

**REPUBLIC OF KENYA**



**NATIONAL ASSEMBLY**

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**ELEVENTH PARLIAMENT – FOURTH SESSION**

**PUBLIC INVESTMENTS COMMITTEE**

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**THE REPORT ON**  
**INSPECTION VISIT OF PHASE I OF THE STANDARD GAUGE**  
**RAILWAY (MOMBASA - NAIROBI LINE) UNDERTAKEN**  
**BETWEEN 16<sup>TH</sup> - 18<sup>TH</sup> JUNE, 2016**  
**AND**  
**IMPLEMENTATION STATUS OF PHASE I AND II OF THE**  
**STANDARD GAUGE RAILWAY**

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**CLERK'S CHAMBERS,  
NATIONAL ASSEMBLY,  
PARLIAMENT BUILDINGS,  
NAIROBI.**

**NOVEMBER, 2016**

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

CBD	-	Central Business District
CCCC	-	China Communications Construction Company
CRBC	-	China Roads and Bridges Corporation
CSE	-	Communications, Signals and Electricity
EPC	-	Engineering Procurement Construction
GoK	-	Government of Kenya
ICD	--	Inland Container Depot
JKIA	–	Jomo Kenyatta International Airport
KRC	-	Kenya Railways Corporation
MIA	–	Moi International Airport
MoU	-	Memorandum of Understanding
MoTI	-	Ministry of Transport & Infrastructure
SGR	-	Standard Gauge Railway
TEU	-	Twenty-Foot Equivalent Unit
TSDI	–	Third Railway Survey and Design Institute
USD	-	United States Dollars

## **1.0 PREFACE**

The Public Investments Committee is a Select Committee established under Standing Order No. 206 and is responsible for the examination of the working of public investments.

### **1.1 Mandate of the Committee**

The Committee is mandated to: -

- (a) Examine the reports and accounts of the public investments;
- (b) Examine the reports, if any, of the Auditor General on the public investment;
- (c) Examine, in the context of the autonomy and efficiency of the public investments, whether the affairs of the public investments, are being managed in accordance with sound financial or business principles and prudent commercial practices.

The Committee shall however not examine: -

- (a) Matters of major Government policy as distinct from business or commercial functions of the public investments;
- (b) Matters of day-to-day administration; and,
- (c) Matters for the consideration of which machinery is established by any special statute under which a particular public investment is established.

The procedure of a Select Committee and other related matters thereto is covered under Standing Order No. 173–203. The Committee has power, under the provisions of the Constitution, National Assembly (Powers and Privileges) Act (Cap. 6), the State Corporations Act (Cap. 446) and the Public Audit Act (Cap. 412), to summon witnesses, examine them on oath and receive evidence.

### **1.2 Committee Membership**

The Committee comprises of the following Members: -

1. Hon. Adan Wehliye Keynan, CBS, MP **- Chairperson**
2. Hon. Anthony Ichung`wah Kimani, MP **- Vice Chairperson**
3. Hon. Francis Mwanzia Nyenze, EGH, MP
4. Hon. Dr. Oburu Oginga, MGH, MP
5. Hon. (CPA) Thomas Ludindi Mwadeghu, CBS, MP
6. Hon. Adan Mohammed Nooru, MP
7. Hon. Franklin Mithika Linturi, MP
8. Hon. Wafula Wamunyinyi, MP
9. Hon. Elias Bare Shill, MP
10. Hon. Sammy Silas Komen Mwaita, MP

11. Hon. John Olago Aluoch, MP
12. Hon. (Dr.) Paul Nyongesa Otuoma, EGH, MP
13. Hon. (Eng). John Kiragu, MP
14. Hon. Dorcas Kedogo, MP
15. Hon. Abdullswamad Sheriff Nassir, MP
16. Hon. Beatrice Nkatha Nyaga, HSC, MP
17. Hon. Bernard Munywoki Kitungi, MP
18. Hon. (Dr.) Chrisanthus Wamalwa Wakhungu, CBS, MP
19. Hon. Cornelly Serem, MP
20. Hon. Eng. Stephen Ngare, MP
21. Hon. Irungu Kang'ata, MP
22. Hon. Johana Kipyegon Ngeno, MP
23. Hon. John Muchiri Nyaga, HSC, MP
24. Hon. John Ogutu Omondi, MP
25. Hon. Korei Ole Lemein, MP
26. Hon. Mary Sally Keraa, MP
27. Hon. Onesmus Muthomi Njuki, MP

### **1.3 Objectives of the Inspection Visit**

Pursuant to Standing Order 206 7(c), the Committee in its 49<sup>th</sup> sitting held on 7<sup>th</sup> June, 2016 resolved to undertake an inspection visit of the standard gauge railway (SGR) line from Nairobi to Mombasa (Phase I) with the objective of ascertaining the project's implementation status; especially the extent to which the Committee's recommendations as contained in its *Special Report on the Procurement and Financing of the construction of the Standard Gauge Railway from Mombasa to Nairobi (Phase I) adopted by the House on 24<sup>th</sup> June, 2014*, were taken into account, for successful implementation and timely completion of the Project.

The Committee also tabled a *Special Report on Procurement of the Independent Consultant for Design Review and Construction Supervision for the Standard Gauge Railway from Mombasa to Nairobi and Procurement of facilities, locomotives and rolling stock* laid before the table of the House on 2<sup>nd</sup> December, 2014.

As evidenced by the two reports, the Committee has been consistent in advocating for efficiency, cost effectiveness and timely completion of the Project.

### **1.4 Delegation**

The fact-finding visit was undertaken between 16<sup>th</sup> and 18<sup>th</sup> June, 2016 by the following

Committee members: -

1. Hon. Adan Wehliye Keynan, CBS, MP - **Chairperson**
2. Hon. Anthony Ichung'wah Kimani, MP - **Vice Chairperson**
3. Hon. Dr. Oburu Oginga, MGH, MP
4. Hon. (CPA) Thomas Ludindi Mwadeghu, CBS, MP
5. Hon. Adan Mohammed Nooru, MP
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15. Hon. John Muchiri Nyaga, HSC, MP
16. Hon. John Ogutu Omondi, MP
17. Hon. Korei Ole Lemein, MP
18. Hon. Mary Sally Keraa, MP
19. Hon. Onesmus Muthomi Njuki, MP

### **1.5 Sites Visited**

The visit commenced on 16<sup>th</sup> June, 2016 at the Nairobi South SGR Terminus in Syokimau with a presentation on the status of SGR Project. The two-day visit ended at the Port of Mombasa on 17<sup>th</sup> June, 2016.

During the visit, the Committee held meetings with the officials of Kenya Railways Corporation, the Consultant's staff including expatriates from TSDI, local personnel from APEC and EDON and the China Road and Bridge Corporation (CRBC) personnel at various sites with key installations and facilities along the SGR corridor.

Among the construction sites the Committee visited and inspected are Nairobi South SGR Terminus (Nairobi South Station) in Syokimau, Athi River SGR Bridge, Emali T-Beam and Rail Sleeper Factory, Simba Railway Station, Tsavo River Super Bridge, Taru Super Bridge, Mariakani SGR Materials Quality Control laboratories as well as Mombasa West Station and Mombasa Port.

