCE **Total Offset Projects Total Employment** 482 Total Investment by Recipients RM81.3 million **Total Offset Recipients** Total Participants of Offset Training 792 **Total Value of** All 0-0 **Business Worth** RM946.07 million



SCENIC <<
The MRT guideway being constructed along the SPRINT Highway.



**FULL SWING <<** View of the Pasar Seni MRT Station site.

# □ Breaking Into New Ground

THE MRT Offset Programme has generated success stories in terms of launching Malaysia into new sectors. One example is the establishment of the Tunnelling Traning Academy by MMC Gamuda KVMRT (T) Sdn Bhd, the Underground Works Contractor for the MRT Sungai Buloh-Kajang Line, as an Underground and Tunnelling Works Offset Project.

The Academy had successfully trained over 500 people to date, including 10 engineers from the Delhi Metro Rail Corporation. It is expected to provide over 1,000 professionally skilled and certified tunnelling personnel by 2015.

Another success story is SMH Rail Sdn Bhd, which together with Siemens AG and Siemens Malaysia Sdn Bhd, are supplying the trains for the MRT Sungai Buloh-Kajang Line. SMH Rail has invested RM55 million to set up a train assembly plant in Rasa, Hulu Selangor,

as a Rolling Stock Offset Project. The project had enabled knowledge and technology transfer for the setting up of an international-standard train assembly plant. Besides generating at least 158 jobs, this offset project had helped open the door to train assembly and maintenance work as well as support service provision to the rail industry not only in Malaysia but in the whole region.



#### >> READY TO RUN

The first two MRT trains to be assembled in the Rasa Train Assembly Plant are almost ready.





>> HANDS ON
Trainees working on the tunnel boring machine cutter head at the Tunneling Train Academy.



#### >> TRAINING GROUND

Students in class at the Tunnelling Training Academy.

## abla Land

THE land acquisition process for the MRT Sungai Buloh-Kajang Line is now proceeding into the post-acquisition stage.

Pursuant to Section 25 of the Land Acquisition Act 1960, Section 62 and Section 76 of the National Land Code 1965 and in relation to Article 83 and 85 of Federal Constitution, there is a requirement to carry out a final title survey for the Title in Continuation for land that was partly acquired, reservation of land which was acquired for the MRT alignment, and alienation of land under the Federal Land Commissioner.

MRT Corp had appointed a licensed surveyor in April 2014 to carry out the above.

#### **MUTUAL AGREEMENTS**

The term Mutual Agreement was used by MRT Corp for a scheme which enabled the coexistence of privately owned land with the MRT alignment in limited situations.

The scheme allowed some of the owners whose lands were originally the subject of compulsory acquisition under the Land Acquisition Act 1960 to retain ownership of their lands subject to the land titles reflecting the presence of the MRT structures.

A total of 50 lots were subject to Mutual Agreements. This figure remained unchanged from the previous financial year, indicating a stabilisation of land issues incidental to the project. In the previous financial year, Mutual Agreements with owners of properties along Jalan Sultan were signed. Since then the properties have been examined and had strengthening works carried out. Construction of tunnels under the properties was expected to begin at the end of November 2014.

MRT Corp hopes that with this record of success, more landowners would agree to Mutual Agreements in the future when additional lines are constructed.



#### PIONEERS <<

The owners of properties which were utilised for the Inai Shaft and situated above the tunnel were the first to sign Mutual Agreements with MRT Corp.

		ACQUISITION	
	KUALA LUMPUR	SELANGOR	TOTAL
Number of acquired lots	72	226	298
Total compensation paid	RM941,323,509.10	RM613,495,446.32	RM1,554,818,955.42
Number of additional lots awaiting gazzettement or with on-going land hearing	4	2	6
		OBJECTION CASES (FORM N)	
Cases settled	22	75	97
Total amount paid	RM111,983,089.13	RM12,255,608.15	RM124,238,697.28



HEAVY LOAD <<

Components of the tunnel boring machine being unloaded at Westport upon arrival.



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#### >> WELL DONE

MRT Corp CEO Datuk Wira Azhar Abdul Hamid with the workers after the sports carnival prize giving ceremony.



#### >> ORGANISED

Centralised Labour Quarters which houses MRT construction workers for the project.

THE Centralised Labour Quarters (CLQ) concept was introduced by MRT Corp in the hope of establishing a new standard in terms of housing workers for the construction industry.

The purpose of the CLQ was to provide comfortable, safe and controlled accommodation for both foreign and local workers. CLQs were designed to function as mini-townships complete with comfortable living quarters, shops, sick bay, surau and recreational facilities.

A total of 11 CLQs were established to house the construction workers for the MRT Sungai Buloh-Kajang Line. All were fully operating during the period under review. They were grouped into four locations along the alignment, namely in Sungai Buloh (with six CLQs), Cochrane (one CLQ), Cheras (two CLQs) and Kajang (two CLQs).

The CLQs have a total capacity of 9,280 beds. At the end of the period under review, 5,510 beds had been occupied.

The majority of occupants of in the CLQs were foreign workers, with Malaysians forming just over 8%. The breakdown of nationalities of the occupants are in Table 1.

All CLQs are equipped with recreational facilities for the workers to use when not at work. They include futsal, volleyball and basketball courts as well as other games such as table tennis.

MRT Corp and PDP had organised two sports carnivals in April 2014 and May 2014 which saw the teams comprising workers from all work packages participate in games such as futsal, volleyball and table tennis.

During Ramadan, breaking of fasts and terawih prayers were organised at various CLOs.

The CLQs also hosted several visiting groups from companies wishing to learn about the CLQ concept. Members of the media had also visited several CLQs.

#### SECURITY

Security at the CLQs is a major consideration and MRT Corp had taken steps to ensure that the safety of both the workers and locals living near the CLQs was well looked after.