## **Committee General Observations**

### **The Committee made the following observations following the two-day tour of the Standard Gauge Railway –**

1. Implementation of Phase I of the standard gauge railway is on course with substantial civil works, track works and procurement of installations of associated facilities and railway stations having been already done. With an overall of 81% progress of civil works achieved and 324 Km of track laid, the project is due for completion in June 2017 ahead of the scheduled date of completion of June 2019.
2. For long-term viability, the Project should incorporate future plans for expansion of the line to a double track with a high speed line and to create room for electric powered trains to save on costs for future expansion.
3. The Committee was informed that the construction period of the SGR was reduced by two years following an Executive directive. The KRC management and Project Consultant however assured the Committee that quality of works would not be compromised in executing the Executive directive on implementation of the project.
4. The timeline of completion of Phase I of the Project may not be realised following the ruling on Petition 171 of 2016 by Judge A. Omollo of the Environment and Land Court in Mombasa on 21st June, 2016 which temporarily halted construction of the railway. This petition was filed by landowners in Mombasa County who are yet to be compensated despite their land having been compulsorily acquired for construction of the railway.
5. The successful completion of the SGR will significantly improve the passenger and freight transport in Kenya, boost the economy of the towns along its route, strengthen Kenya's political and economic status and promote integration process of East Africa Community.
6. There is an urgent need to interlink the SGR line with Jomo Kenyatta International Airport, Moi International Airport and the two major cities, namely Nairobi and Mombasa Central Business District to facilitate ease of transportation of freight and passengers.
7. The main contractor, China Road and Bridge Corporation (CRBC) has directly engaged local suppliers to supply materials and subcontracting services to the project, some of the local sub-contractors' input on the project include drainage works, grassing as well as supply of materials such as sand, cement, fuel and steel, however compliance of the forty per centum of local content engagement has not been achieved as per the contract.
8. The SGR project is viable as envisaged in the tripartite Agreement signed between the governments of Kenya and Uganda in 2009.
9. The Committee was informed that environmental impact assessment is taken into consideration at every stage during the construction of the Project and all the relevant stakeholders are consulted.



10. The Committee was informed that the contractor has made provision for fibre optic cables and power lines for future internet and electricity connectivity along the Standard Gauge Railway.
11. The Committee also observed that there is need to engage an independent quality assurer for purposes of inspection and laboratory testing of materials procured and used by the contractor to conform to standards as per the contract.

## **Committee Recommendations**

### **I. General Recommendations**

The Committee makes the following general recommendations: -

- (i) The urgency to complete and deliver the project two years ahead of the scheduled date should not compromise quality, scope and budget of the project. The Contractor should undertake the project in accordance with the contractual obligations and specifications.
- (ii) The Project should incorporate future plans for expansion of the line to a double track with high speed in addition to provision of fibre optic cables and power lines for future electrification of the line.
- (iii) KRC should consider an open-access model for the standard-gauge line where companies with their own trains can use the line at specified times and pay the Corporation an access fee.
- (iv) There is need improve road network along the railway and industrial areas to improve transshipment and connectivity and create efficiency and ease of transport.
- (v) There is need to expand the Standard Gauge Railway to other parts of the country with high business volumes.

### **II. Phase 1 Recommendations**

On Phase I of the Standard Gauge Railway, the Committee makes the following recommendations:

- (i) To ensure the viability of the Phase 1 of the SGR, KRC should hasten construction of railway line to connect Nairobi SGR Terminus to Nairobi CBD, Jomo Kenyatta International Airport and the Inland Container Depot Terminal at Embakasi and also connect Mombasa West Station to Mombasa CBD, Wilson Airport and Moi International Airport to ensure enhanced efficiency in transport of passengers and freight in the two major Kenyan cities.
- (ii) KRC should appoint an operator who is acceptable to the Contractor CRBC and China Exim Bank to initially operate the line to generate enough revenue to cover the cost of operation and maintenance of the line and rolling stock as well as meet external loan obligations and meet any revenue shortfalls when the line becomes operational.
- (iii) The Contractor, CRBC should endeavour to enhance skills and technology transfer to the local staff who will manage and operate the trains, rolling stock and the line after

the handing over of the project to the Kenya Railways Corporation.

### III. Phase 2 Recommendations

On Phase 2 of the Standard Gauge Railway, the Committee makes the following recommendations:

- (i) For Kenya to fully realize the benefit of the SGR project, the implementation of Phase 2 of the Project (Naivasha-Kisumu-Malaba) should be expedited to allow movement of cargo to the neighbouring countries as envisaged in the tripartite Agreements signed between the governments of Kenya and Uganda in 2009 and Kenya, Uganda and Rwanda in 2013.
- (ii) The Committee also recommends that a formal agreement be entered into with KRC, Kenya National Highways Authority and Kenya Wildlife Service to resolve any conflict involving the right of way of the SGR line as construction of Phase 2 commences.

### Acknowledgement

The Committee wishes to record its appreciation to the Office of the Speaker and the Clerk of the National Assembly for facilitation in fulfilment of its mandate. The Committee is also grateful to all the Kenya Railways Management, the Project Contractor CRBC and Staff of TSDI-APEC-EDON Consortium who adduced evidence before it and guided the Committee during the visit. The Committee would also like to appreciate the National Police Service for providing adequate security to the Committee throughout the visit.

Further, the Committee is grateful to the staff of the National Assembly, Office of the Auditor-General, the Inspectorate of State Corporations and the National Treasury for the services they rendered to the Committee. It is their commitment and dedication to duty that made the work of the Committee and production of this Report possible.

On behalf of the Members of the Public Investments Committee, I beg to table the Committee's Report on Fact-Finding Tour of Phase I of the Standard Gauge Railway pursuant to Standing Order 199.

Sign: 

Date: 18/11/2016

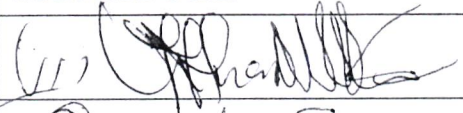
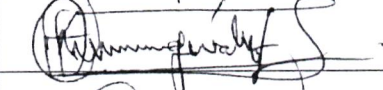
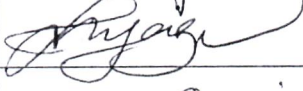
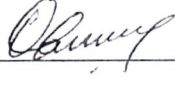
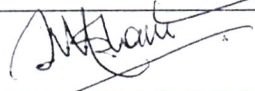
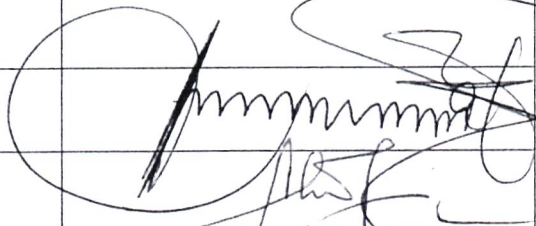
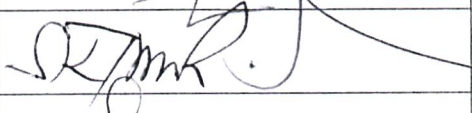
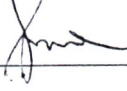
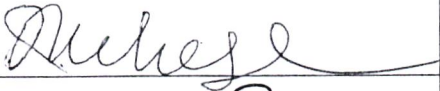
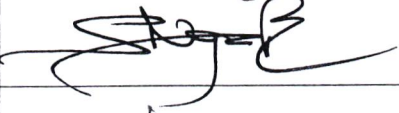

HON. ADAN W. KEYNAN, CBS, MP

CHAIRPERSON, PUBLIC INVESTMENTS COMMITTEE

PUBLIC INVESTMENTS COMMITTEE

ADOPTION OF THE REPORT ON INSPECTION VISIT OF PHASE I OF THE STANDARD GAUGE RAILWAY (MOMBASA - NAIROBI LINE) UNDERTAKEN BETWEEN 16<sup>TH</sup> - 18<sup>TH</sup> JUNE, 2016 AND IMPLEMENTATION STATUS OF PHASE I AND II OF THE STANDARD GAUGE RAILWAY

DATE: 18/11/2016

	NAME	SIGNATURE
1.	Hon. Adan Wehliye Keynan, CBS, MP	
2.	Hon. Anthony Kimani Ichung'wah, MP	
3.	Hon. Francis Mwanzia Nyenze, EGH, MP	
4.	Hon. (Dr.) Oburu Oginga, MGH, MP	
5.	Hon. (CPA) Thomas Ludindi Mwadeghu, CBS, MP	
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12.	Hon. (Dr.) Paul Nyongesa Otuoma, EGH, MP	
13.	Hon. (Eng.) John Kiragu, MP	
14.	Hon. (Eng.) Stephen Ngare, MP	
15.	Hon. Abdullswamad Sheriff Nassir, MP	

## **2.0 IMPLEMENTATIONS STATUS OF PHASE I (MOMBASA-NAIROBI) OF THE STANDARD GAUGE RAILWAY PROJECT**

### **2.1 Description of the Project**

Kenya Railways Corporation is developing a new standard gauge railway (SGR) line for passengers and cargo transportation between Mombasa, the largest port in East Africa, and Nairobi. The line, on completion is proposed to connect Mombasa to Malaba on the border with Uganda and continue onward to Kampala, Uganda's capital city. It will further run to Kigali in Rwanda with a branch line to Juba in South Sudan.