The movement of workers in and out of the CLQs is closely monitored. Workers are transported to their respective worksites daily and brought back to their CLQ once their shifts end. Regular checks on their permits are carried out while the safety, welfare and basic requirements of the workers are catered for at the CLQs.

The application to set-up an Auxiliary Police unit for the CLQ had been approved by the Police in October 2013. Approvals were for 71 personnel for all ranks and recruitment interviews were conducted throughout the period under review.

#### **NATIONALITY OF CLQ OCCUPANTS**

NATIONALITY	PERCENTAGE
Bangladesh	45.8
Indonesia	18.9
Nepal	11.4
Malaysia	8.2
India	5.5
Pakistan	4.5
Myanmar	2.6
China	1.8
Thailand	0.7
Vietnam	0.3
Sri Lanka	0.1
Egypt	0.04

**Table 1 •** Nationality Of CLQ Occupants



>> HERITAGE PRESERVED

Careful monitoring was required for the construction of Muzium Negara Station.



# 



>> THRILLED

Visitors pose at the front window of the mock MRT train.

#### STAKEHOLDER ENGAGEMENT

SINCE becoming the developer and owner of the MRT Project, MRT Corp has aimed at setting new standards in the construction sector in terms of stakeholder engagement. MRT Corp has always believed that anyone impacted by the construction of the MRT Project must be kept informed of construction activities so that the inconvenience caused could be anticipated and kept to a minimum level.

Besides construction updates, these engagement sessions served as a platform for stakeholders to raise their

concerns, especially on traffic congestion, safety and security, and environmental impact. With the presence of representatives of MRT Corp, PDP and the respective Work Package Contractor (WPC), concerns from stakeholders could be addressed together.

During the period under review, 25 engagement sessions were organised



#### >> FULL ATTENTION

MRT Corp's Strategic Communications and Public Relations Director Encik Mahmood Abdul Razak showing the students of Politeknik Sultan Abdul Halim Mu'adzam Shah the scale model of the MRT Project.



#### >> GOOD FEELING

MRT Corp staff volunteering to paint the Taman Shahjaya Community Hall under the MRT Corp Employee Volunteer Programme.

with residents, resident associations, businesses, traders and others who were living or operating within the vicinity of MRT worksites.

The number of engagements decreased compared to the previous financial year. Most of them were follow-up sessions concerning construction issues as the construction of the project is at full swing.

At these sessions, the stakeholders were given an update on the latest construction progress. The most common feedback gathered from such sessions was stakeholders' wishing for the construction of the MRT to be completed as soon as possible so that there would be less inconvenience.

#### **REACHING OUT TO THE PUBLIC**

MRT Corp has set up several channels for the public to obtain information about the MRT Project and also for them to provide feedback or lodge complaints.

#### **MRT Hotline**

Since December 2011, MRT Corp had made available a 24 hour hotline service with the number 1-800-82-6868 for the public to lodge complaints and make general enquiries. During the period under review, the hotline handled more than 1,000 calls (see Table 1).

#### **MRT Information Centres**

The new MRT Information Centre (MIC) at Damansara Utama, Petaling Jaya, began operations in September 2014. This information centre replaced the five information centres which were set up at the earlier stages of the construction of the MRT Project and had operated for two years.

Besides information boards and brochures, the MIC is also equipped with an interactive "Hawkeye" which has a 360 degree aerial view of the entire 51km Sungai Buloh-Kajang alignment, a tunnel room and an MRT Gallery. To date, the MIC has received close to 700 visitors, mostly comprising groups (see Table 2).

#### **MRT Information Kiosks**

The extremely popular MRT Information Kiosks (MIK) consist of two sets of mobile booths which make a monthly circuit at shopping malls, hypermarkets, transportation hubs and other activity centres.

The two MIKs received more than 40,000 visitors during the period under review (see Table 3).

In May 2014, the MIKs were taken out of service and were being refurbished to cater to the upcoming MRT Sungai Buloh-Serdang-Putrajaya Line.

#### **MRT Information Truck**

The MRT Information Truck (MIT) gives the public easy access to information about the MRT Project as it reaches out to the public living or working along the MRT alignment. The truck features public display boards with details and information on the project.

On the road since June 2012, the MIT has been deployed at shopping centres, offices, mosques, schools and colleges, morning as well as night markets and also property sales galleries. MIT has received overwhelming support with a recorded total of over 10,000 visitors during the period under review (see Table 4).



#### >> OVERSEAS VISITORS

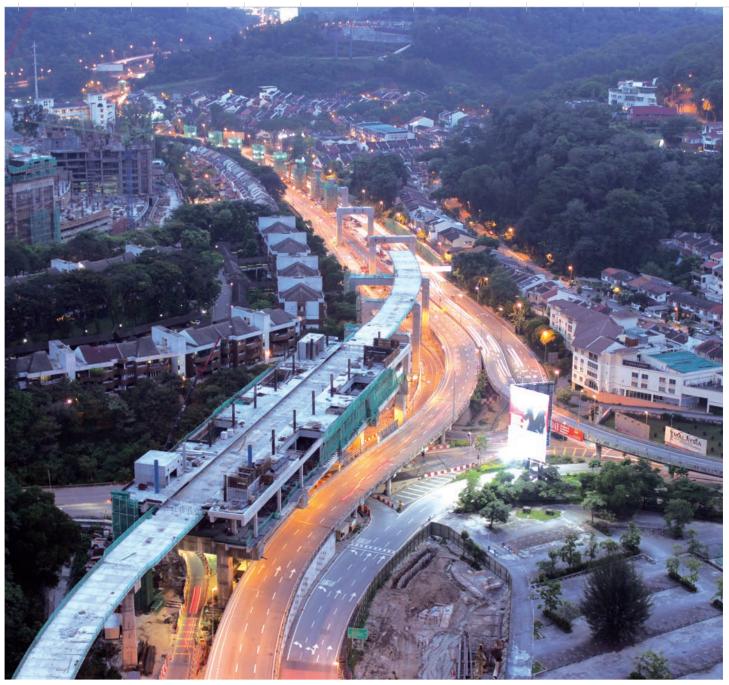
MRT Corp Stakeholder Relations and Land Management Director Encik Haris Fadzilah Hassan giving a presentation to a delegation from MRT Jakarta.