The project aims to connect Kenya, Uganda, Rwanda and South Sudan and is expected to simplify transport operations in the country and across the borders and reduce travel costs, shorten the passenger travel time from Mombasa to Nairobi from more than ten hours to a little more than four hours. Freight trains will complete the journey in less than eight hours apart from benefiting the economies of Kenya and the neighbouring countries.

The Mombasa – Nairobi line constitutes the first phase of the SGR and is Kenya's flagship project under the Kenya Vision 2030 development agenda.

The Standard Gauge Railway is the biggest infrastructural project in Kenya since independence and is estimated to cost Kshs 327 billion (\$3.804 billion). The Project is financed through a loan, which is part concessional and part commercial from the Exim Bank of China which amounts to 90% (KES. 294.3 billion) while the remaining 10% (KES. 32.7 billion) is financed by the Kenyan Government, through the Railway Development Fund levy.

Cost of land acquisition is estimated to be Kshs. 15 billion financed from the Railway Development Levy.

The Government contracted China Roads and Bridges Corporation (CRBC) Ltd to construct the line under Engineering Procurement Construction (EPC), where two commercial contracts of USD 2.66 billion for construction of the proposed Mombasa – Nairobi SGR line and supply and installation of facilities, locomotives and rolling stock and USD 1.44 billion for communications, signals and electricity (CSE) were signed on 11<sup>th</sup> July, 2012.

TSDI-APEC–EDON consortium was contracted on 3<sup>rd</sup> June 2014 by KRC for supervision for the construction of the line from Mombasa to Nairobi and procurement and installation of facilities, locomotives and rolling stock.

The project commenced on 12<sup>th</sup> December, 2014 with a signed contract duration of 60 months.

The total length of the main line is 472.253 km with 77 bridges including super, major and medium bridges covering 29 km, which is 6.3% of the entire alignment. The bridges are frame bridges and box culverts.

The whole line is designed in accordance with Chinese Standards for class I single line with uniform design specification and standard gauge of 1435mm that will permit seamless operations across the borders.

## 2.2 Rolling stock of the SGR line

The line will initially carry diesel trains while electrification is possible in future. Multiple unit passenger trains having a capacity of 960 passengers will travel at a speed of 120km/h on the line.

Freight trains will have a capacity of 216 TEUs and travel at an average speed of 80km/h. A typical freight train on the line will consist of 54 double stack flat wagons and measure 880m-long.

## 2.3 Project Details at a quick glance

<b>Project Name</b>	MOMBASA-NAIROBI STANDARD GAUGE RAILWAY (SGR) PROJECT
<b>Funded by</b>	Government of Kenya : 10%
	Import-Export Bank of China (EXIM Bank): 90%
<b>Overall Responsibility</b>	Ministry of Transport and Infrastructure, Kenya
<b>Employer</b>	Kenya Railways Corporation (KRC)
<b>Employer's Representative (TSDI-APEC-EDON Consortium)</b>	The Third Railway Survey and Design Institute Group Co., Ltd (TSDI)
	APEC Consortium Co., Ltd (APEC)
	EDON International Consulting Co., Ltd (EDON)
<b>EPC Contractor</b>	China Road and Bridge Corporation (CRBC)
<b>Contract sum</b>	<b>USD 3.804 Billion</b>
<b>Project Components</b>	Contract I : Construction of a Standard Gauge Railway from Mombasa to Nairobi, Kenya ( <b>USD 2.66 Billion</b> )
	Contract II : Supply and installation of the facilities, locomotives and rolling stock for the Mombasa-Nairobi Standard Gauge Railway Project ( <b>USD 1.144 Billion</b> )
<b>Date of Commercial Contract</b>	Contract I : 11 <sup>th</sup> July, 2012
	Contract II: 4 <sup>th</sup> October 2012
<b>Date of Loan agreement</b>	11 <sup>th</sup> May 2014
<b>Mile stone dates</b>	Commencement date: 12 <sup>th</sup> December 2014
	Completion date: 1 <sup>st</sup> June 2017

### **3.0 IMPLEMENTATION STATUS OF PHASE 2 (NAIROBI – MALABA SGR) INCLUDING NEW KISUMU PORT AND INLAND CONTAINER DEPOT (ICD) IN NAIROBI**

#### **3.1 Background**

The Nairobi - Malaba SGR is part of the Mombasa - Kampala - Kigali - Juba SGR, which is one of the projects under the Northern Corridor Integrated Projects initiative for which Kenya, Uganda, Rwanda and South Sudan have signed and ratified the SGR Protocol. Each Country is required to develop the sections within its borders, hence Kenya is developing the Mombasa - Malaba section.

#### **3.2 Progress made in Implementation of Phase 2**

Due to the difficult terrain in this section, the Government has decided to split the development into three sub-phases as follows:

- **Phase 2A** = Nairobi - Naivasha (120 kilometres)
- **Phase 2B** = Naivasha - Kisumu (262 kilometres) including developing a new high capacity port at Kisumu. This phase includes the purchase of 35 locomotives, 724 freight wagons and 64 passenger coaches, which will be adequate for the entire Phase
- **Phase 2C** = Kisumu - Malaba (107 kilometres)

KRC signed a MoU with CCCC on 14th October, 2014 to develop Phase 2. Since then, the Feasibility Studies and preliminary designs were completed paving way for KRC and CCCC to sign commercial contracts for the three sub sections. The general progress made is described below: -

##### **3.2.1 Development of Phase 2A (Nairobi - Naivasha)**

The Executive resolved to fast track the development of Phase 2A (Nairobi - Naivasha section) to serve the proposed Naivasha Industrial Park to be located within the Geothermal fields south of Lake Naivasha. KRC and China Communications and Construction Company (CCCC) are evaluating route options for a branch line to serve the Park from the proposed Mai Mahiu Station or Longonot Station. Phase 2A project will be financed by GoK budgetary allocations (15%) and a loan from the EXIM Bank of China 85%) signed by the two parties on 3<sup>rd</sup> December, 2015.

The parties are in the process of discussing conditions precedent to the disbursement of the Loan with construction expected to commence on 26<sup>th</sup> September, 2016. CCCC will be the EPC Contractor in line with a MoU signed between KR and CCCC on 14<sup>th</sup> October, 2014.

The route for Phase 2A starts at Nairobi South Station then turns south, crossing the Nairobi National Park from where it will pass through the southern outskirts of OngataRongai Town, cross the Magadi Road and head towards Ngong' Hills. From there, the line descends

into the Rift Valley through a 4.5 km tunnel and runs along the Rift Valley escarpment to Mai Mahiu and Longonot. The route is 120 kilometres long.

KRC will need to engage a supervision consultant to undertake designs review and construction supervision. Discussions with MoTI are underway for appropriate way forward to fast track the procurement process of a Supervision Consultant for Nairobi - Naivasha section without infringing GoK procurement laws and regulations.

### **3.3.2 Development of Phase 2B (Naivasha – Kisumu) and Phase 2C (Kisumu - Malaba)**

The route runs from Longonot to Narok along the southern boundary of the Mau Forest from where it connects to Malaba through Bomet, Sondu, Ahero, Kisumu, Yala and Mumias. The terrain is undulating, thus requiring mitigation by long bridges and tunnels. As part of the project, a new high capacity port (to handle at least 600,000 tonnes annually) will be developed at Kisumu, approximately seven (7) kilometres to the west of the entrance into Kisumu International Airport.

The Cabinet approved the development of the Naivasha - Malaba section (including the development of the new high capacity port at Kisumu) on a G-to-G platform on 23<sup>rd</sup> March, 2016, paving the way for requesting for the AG's comments on the draft Commercial Contracts prepared by KR and CCCC.

Three (3) draft Commercial Contracts had been prepared for this section as follows:

- Phase 2B (Naivasha - Kisumu including the 9 km branch line from proposed Kisumu SGR Hub to the proposed new Kisumu Port).
- New Kisumu Port development
- Phase 2C (Kisumu - Malaba)

The Attorney General approved the draft Commercial Contracts on 24<sup>th</sup> March 2016 and these were signed by KRC and CCCC on 24<sup>th</sup> March, 2016 and witnessed by the Cabinet Secretary MoTI, members of KRC Board and Management. The signed documents have been submitted to MoTI and the National Treasury to initiate the process of financing identification from the Government of the Peoples Republic of China.

### **3.3 Development of ICD in Nairobi**

The Feasibility Study Report for the development of the Mombasa - Nairobi SGR recognised the need to modernise and expand the existing ICD in Nairobi in order to accommodate anticipated increased number of containers through the depot from the SGR operations. The cost of the project was to be borne by GoK. The ICD project was made a Condition Subsequent in the Financing Agreement for the development of Mombasa - Nairobi SGR, wherein the 4th Disbursement would only be made once EXIM Bank was satisfied that substantial progress had been made by GoK towards realising the ICD project.

In order to emphasise the need for developing the ICD, the Financing Agreement signed

between GoK and EXIM Bank of China on 3<sup>rd</sup> December, 2015, for the development of the Nairobi - Naivasha SGR made the ICD development a condition precedent to the disbursement. The disbursement would only commence after CCCC and KRC have signed a Commercial Contract for the development of the ICD. GoK fulfilled this condition on 24<sup>th</sup> March, 2016 when KRC and CCCC signed a Commercial Contract for the development of the ICD with CCCC as the EPC Contractor. The Commercial Contract has since been submitted to MoTI and forwarded to the National Treasury for financing identification.

**Summary of progress made Phase 2 (Nairobi - Malaba SGR)**

	Segment	Description	Route length or Capacity	Contract sum (US\$ MN)	Progress made
1.	Phase 2A	Nairobi - Naivasha	120 Km	1,483	<ol style="list-style-type: none"> <li>1. Financial Contract signed on 03-12-15</li> <li>2. Conditions Precedent being discussed between TNT and EXIM Bank of China</li> <li>3. MoTI will provide way forward for the procurement process for Supervision Consultant</li> <li>4. Construction expected to commence on 26<sup>th</sup> September, 2016.</li> </ol>
2.	Phase 2B	Naivasha - Kisumu (including provision of locomotives and rolling stock and branch line to new Kisumu Port)	262 Km	3,663	<ol style="list-style-type: none"> <li>1. Commercial Contract signed on 24<sup>th</sup> March, 2016 and submitted to MoTI and TNT to initiate financing identification.</li> <li>2. (Naivasha -Malaba SGR) Management discussing with MoTI procurement process for Supervision Consultant</li> </ol>
3.	Phase 2C	Kisumu - Malaba	107 Km	1,229	- ditto -
4.	New Kisumu Port	New development	600,000 tonnes	137	- ditto -



	<b>Segment</b>	<b>Description</b>	<b>Route length or Capacity</b>	<b>Contract sum (US\$ MN)</b>	<b>Progress made</b>
5.	Inland Container Depot	Expansion and modernisation of ICD in NRB	405,000 TEUs	213	Commercial Contract signed on 24 <sup>th</sup> March, 2016 and submitted to MoTI and TNT to initiate financing identification
	<b>TOTAL</b>		<b>Nairobi-Malaba = 489 km</b>	<b>6,725</b>	

## **EMERGING ISSUES**

### **Environment Concerns**

1. Several proposed routes for exiting Nairobi in Phase 2 of the Project were not technically possible due to environmental concerns and high cost of compensation when acquiring land.

Kenya Railways Corporation is in consultation with Kenya Wildlife Service (KWS) with regards to a proposal of having a 6.4 kilometre bridge constructed on the entire southern edge of the Nairobi National Park. The railway would then pass through Rongai and Ngongtowns which are high population areas before exiting the escarpment into the Rift Valley via a tunnel. Discussions on this proposed route have not been finalized. An earlier proposal to have a tunnel dug under the Nairobi National Park was not approved by KWS due to concerns on the effect of tunnelling to animal habitat in the Park.

2. The Corporation is working in consultation with KWS to ensure environmental sustainability of the project. They have so far met all conditions set by KWS.

### **Route Concerns**

3. The proposed route dubbed the ‘Southern route’ would then proceed to pass through Suswa, Naivasha, Narok, Ahero and Sondu towns before terminating in Kisumu. The route had been considered due to the difficult terrain of the escarpment along the Northern Corridor as well as the cost of acquiring land along the Northern corridor. These factors would greatly increase the cost of building the railway along the Northern corridor. The Southern route is considered relatively virgin and land cost would be minimal.
4. A proposed depot in Naivasha will serve the large commercial centres along the Northern corridor such as Nakuru and Eldoret via trucks.

## **Project Sustainability in the EAC Region**

5. According to KRC management, the three countries that signed the Tripartite Agreement, i.e. Kenya, Rwanda, Uganda are still intent on building their section of the SGR. The efficiency of the Kenyan corridor would ensure business people will choose it even if Tanzania is constructing a similar SGR.

### **4.0 TOUR OF THE STANDARD GAUGE RAILWAY (NAIROBI – MOMBASA)**

#### **4.1 Meeting with KRC Management and Project Consultant at Nairobi SGR Terminus**

**The Managing Director Kenya Railways Corporation Mr. Atanas Maina accompanied by KRC Railways Operations Manager Eng. Maxwell Mengich, Eng. J.M. Karanja, Architect Jeremiah Ndong and Architect Tobias Okoth from TSDI-APEC-EDON Consortium (TAEC) briefed the Committee as follows: -**

1. China Roads and Bridge Corporation was contracted by Kenya Railways to undertake Phase I of the Mombasa – Nairobi SGR Project vide two commercial contracts namely, Civil Works EPC Turnkey commercial contract and Supply and installation of facilities, locomotives and rolling stock contract.
2. TSDI-APEC-EDON Consortium was contracted to undertake design review and construction supervision of the contracts to ensure that the main contractor CRBC meets quality standards and adheres to specifications of the project.
3. The proposed standard gauge railway line starts at the port of Mombasa and runs in a north westerly direction traversing Kwale, Kilifi, TaitaTaveta, Makueni, Kajiado and Machakos counties and terminates in the city of Nairobi at Embakasi.
4. The single line track will have a superior design catering for robust and low-maintenance requirement. The new line will run parallel to the existing meter gauge railway and the Mombasa-Nairobi Road or A109 Highway for the most part. It will deviate at certain points to attain the desired gradient and curvature.
5. The route length of the line is 472 km and the total track length is 609 km. The line has 77 bridges including super, major and medium bridges covering 29.687 km. A further length of 2.038 km is to be laid at the Marshalling yard and station in the port of Mombasa.
6. The project will have two major stations in Mombasa and Nairobi. The stations incorporate the main station building, power substations, dispatch centre, comprehensive maintenance office building, locomotive depot and signals buildings, locomotive and vehicle workshops, materials shed and warehouses, living houses, water supply house, boiler room and guard room. The Nairobi South Station in Syokimau covers an area of 400 acres of land and will serve as an operations area and railway terminus for trains heading out of Nairobi. The station will have locomotive and vehicle workshops for maintenance, servicing and repair of locomotives. The

station is equipped with dispatch and signal control centre where all signals for marshalling the locomotives will originate from. Metre- gauge railway line is provided for connection to the city centre.