#### FUTURE COMMUTERS <<

SJK (C) Jalan Davidson was presented with the MRT train model. This engagement session was done to introduce them to the project. The MRT Merdeka Station is located in front of the school.



>> COMING TOGETHER

Aerial view of the construction work at Semantan Station.



#### **EVENTS**

During the period under review, MRT Corp organised several events and campaigns to promote the MRT Project. The events also had an underlying message of promoting a future lifestyle where public transport, especially urban rail, plays a major part.

MRT Corp organised a "Train Socialisation Campaign" which began on 17 March 2014 at the KLIA Ekspres Arrival Hall at KL Sentral where an actual-size mock-up of half a car of the MRT train was exhibited.

Members of the public could get into the mock-up, which was fully equipped with chairs, holding bars, audio announcement and other features, to get a full sensory experience of being in the future MRT train. The mock-up also served as the location for a live Hot FM radio show. A mini exhibition on the MRT Project was also put on as part of the campaign.

The three-month campaign received visits from over 7,000 people. Useful data and feedback were gathered, which provided invaluable insights to the project team.

MRT Corp also created the MRT Corp Employee Volunteer Programme (EVP) which allowed staff from MRT Corp, MMC Gamuda KVMRT (PDP) Sdn Bhd, MRT Project Work Package Contractors and all other associates of the project to volunteer for activities to help communities along the MRT alignment.

Three EVP activities were held during the period under review. The inaugural activity was a gotong-royong on 7 June 2014 to clean up Kampung Masjid, Sungai Buloh. This was followed by the painting of the surau at Kampung Selamat, Sungai Buloh on 14 June 2014. The third activity on 21 June 2014 involved the painting of the community hall in Taman Shahjaya, Cheras.



**COMPLETED SPAN <<**Aerial view of the viaduct at Jalan Damansara.

#### ☐ Giving Back To The Community

THE MRT Corp Employee Volunteer Programme (EVP) came about during a brainstorming session on how MRT Corp and companies associated with the MRT Project could step up efforts to control the spread of dengue fever along the alignment of the MRT Sungai Buloh-Kajang Line.

While the Dengue-Free Worksite Campaign, where work package contractors got their workers to spend half an hour every morning to clean up their worksites before starting work, addressed the issue for locations within the MRT Project, a separate effort was needed for areas which were outside the work zones.

Hence, the idea of the EVP was born. The EVP envisaged staff from MRT Corp and also other companies involved in the MRT Project volunteering to clean up housing estates, villages and other public areas located along the MRT Sungai Buloh-Kajang Line.

However, as the idea developed further, many felt that the EVP did not need to just restrict itself to clean-ups activities. As a result, the EVP grew to a full-fledged volunteer programme running activities that would "give back something" to communities which were affected by the MRT Project construction.

The inaugural activity was held on 7 June 2014 which saw the clean up of Kampung Masjid, Sungai Buloh, which is located adjacent to the future Sungai Buloh MRT Station and the station's multi storey park and ride facility.

Some 80 volunteers, comprising staff of MRT Corp, PDP and TSR Bina Sdn Bhd (the work package contractor for the multi storey park and ride) as well as the residents of the village came together to clean up the surroundings of the kampung.

A week later on 14 June 2014, the staff of MRT Corp, PDP, Syarikat Muhibah Perniagaan dan Pembinaan



#### >> JOB DONE

 $\textit{MRT Employee Volunteers pose for a photo after painting the outside of the community hall at \textit{Taman Shahjaya}, \textit{Cheras}.$ 

Sdn Bhd (the work package contractor for Viaduct Package V1) and its subcontractors joined hands with the villagers of Kampung Selamat to give Surau As-Salam a new coat of paint. Kampung Selamat is located next to the alignment of the MRT Sungai Buloh-Kajang Line and the Kampung Selamat MRT Station. The residents had requested for the local surau to be painted ahead of the holy month of Ramadan.

Besides painting the surau, MRT Corp also contributed RM2,000 for activities organised during Ramadan.

The third and final event held during the period under review was the painting of the Taman Shahjaya Community Hall at Taman Shahjaya, Cheras, on 21 June 2014. Besides the staff of MRT Corp, PDP, Ahmad Zaki Sdn Bhd (the work package contractor for Viaduct Package V6) and its subcontractors, MRT Corp CEO Datuk Wira Azhar Abdul Hamid also took part in the activities.

Taman Shahjaya is located next to the MRT Sungai Buloh-Kajang alignment between the future Taman Sri Raya and Bandar Tun Hussein Onn MRT Stations. Besides painting the hall, MRT Corp also presented a cash contribution and prayer mats which would be used for terawih prayers during Ramadan.

In view of the success of the first year of the EVP, activities for the new financial year are expected to begin in 2015.



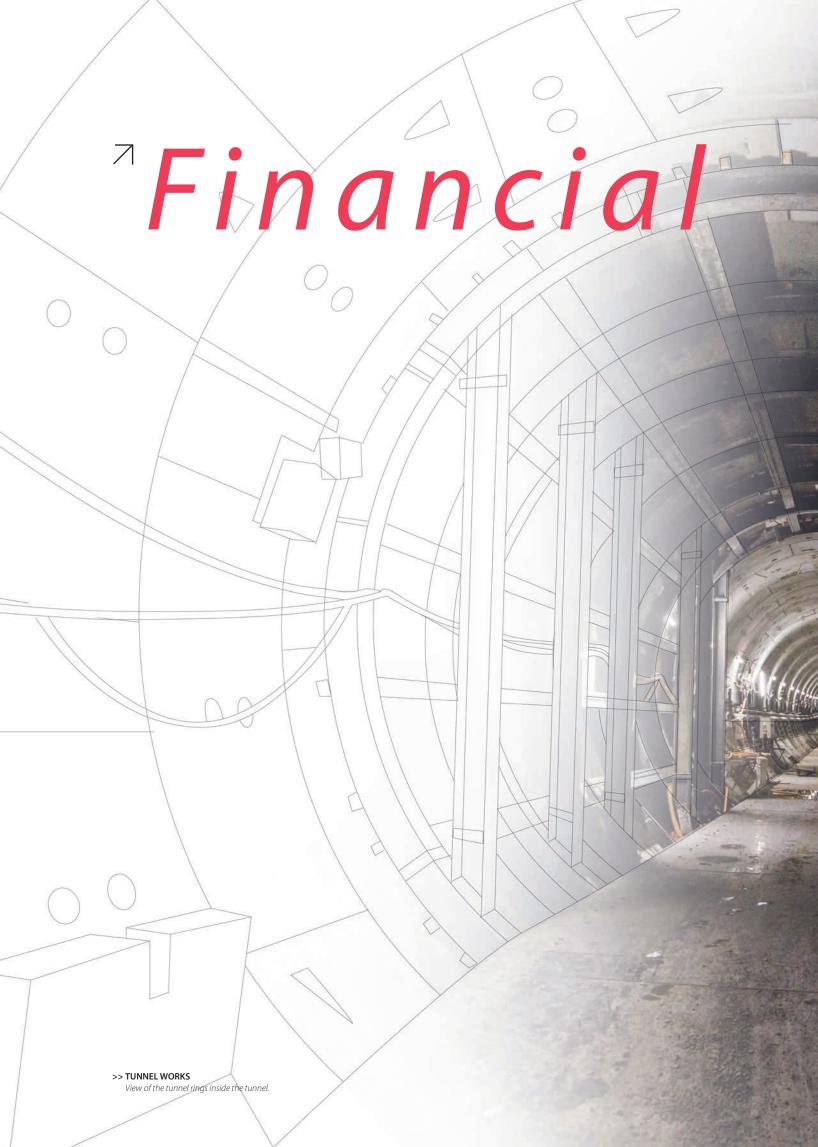
#### >> WORKING TOGETHER

MRT Corp CEO Datuk Wira Azhar Abdul Hamid (in white) getting a wall on the outside of the Taman Shahjaya Community Hall ready for a coat of paint.



#### >> TEAM WORK

Volunteers painting the outside walls of the surau at Kampung Selamat in Sungai Buloh.





FUNDING for the MRT Project is fully provided by the Government of Malaysia via DanaInfra Nasional Berhad (DanaInfra) which is a special purpose vehicle company set up with the main purpose of undertaking the funding of Government infrastructure projects.

As at 30 September 2014, Danainfra had issued five series of Sukuk totaling RM11.7 billion. The Sukuk tenures range from seven to thirty years with profit rates ranging from 3.62% to 5.51%.

From November 2013, MRT Corp had been managing the fund's disbursement and placement which were previously managed by DanaInfra. As a result, the financial income had increased significantly to RM27.3 million during the period under review compared to RM0.5 million during the last financial year.





**TAKING SHAPE <<**Workers constructing the platform of the Muzium Negara Station in front of the tunnel opening.



### **Financial Year ended 30 September 2014** Financial Highlights

Amounts in RM'000

STATEMENT OF PROFIT OR LOSS	FY 2014	FY 2013	+/-	
Other income	696	648	48	
Finance income	27,261	463	26,798	
Administrative expenses	(31,091)	(21,305)	(9,786)	
Finance cost	(7)	(3)	(4)	
Loss before tax	(3,141)	(20,197)	17,056	
Tax expense	(255)	-	(255)	
Net loss for the year	(3,396)	(20,197)	16,801	



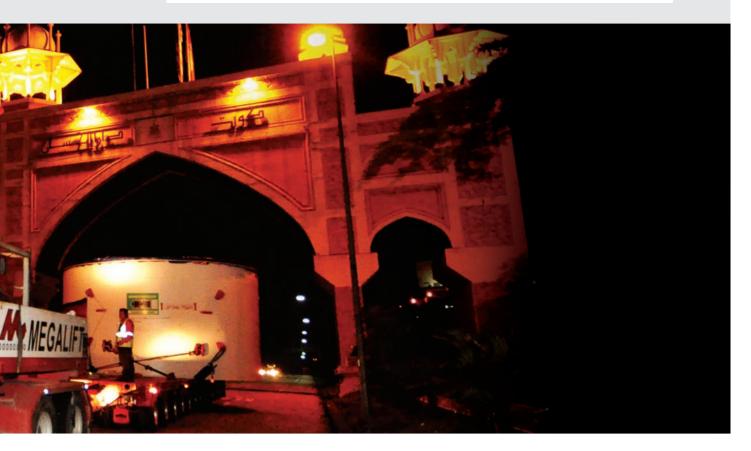
>> HEAVY LOAD

The world's first Variable Density Tunnel Boring Machine being delivered to the Cochrane Launch Site after its arrival from Germany.