7. There will be seven (7) intermediate stations namely Mariakani, Miasenyi, Voi, MitoAndei, Kibwezi, Emali and Athi River and thirty-three (33) crossing/passing stations incorporating signal building tower, pump house for water well, comprehensive workshop building, living house and guard room.
8. With the stations in place, it means that 25 trains can be on the line at a single time.
9. Other civil works carried out include: -
  - (i) Electrification of the infrastructure
  - (ii) Build main freight exchange and passenger stations at Mombasa and Nairobi
  - (iii) Build intermediate freight exchange and passenger stations at Mariakani
  - (iv) Build 33 crossing (passing) stations
  - (v) Build Marshalling Yards at the Port of Mombasa and Nairobi hub
  - (vi) Build 8 underpasses for animals within Tsavo National Park
  - (vii) Fence out the track throughout its length
  - (viii) Supply and Installation of Facilities, Locomotives and Rolling Stock
10. Electrification was not included in the feasibility studies and preliminary designs for the Mombasa – Malaba SGR but it will be considered in future as one of the options for increasing the line capacity beyond the design capacity of 22 million tonnes per annum.
11. The Project is at an advanced stage and as at 31<sup>st</sup>May, 2016, 70% of civil works had been completed with 30% of track laying done mainly between Mombasa and Voi. **It is due for completion in June 2017 ahead of the scheduled date of completion of 2019. This was attributed to timely conclusion of land acquisition by KRC and subsequent mobilisation of resources by the contractor. The President also issued an executive order for early of completion and delivery of the project.**
12. The reduction in time of completion does not however affect the scope, budget and quality of the works of the project.
13. **KRC further signed another contract with China Communications Construction Company (CCCC) for the development of Naivasha – Malaba section of the project with the following four elements: -**
  - (i) Naivasha – Kisumu SGR line
  - (ii) Kisumu – Malaba SGR line
  - (iii) Kisumu Port Development; and

- (iv) Modernisation and expansion of the Inland Container Depot at Embakasi in Nairobi
14. Phase II of the SGR project is proposed to connect Nairobi to Malaba on the border with Uganda and continue onward to Kampala, Uganda's capital city. It will further run to Kigali in Rwanda with a branch line to Juba in South Sudan. Branch lines along the route will extend to Kisumu, Kasese and Pakwach.
  15. The governments of Kenya and Uganda signed a memorandum of understanding (MoU) in October 2009 to construct the SGR from Mombasa to Kampala. A tripartite agreement was signed by the governments of Kenya, Uganda and Rwanda in August 2013 to fast track the development of the railway to their respective capital cities. The objective of this agreement was for the three countries to adopt new technologies to enhance economic development in the region. The SGR project is meant to spur economic growth and development of the parties by reducing cost of doing business and increase the regions competitiveness. It would also enhance spatial development along the SGR corridor.
  16. The Ugandan section of the SGR line was launched in October 2014. The SGR line from Mombasa to Kigali is expected to be completed by 2018. Kenya Railways Corporation is responsible for the construction of the 1,300km-long track inside Kenya from Mombasa to Malaba via Nairobi.

#### **Committee Observations**

The Committee observed THAT –

- (i) The standard gauge railway has begun taking shape with substantial civil works done, track works and procurement of installations of associated facilities having been already been done;
- (ii) It is imperative that Kenya Railways Corporation ensures provision for SGR line connection to the Container Depot Terminal in Embakasi, Jomo Kenyatta International Airport and the Nairobi Central Business District for enhanced transport of freight and passengers;
- (iii) For long-term viability, the Project should have incorporated a future plan for expansion of the track to a double track with a high speed line to save on costs and savings for future expansion.
- (iv) The viability of the Project as envisaged in the tripartite Agreement signed between the governments of Kenya and Uganda in 2009 and Kenya, Uganda and Rwanda in 2013 may be at risk following reports that Rwanda has opted to connect to the Tanzanian SGR line which is deemed cheaper and less time-consuming than connecting through Kenya-Uganda.

The Committee was, however, informed that both Uganda and Rwanda are still party to the signed Agreements. In fact, Exim Bank of China has committed to provide

funds for the construction of the Ugandan SGR line. The Tanzanian SGR line is also an important part of the larger East African Railway network.

- (v) The Committee also expressed concern on the reduction of construction period by two years following an Executive Order. The KRC management and Project Consultant assured the Committee that quality of works was not compromised in executing the Order.
- (vi) On environmental concerns, the KRC management and the consultant assured the Committee that environmental impact assessment is taken into consideration during the construction of the Project and that Kenya Wildlife Service and the National Environmental Management Authority were and continue to be consulted in the implementation of the Project.

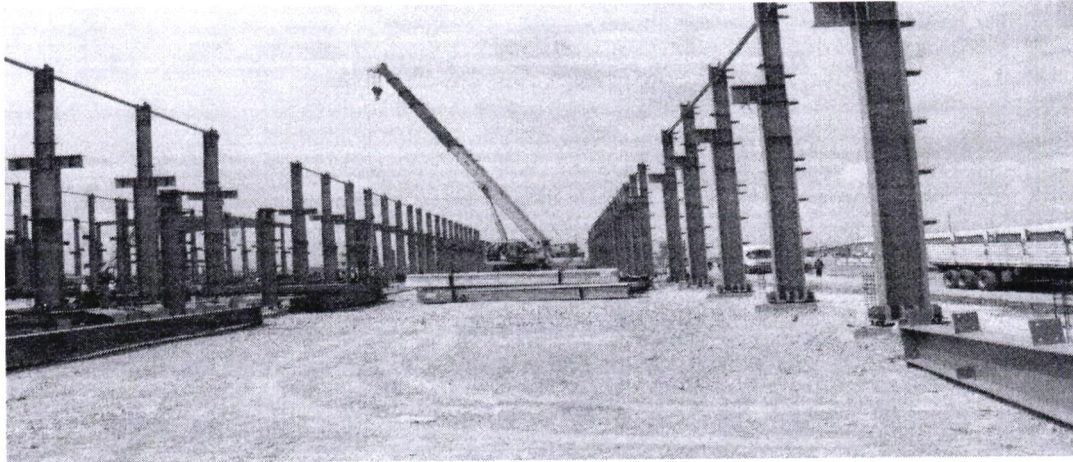
#### **4.2 Tour of Nairobi SGR Terminus**

The Nairobi SGR Terminus is one of the two major stations of the project, the other being Mariakani West station. The station is still under construction and on completion it will comprise the following facilities namely: - main station building, power substations, dispatch centre, comprehensive maintenance office building, locomotive depot and signals buildings, locomotive and vehicle workshops, materials shed and warehouses, living houses, water supply house, boiler room and guard room.

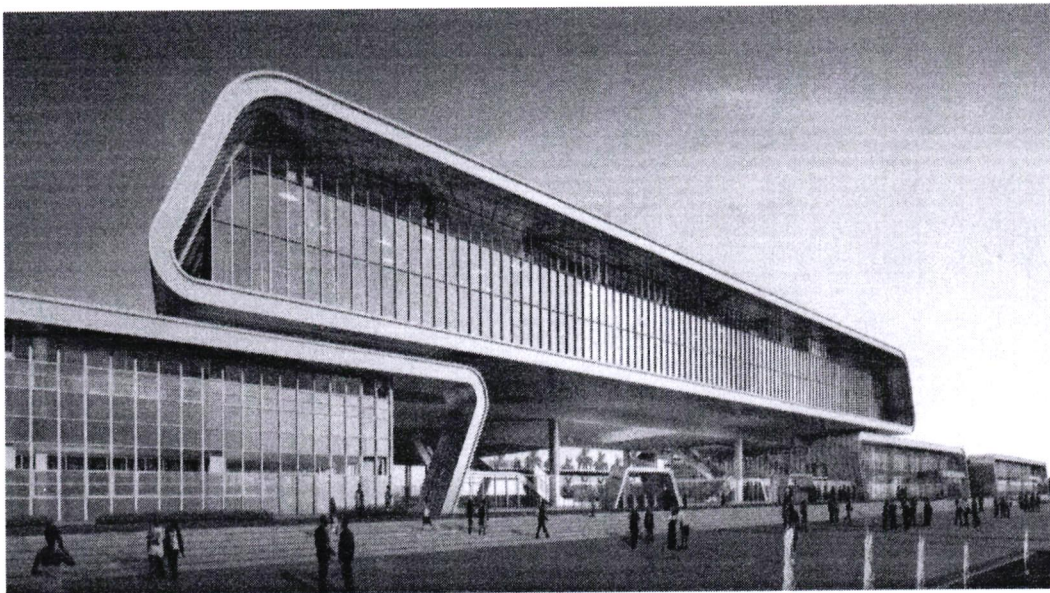
It will serve as an operations area and railway terminus for passenger trains.



*Picture 1: PIC delegation at Nairobi SGR Terminus construction site*



*Picture 2: Ongoing construction Work at Nairobi SGR Terminus construction site*



*Picture 3: Façade view of Nairobi Station Building*

#### **4.3 Tour of Athi River Super Bridge**

**Eng. Solomon Njeru, the Project's Chief Geomatic Engineer accompanied by Eng. J.M. Karanja, Architect Jeremiah Ndong and Architect Tobias Okoth from TSDI-APEC-EDON Consortium (TAEC) briefed the Committee as follows: -**

The SGR project has a series of railway bridges along the course of the track. The changing terrain and presence of delicate ecosystems requires elevation of the railway to accommodate movement of traffic and wild animals.

The total number of bridges along the line from Mombasa to Nairobi will be 98, covering 29km of the line to cross rivers, Mombasa road at Emali and Taru, valleys and the old line and eight animal crossing corridors over seven metres high and over 50 metres long in Tsavo East and West national parks.

The piers supporting the bridge beams stand 22 metres apart and seven metres high and are visible in most sites with steep gradients. They run deep into the ground, some up to 50 metres deep.

Athi River Super Bridge is located in Section 5 of the line and stretches from Mombasa Road shortly after the Kenya Meat Commission all the way across the Athi River - Namanga road into the Nairobi National park near the Eastern Gate. It is the largest and longest of all the bridges along the railway line. It will allow free and unrestricted movement of traffic along Athi River – Namanga Road and wild animals within Nairobi National park.

Spanning 2.6 kilometres and with 78 piers to support the beams of the bridge the bridge will be the sixth longest bridge in Africa. The Bridge will have a single track to carry the rail traffic from Mombasa road shortly after the Kenya Meat Commission and is designed to support axle load of 25 tonne-locomotives moving at an operation speed of 80-100km/h for freight trains and 120km/h for passenger trains.

The bridge adopts T-shape abutment and supported by round-ended piers of reinforced concrete. It is designed to last for 100 years.

Civil and structural works are still ongoing at the Athi River Super Bridge site.



*Picture 4: Construction of Athi River Super Bridge*

#### 4.4 Tour of Emali T-Beam and Rail Sleeper Factory

**Eng. J.M. Karanja, TSDI-APEC-EDON Consortium (TAEC) Deputy Team Leader guided the Committee in visit of the factory and briefed the members on the production railway sleepers and T-beams as follows: -**

Emali Factory is based at Section 7 of the line.

A railway sleeper is the horizontal bar that is mostly made of steel or concrete on which the two steel rails runs on-top. The sleeper must be made of strong material since it absorbs the forces that the train carries.

SGR lies on pre-cast sleepers supported by T-beams in some sections, unlike the steel bar sleepers for the old metre gauge. The sleepers and T-beams are assembled at Emali and Kathekani factories, where they are joined with the rails and transported to sites for laying, using special trains shipped by the contractor CRBC. One rail is 22 metres long and is fitted with 44 sleepers.

The project uses concrete reinforced sleepers as opposed to the steel sleepers used in the old railway. The Chinese standards railway sleepers are made out of steel reinforced concrete. This typically means steel is added during casting to increase overall strength. Concrete sleepers are heavier than their steel counterparts, making the track more stable.

In the preparation of railway sleepers, tensioned steel cabling is inserted into the mould then concrete is poured to increase strength. Each sleeper has 8 cables running laterally. They form the ends of the sleepers and then flat steel plates are added. A secondary vibration bed vibrates the mould but for compaction.

After several hours in the kiln under hot steam, the concrete is cured under controlled temperature and humidity. The sleepers are then removed and cut into individual sleepers, each having a serial number from the mould it was cast in.

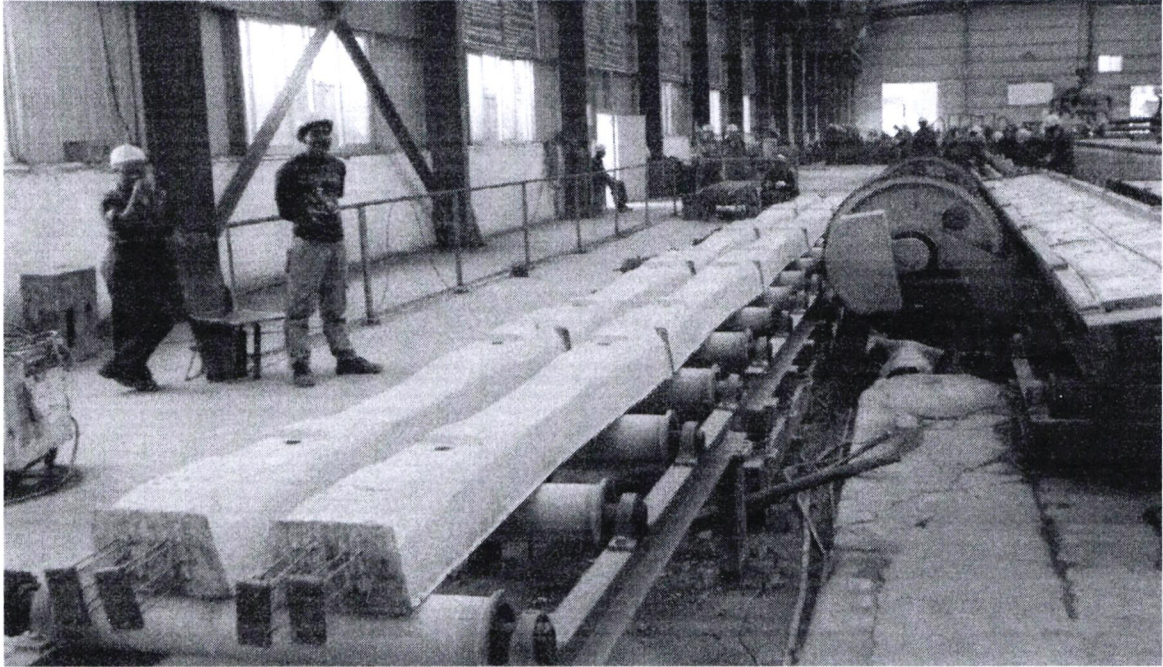
All the sleepers from the factory will have to undergo a specific structural test to guarantee their survival and avoid structural failures in the outside conditions. Pressure test is done before installation to see how it will react to the weight of the train. Only after passing this test can they be taken to the final stage where steel bolts are added to the sleeper for fastening the railway. Emali factory produces up to 100 sleepers per-day.

The SGR Project's sleepers have a height of 235mm at the highest point and 175 mm at the lowest point. It spans 2500mm from end to end and weights up to 300kg. The mounting bolts have a diameter of 65mm. It can withstand weight equivalent to a fully loaded train passing on the sleeper.

The sleepers are joined to the steel rail by four bolts each, which translates to 88 for the two sides per rail. The rails are also joined to each other by six nuts, three on each side.

The route length being exactly 472km but the total track length exactly 609km, counting diversions into stations means that for the entire stretch, 70,202 pieces of bolts will be used to lay the track.