### **Financial Year ended 30 September 2014**Financial Highlights

Amounts in RM'000

STATEMENT OF FINANCIAL POSITION	FY 2014	FY 2013	+/-	
Property, plant and equipment	9,725,512	4,435,084	5,290,428	
Current assets	1,554,989	11,364	1,543,625	
Total assets	11,280,501	4,446,448	6,834,053	
Equity	60,838	4,234	56,604	
Contribution from Government	10,823,203	3,999,187	6,824,016	
Current liabilities	396,460	443,027	(46,567)	
Total equity & liabilities	11,280,501	4,446,448	6,834,053	



l	PART A : ADVANCE WORK		
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
1.	AW1 - Package A Dilapidation Survey Works For Semantan And Cochrane Launching Shaft	Cunningham Lindsey Adjusters (M) Sdn Bhd	0.04
2.	AW2 - Package C1 Construction And Completion Of Working Platform Including Earthworks, Access Road, Drainage Works,TNB Substation, Retaining Walls, Utilities Protection And Ancillary Works For Semantan Launching Shaft	Menta Construction Sdn Bhd	12.26
3.	AW3 - Package C2 Construction And Completion Of Working Platform Including Demolition Of Existing Government Quarters And Playground, Site Clearance, Utilities Protection, Drainage Works, TNB Substation, Tree Relocation, Traffic Diversion & Control And Ancillary Works For Cochrane Launching Shaft	Ragawang Corporation Sdn Bhd	7.26
4.	AW4 - Package D1 Relocation Of Existing Telecommunication & Power Supply Cables For Cochrane Launching Shaft	E.S.S. Engineering Sdn Bhd	0.01
5.	AW5 - Package D2 Relocation Of Existing Sewerage And Water Mains For Cochrane Launching Shaft	Puncak Niaga (M) Sdn Bhd	0.49
6.	AW6 - Package E Supply And Installation Of Instrumentation And Equipment For Monitoring Works Including Automated Total Station For Semantan And Cochrane Launching Shaft	Soil Instruments (M) Sdn Bhd	1.15
7.	AW7- Package F1 Construction And Completion Of Contiguous Bored Piles Including Ground Anchor For Semantan Launching Shaft	Geohan Sdn Bhd	6.58
8.	AW8 - Package F2 Construction And Completion Of Secant Bored Pile For Cochrane Launching Shaft	Bauer (M) Sdn Bhd	10.59



FUTURE STATION <<

Construction of the MRT guideway at the future Taman Suntex Station in progress.

ſ	PART A : ADVANCE WORK (continued)		
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
9.	AW9 Construction And Completion Of Earthworks And Associated Works (Phase 1) At Sungai Buloh Depot	Gadang Engineering (M) Sdn Bhd	23.91
10.	AW10 Demolition Of Chiller Room, Pump Houses And Removal Of Piles Obstructing TBM Drive At IPPKKL	Pembinaan CW Yap Sdn Bhd	2.65
11.	AW11 - Package GPL1 Relocation Of Existing Gas Pipeline For KL Sentral	Misi Setia Oil and Gas Sdn Bhd	0.92
12.	AW12 - Package SYB1 Relocation Of Existing Water Pipeline And Traffic Management For Utilities Relocation For KL Sentral	Hatimuda Sdn Bhd	5.69
13.	AW13 - Package TEL1 The Relocation Of Existing Telecommunication Lines For KL Sentral	Sri Communication Sdn Bhd	0.70
14.	AW14 - Package TCO1 The Relocation Of Existing Fibre Optic Lines For KL Sentral	Tenaga Nirwana (M) Sdn Bhd	1.50
15.	AW15 - Package TNB1 The Relocation Of Existing Power Supply Cables For KL Sentral And Merdeka	Worktime Engineering Sdn Bhd	1.72
16.	AW16 - Package TEL2 The Relocation Of Existing Telecommunication Lines For Merdeka	Sri Communication Sdn Bhd	1.98
17.	AW17 - Package SYB2 Relocation Of Existing Water Pipeline For Maluri	MMC Gamuda KVMRT (PDP) Sdn Bhd	8.34
18.	AW18 - Package TEL3 Relocation Of Existing Telecommunication Lines For Maluri	Sri Communication Sdn Bhd	10.02

I	PART A: ADVANCE WORK (continued)		
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
19.	AW19 - Package TCO2 Relocation Of Existing Fibre Optic Lines For Maluri	Fastpro Sdn Bhd	3.9
20.	AW20 - Package TNB2 Relocation Of Existing Power Supply Cables For Maluri	Huls Transmission Sdn Bhd	37.89
21.	AW21 Grouting Works, Underground Excavation, Ground Anchors And Rock Bolts For Cochrane Launching Shaft & Station	Keller (M) Sdn Bhd	11.10
22.	AW22 Demolition Of Superstructure For Klang Bus Stand, Plaza Warisan And UO Superstore, Supply And Installation Of 1MVA Compact Substation And All Necessary Associated Works For Pasar Seni Station	Pembinaan C W Yap Sdn Bhd	24.02



**CHALLENGING <<**Construction of the Semantan Station over Jalan Semantan.

ı	PART B : GUIDEWAY (VIADUCT)		
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
23.	Elevated Section V1 - Viaduct Construction And Completion Of Viaduct Guideway And Other Associated Works From Sungai Buloh To Kota Damansara Station	Syarikat Muhibah Perniagaan & Pembinaan Sdn Bhd	1,092.33
24.	Elevated Section V2 - Viaduct Construction And Completion Of Viaduct Guideway And Other Associated Works From Kota Damansara To Dataran Sunway Station	Gadang Engineering (M) Sdn Bhd	863.39
25.	Elevated Section V3 - Viaduct Construction And Completion Of Viaduct Guideway And Other Associated Works From Dataran Sunway To Section 17	Mudajaya Corporation Berhad	816.24
26.	Elevated Section V4 - Viaduct Construction And Completion Of Viaduct Guideway And Other Associated Works From Section 17 To Semantan Portal	Sunway Construction Sdn Bhd	1,172.75
27.	Elevated Section V5 - Viaduct Construction And Completion Of Viaduct Guideway And Other Associated Works From Maluri Portal To Plaza Phoenix Station	IJM Construction Sdn Bhd	974.78
28.	Elevated Section V6 - Viaduct Construction And Completion Of Viaduct Guideway And Other Associated Works From Plaza Phoenix Station To Bandar Tun Hussein Onn Station	Ahmad Zaki Sdn Bhd	764.91
29.	Elevated Section V7 - Viaduct Construction And Completion Of Viaduct Guideway And Other Associated Works From Bandar Tun Hussein Onn To Taman Mesra	MTD Construction Sdn Bhd	499.98
30.	Elevated Section V8 - Viaduct Construction And Completion Of Viaduct Guideway And Other Associated Works From Taman Mesra To Kajang Station	UEM Construction Sdn Bhd	951.09



**DEEP PIT <<** Excavation of the Maluri MRT Station in progress.

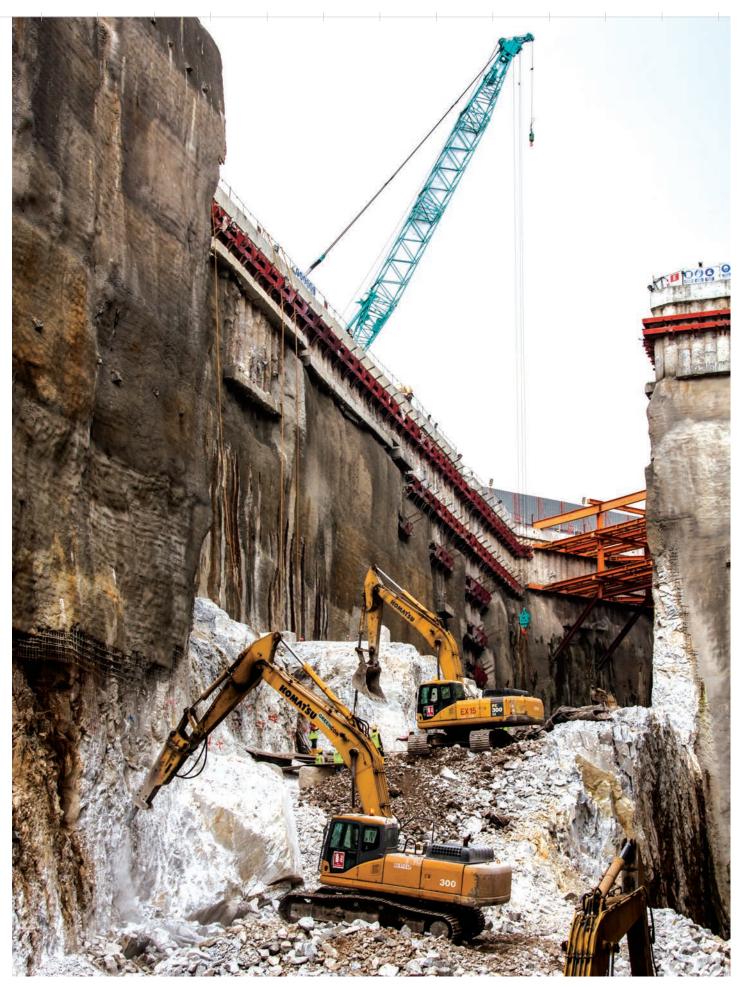
·	PART C: DEPOTS		
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM'MILLION
31.	Package DPT1 Construction And Completion Of Sungai Buloh Maintenance Depot, Administration Building, External Works And Other Associated Works	Trans Resources Corporation Sdn Bhd	458.98
32.	Package DPT2 Construction And Completion Of Kajang Maintenance Depot, External Works And Other Associated Works	TSR Bina Sdn Bhd	212.81



>> READY FOR ASSEMBLY
An MRT train car body in the assembly line in the Rasa Assembly Plant.

CONTRACT SUM RM' MILLION  117.11
02 44
03,44
128.86
115.98
50.70
123.20

	PART E : SYSTEMS		
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
	System Group 1		
39.	Systems Work Package SBK-S-01 Engineering, Procurement, Construction, Testing & Commissioning Of Electric Trains	Consortium of Siemens Malaysia Sdn Bhd, Siemens AG and SMH Rail Sdn Bhd	1,365.08
40.	Systems Work Package SBK-S-02 Engineering, Procurement, Construction, Testing & Commissioning Of Depot Equipment & Maintenance Vehicles	Consortium of Siemens Malaysia Sdn Bhd, Siemens AG and Hisniaga Sdn Bhd	418.81
41.	Systems Work Package SBK-S-03 Engineering, Procurement, Construction, Testing & Commissioning Of Signalling & Train Control System	Bombardier (Malaysia) Sdn Bhd	281.31
42.	System Works Package SBK-S-04 Engineering, Procurement, Construction, Testing & Commissioning Of Platform Screen Doors And Automatic Platform Gates	Singapore Technologies Electronics Limited	78.09
	System Group 2		
43.	Systems Work Package SBK-S-05 Engineering, Procurement, Construction, Testing & Commissioning Of Power Supply & Distribution System	Meidensha Corporation	459.25
44.	Systems Work Package SBK-S-06 Engineering, Procurement, Construction, Testing & Commissioning Of Track Works	Mitsubishi Heavy Industries Ltd	855.00
	System Group 3		
45.	Systems Works Package -SBK-S-07 Engineering, Procurement, Construction, Testing & Commissioning Of Telecommunication System	Apex Communication Sdn Bhd - LG CNS Consortium	319.94
46.	System Works Package SBK-S-08 Engineering, Procurement, Construction, Testing & Commissioning Of SCADA Facility	A.F.S. Engineering (M) Sdn Bhd - ST Electronics Ltd	23.24
47.	System Works Package SBK-S-09 Engineering, Procurement, Construction, Testing & Commissioning Of Automatic Fare Collection System	Affiliated Computer Services Solutions France SAS	120.76