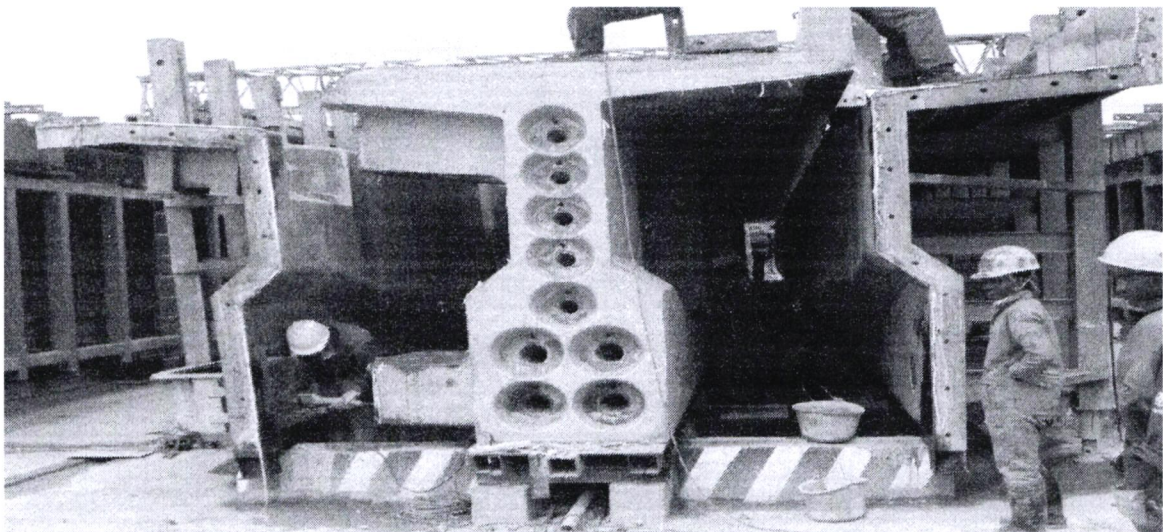


*Picture 5: Inside the rail sleeper factory*

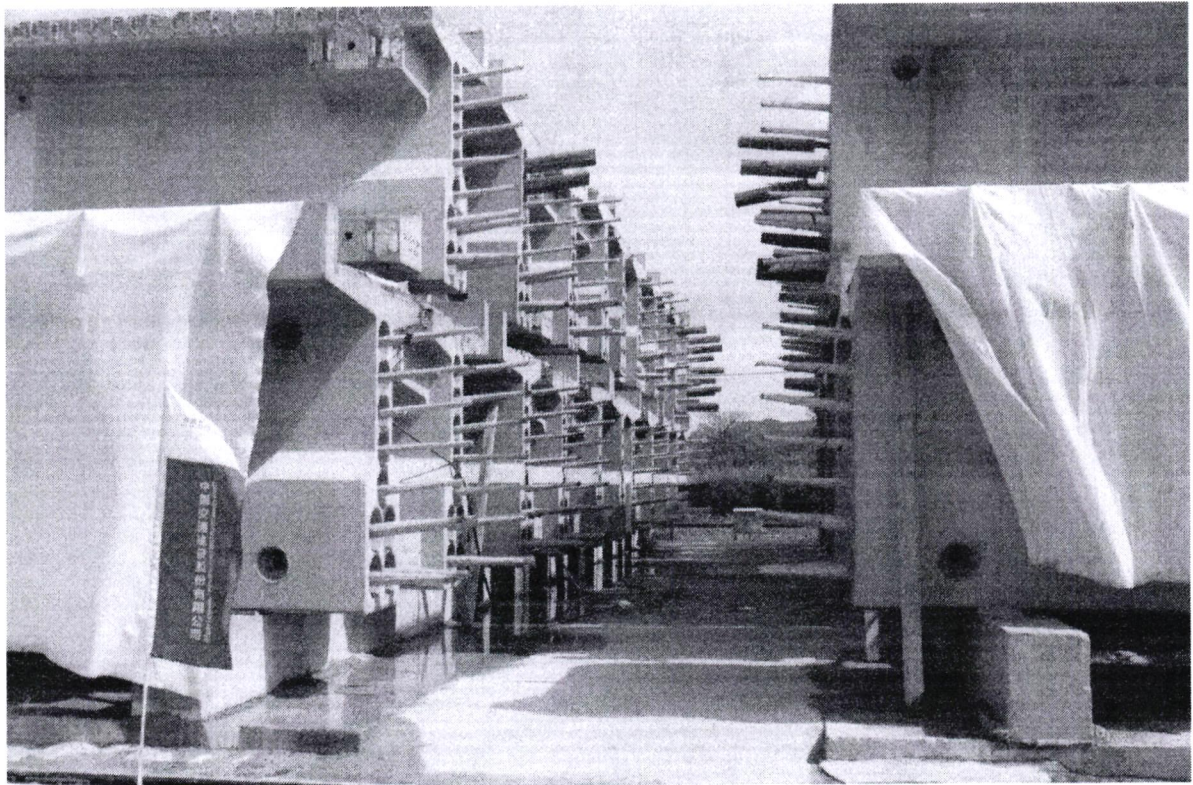
The factory also manufactures T-beam also known as girder used as a support beam that is used in construction of bridges. The T-Concept allows for longer spans and low maintenance costs. For the SGR, reinforced concrete steel beams are used.

T-beam production process involves 15 steps, which last up to 6 hours. Currently, the plant produces 2 beams per day. The beams are precast then hoisted to a storage for further controlled drying, awaiting transportation to the installation site. They are transported by rail to installation points along the new railway.

Due to their massive weight, they are hoisted by gantry cranes and installed on the site.



*Picture 6: Sample T-Beam*



Picture 7: T-Beams ready for transportation to site

#### 4.5 Tour of Simba Passing Station

**Eng. J.M. Karanja, TSDI-APEC-EDON Consortium (TAEC) Deputy Team Leader briefed the Committee as follows: -**

There are 33 stations along the line, of which two will be traffic hubs at both ends and eight will be intermediate stations while 23 will be passing stations stationed at intervals of between 12km to 18 km along the line, all the way from Mombasa to Nairobi. Simba station is one of the passing stations.

No.	Station Name	Category
1	Mombasa Port	Passing Station
2	Mombasa West Station	Major Station
3	Chigato Station	Passing Station
4	Mariakani Station	Intermediate Station
5	Manjewa Station	Passing Station
6	Mugalani Station	Passing Station
7	Mackinon Road Station	Passing Station

No.	Station Name	Category
8	Miasenyi Station	Intermediate Station
9	Maungu Station	Passing Station
10	Ngutini Station	Passing Station
11	Voi Station	Intermediate Station
12	Ndi Station	Passing Station
13	Maololo Station	Passing Station
14	Tsavo Station	Passing Station
15	Kyulu Station	Passing Station
16	Kanga Station	Passing Station
17	MtitoAndei Station	Intermediate Station
18	Ndalasyani Station	Passing Station
19	Ngwata Station	Passing Station
20	Kibwezi Station	Intermediate Station
21	Kinyambu Station	Passing Station
22	Makindu Station	Passing Station
23	Simba Station	Passing Station
24	Kivati Station	Passing Station
25	Emali Station	Intermediate Station
26	Sultan Hamud Station	Passing Station
27	Kima Station	Passing Station
28	Kiu Station	Passing Station
29	Ulu Station	Passing Station
30	Konza Station	Passing Station
31	Rukenya Station	Passing Station
32	Athi River Station	Intermediate Station
33	Nairobi South Station	Major Station

The stations are under construction, and some are already complete and visible from the road, all painted yellow. The stations have loop lines that allow trains to park to allow oncoming trains to pass.

The stations are designed as follows: -

Each passing station is equipped with signalling and information technology facilities, shaft hotbox detection system, pump house for water well, comprehensive workshop building, living house, duty room and guardroom.

The intermediate station has signalling and information technology facilities, shaft hotbox detection system, pump house for water well, comprehensive workshop building, living house, duty room and guardroom, 33 kilovolts' sub-station, water system room, railcar garage, freight transportation building, installation and maintenance room and loading and unloading maintenance operating building.

In addition to the facilities in intermediate station, the major stations have dispatch centre, locomotive and vehicle workshops, materials sheds, warehouses and boiler room.

The stations have a minimum of three tracks to allow trains overtaking or passing of each of the trains moving in different directions. This compensates for the single line.

The trains will be operated remotely through use of radio frequency provided by the Communication Authority of Kenya, specifically for use in the operations of the standard gauge railway.

At the main operational areas cameras are fitted along the line however the trains will not be fitted with cameras.