**HARD ROCK <<** Excavators breaking limestone while excavating the Tun Razak Exchange Station.

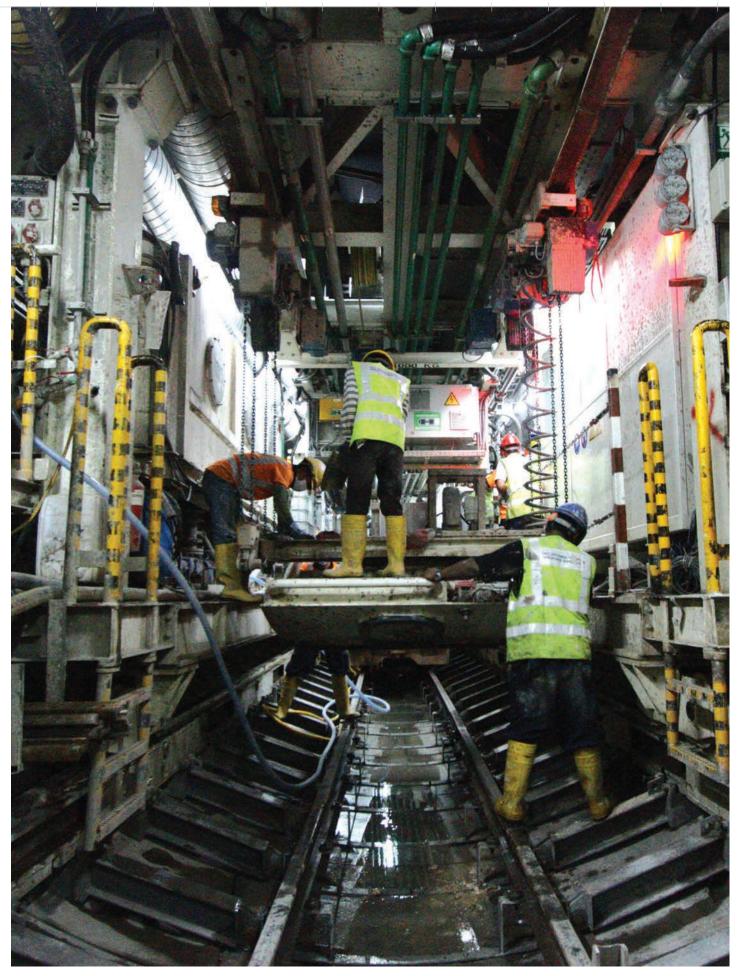


>> IN PROGRESS

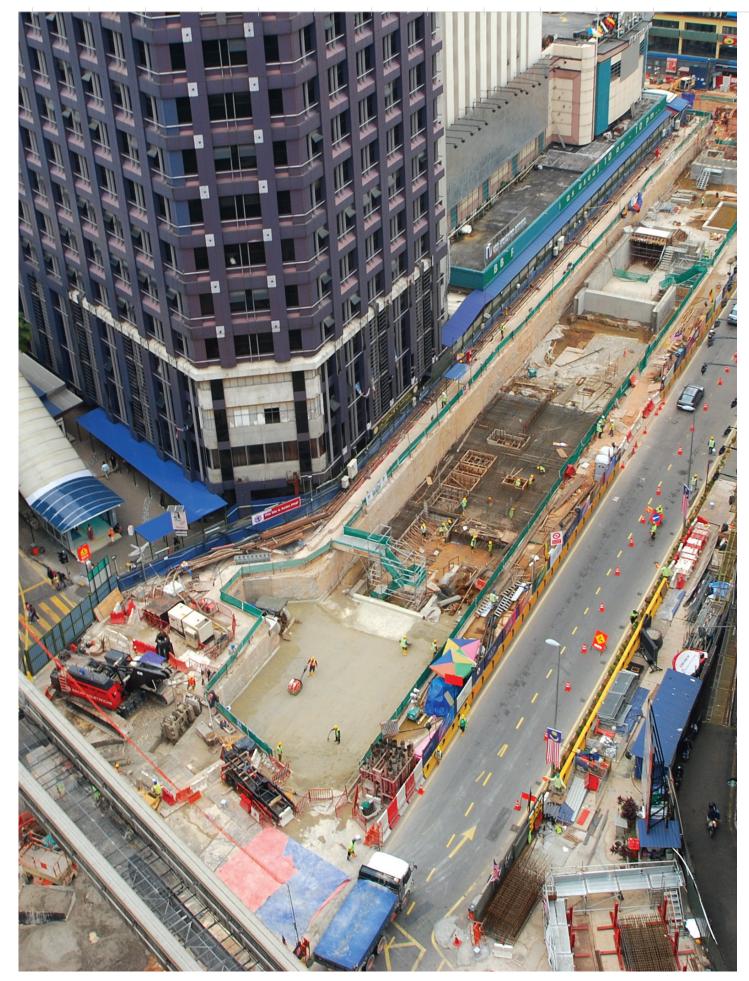
Aerial view of the Inai Launch Shaft.

	PART E: SYSTEMS (continued)		
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
48.	System Works Package SBK-S-10 Engineering, Procurement, Construction, Testing & Commissioning Of Electronic Access Control System	Apex Communication Sdn Bhd - Johnson Controls (M) Sdn Bhd	41.01
49.	System Works SBK-S-11 Engineering, Procurement, Construction, Testing & Commissioning Of Building Management System	Metronic Engineering Sdn Bhd	43.04
50.	System Works Package SBK-S-12 Engineering, Procurement, Construction, Testing & Commissioning Of Government Integrated Radio Network	Sapura Research Sdn Bhd	4.41
51.	System Works Package SBK-S-13 Design, Procurement, Configuration, Installation, Testing & Commissioning Of IT System For All Elevated And Underground Section Stations And Depots	EV - Dynamic Sdn Bhd	44.47
	PART F : UNDERGROUND WORKS		
52.	Underground Works (Tunnel, Stations & Associated Structures) Between Semantan North Portal And Maluri South Portal	MMC Gamuda KVMRT (T) Sdn Bhd	8,280.00

ŀ	PART G : ELEVATED STATIONS		
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
53.	Package S1 Construction And Completion Of Elevated Stations And Other Associated Works At Sungai Buloh, Kg. Baru Sungai Buloh And Kota Damansara	Trans Resources Corporation Sdn Bhd	286.66
54.	Package S2 Construction And Completion Of Elevated Stations And Other Associated Works At Taman Industri Sungai Buloh, PJU 5 And Dataran Sunway	Naim Engineering Sdn Bhd	208.26
55.	Package S3 Construction And Completion Of Elevated Stations And Other Associated Works At The Curve, One Utama And Taman Tun Dr Ismail	UEM Construction Sdn Bhd	279.87
56.	Package S4 Construction And Completion Of Elevated Stations And Other Associated Works At Section 16, Pusat Bandar Damansara And Semantan	Naim Engineering Sdn Bhd	210.45
57.	Package S5 Construction And Completion Of Elevated Stations And Other Associated Works At Taman Bukit Ria, Taman Bukit Mewah, Leisure Mall And Plaza Phoenix	IJM Construction Sdn Bhd	228.91
58.	Package S6 Construction And Completion Of Elevated Stations And Other Associated Works At Taman Suntex, Taman Cuepacs And Bandar Tun Hussein Onn	Ahmad Zaki Sdn Bhd	174.64
59.	Package S7 Construction And Completion Of Elevated Stations And Other Associated Works At Balakong And Taman Koperasi	Apex Communication Sdn Bhd	108.66
60.	Package S8 Construction And Completion Of Elevated Stations And Other Associated Works At Saujana Impian, Bandar Kajang And Kajang	Apex Communication Sdn Bhd	255.52



**HARD AT WORK <<**Workers at the back-up car of a tunnel boring machine.



>> NARROW SITE

Construction of the Bukit Bintang MRT Station.

١٥.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
51.	SBG-Northern Supply And Delivery Of Segmental Box Girders (SBG) For Proposed Projek Mass Rapid Transit Lembah Kelang: Jajaran Sg Buloh-Kajang (Northern Section)	SPC Industries Sdn Bhd	226.31
52.	SBG-Southern Supply And Delivery Of Segmental Box Girders (SBG) For Proposed Projek Mass Rapid Transit Lembah Kelang: Jajaran Sungai Buloh-Kajang (Southern Section)	Eastern Pretech (M) Sdn Bhd	191.64
53.	Package NB Design, Supply, Installation, Testing And Commissioning Of Noise Barriers And Enclosures	Muhibbah-SV-Samjung JV	207.93
54.	Package SDDT-U Supply, Delivery And Supervision Of Step Down Distribution Transformer For All Underground Stations And Ancillary Buildings	PTIS Engineering Sdn Bhd	11.07
55.	Package UPS-E Supply, Delivery And Supervision Of Installation, Testing And Commissioning Of Uninterruptible Power Supply For All Elevated Stations	Info-Matic Power Sdn Bhd	6.76
56.	Package LS-E Supply, Installation, Testing And Commissioning Of Lift System For All Elevated Packages, Sungai Buloh Depot And Multi Storey Carparks	OTIS Elevator Company (M) Sdn Bhd	43.67
57.	Package ETS-E Supply, Procurement, Installation, Testing And Commissioning Of Escalator And Travelator System For All Elevated Stations	MS Elevators Engineering Sdn Bhd	105.68
58.	Package ECS1 Supply, Procurement, Installation, Testing And Commissioning Of Environmental Control System For Elevated Package V1 To V4 And Sungai Buloh Depot	Kejuruteraan Astra Sdn Bhd	45.02

PART H : CIVIL & STRUCTURAL AND OTHER WORKS (continued)			
NO.	CONTRACT NAME	CONTRACTOR	CONTRACT SUM RM' MILLION
69.	Package ECS2 Supply, Procurement, Installation, Testing And Commissioning Of Environmental Control System For Elevated Package V5 To V8 And Kajang Depot	FastColl Corporation Sdn Bhd	22.55
70.	Package FD1 Supply, Procurement, Installation, Testing And Commissioning Of Fire Detection And Protection System For Elevated Package V1 To V2 And Sungai Buloh Depot	P.J. Indah Sdn Bhd	32.88
71.	Package FD2 Supply, Procurement, Installation, Testing And Commissioning Of Fire Detection And Protection System For Elevated Package V3 To V4	Fitters-MPS Sdn Bhd	15.10
72.	Package FD3 Supply, Procurement, Installation, Testing And Commissioning Of Fire Detection And Protection System For Elevated Package V5 To V6	Zulfan (M) Sdn Bhd	19.45
73.	Package FD4 Supply, Procurement, Installation, Testing And Commissioning Of Fire Detection And Protection System For Elevated Package V7 To V8 And Kajang Depot	Mecomb Malaysia Sdn Bhd	22.85
74.	Package LED-E Design, Supply, Procurement, Installation, Testing And Commissioning Of LED Lighting And Lighting Boom Equipment For All Elevated Packages	Norangkasa Enterprise Sdn Bhd	40.28
75.	Package SDDT-E Supply, Delivery And Supervision Of Installation, Testing And Commissioning Of Step Down Distribution Transformer For All Elevated Packages, Sungai Buloh And Kajang Depots	PTIS Engineering Sdn Bhd	8.25
76.	Package LS-U Supply, Procurement, Installation, Testing And Commissioning Of Lift System For All Underground Stations And Ancillary Buildings	EITA Elevator (Malaysia) Sdn Bhd	16.78



HISTORICAL SITE << View of the Merdeka Station beside Stadium Negara.



>> TAKING SHAPE
View of the Taman Koperasi Cuepacs Station beside the Cheras-Kajang Highway.

#### PART H: CIVIL & STRUCTURAL AND OTHER WORKS (continued)

NO. CONTRACT NAME CONTRACTOR CONTRACT SUM RM' MILLION

77. Package ETS-U
Supply, Procurement, Installation, Testing
And Commissioning Of Escalator And Travelator
System For All Underground Stations

Kone Elevator (Malaysia) Sdn Bhd

75.68



SAFETY FIRST <<

A tally board used to keep track of personnel who go underground to work.



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