The Committee was informed that the Contractor has made provision for fibre optic cables and power lines for future internet and electricity connectivity along the SGR.



*Picture 8: PIC delegation at Simba Passing Station*

#### **4.6 Tour of Tsavo River Super Bridge**

**Eng. J.M. Karanja, TSDI-APEC-EDON Consortium (TAEC) Deputy Team Leader briefed the Committee as follows: -**

The bridge crosses over the existing meter gauge railway and the Tsavo River. The bridge is supported by 215 bored piles, 43 pile caps, 18 open excavation foundations, 59 bridge piers and two bridge platforms. The stretch may have used over 4,674 pieces of steel metals excluding those fitted in the ground.

Just like the Athi River Super Bridge, Tsavo Super Bridge also adopts T-shape abutment and supported by a structure solid round concrete piers.

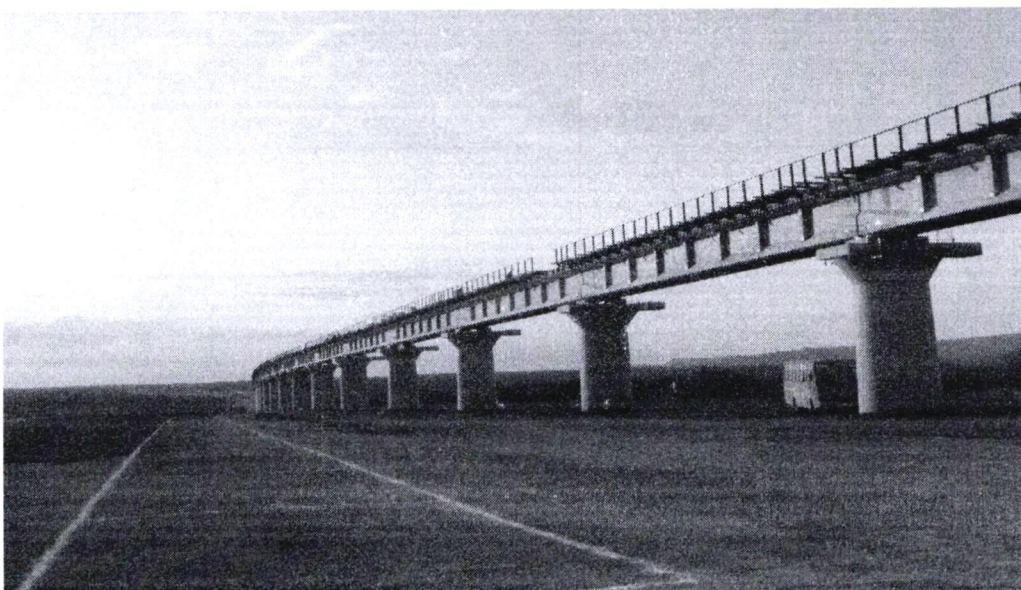
The depth of the piers into the soil is not uniform and determines the base of the pier. The piers take between 80 and 82 Y-21 steel bars and considering they have to also go deep in the ground, the steel rods could be double or triple the number.

The bridge is the second longest after the Athi River Super Bridge with a total crossing length of approximately 2 km (1987 meters) and a height of 35.1m at the highest place, which greatly protects the habitat of the wild animals in the park. The height guarantees that the animals in the park including the tallest giraffes can go through the passage

The Tsavo area is an important wildlife ecosystem and the overpass bridge will give wildlife exclusive access to the Tsavo River, reducing human-wildlife conflict within the Tsavo conservation area.

#### **Committee Observation**

The Committee observed that the project designers have factored in the architectural designs 969 box-culverts to allow animal passage underneath the line in various areas in the park to mitigate interference with animal migratory patterns between Tsavo East and Tsavo West.



*Picture 9: View of Tsavo Super Bridge*

#### **4.7 Tour of Taru Super Bridge**

**Eng. J.M. Karanja, TSDI-APEC-EDON Consortium (TAEC) Deputy Team Leader briefed the Committee as follows: -**

The bridge is located 73 km from Mombasa port.

This is the first spot from kilometre zero at the Port of Mombasa where the modern standard gauge rail track will cross over the Mombasa – Nairobi highway northwards towards Voi. It is here where the SGR passes very close to Tsavo East National Park.

The Bridge was constructed after consultations with Kenya National Highways Authority who advised that the pillars supporting the railway bridges be realigned to pave way for expansion of the Mombasa-Nairobi highway at the railway crossing.

The Bridge has a height of 7 metres to allow vehicular traffic passage under the bridge.



*Picture 10: Ongoing construction work at Taru Super Bridge*

#### **4.8 Laying of Sleepers and T-Beams along Mariakani**

During the stop over at this point, the Committee witnessed China Road and Bridge Corporation (CRBC), the main contractor of SGR lay T-beams on piers using special trains at the Mariakani section of the line.

The Committee observed that the construction is highly mechanized and the contractor has deployed assorted plant and equipment for faster progress of construction.

#### **4.9 Tour of Mariakani Camp – Lab Processes**

**Eng. J.M. Karanja, TSDI-APEC-EDON Consortium (TAEC) Deputy Team Leader briefed the Committee as follows: -**

There are 17 SGR construction materials test laboratories along the line.

In the laboratories, investigations and structural assessment of diverse construction materials is carried out. The laboratories test sand, ballast and soil density, as well as cement superiority and steel yield stress among other supplies.

The Committee observed that the Contractor has hired and trained local work force as materials technologists and support staff.

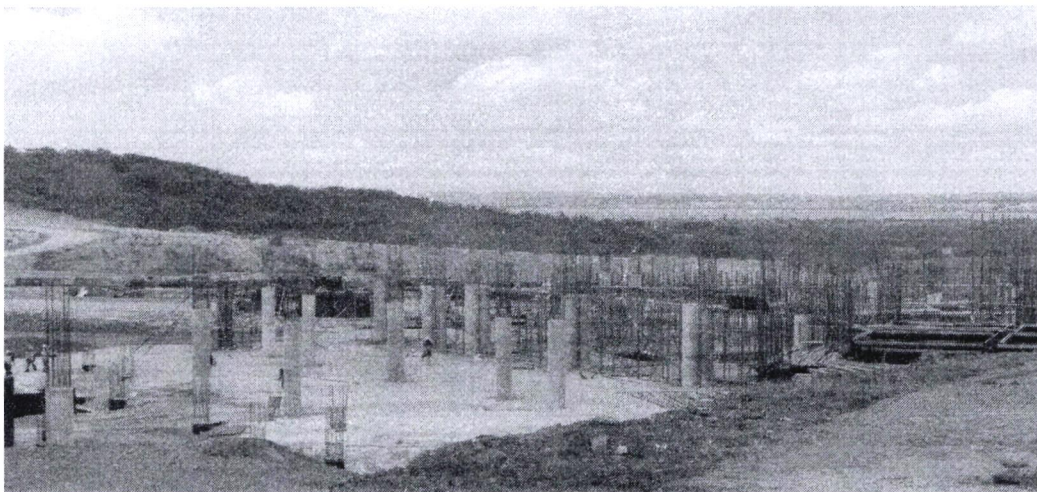
The Committee also observed the absence of Kenya Bureau of Standards and Public Works officials in the various SGR laboratories, to ensure quality control.

#### **4.10 Tour of Mombasa West Station**

The Mombasa West Station is one of the two major stations of the project, the other being Nairobi South station. The station is still under construction and on completion it will comprise the following facilities: - main station building, power substations, dispatch centre, comprehensive maintenance office building, locomotive depot and signals buildings, locomotive and vehicle workshops, materials shed and warehouses, living houses, water supply house, boiler room and guard room.

It will serve as an operations area and railway terminus for passenger trains heading to Nairobi.

The Committee was informed that the challenges posed by the steep incline and rugged terrain of the Miritini to Mazaras section were overcome by constructing long viaducts, deep cuttings and high embankments.



*Picture 11: Ongoing construction work at Mombasa West Station*



*Picture 12: PIC delegation at Mombasa West Station Construction site*

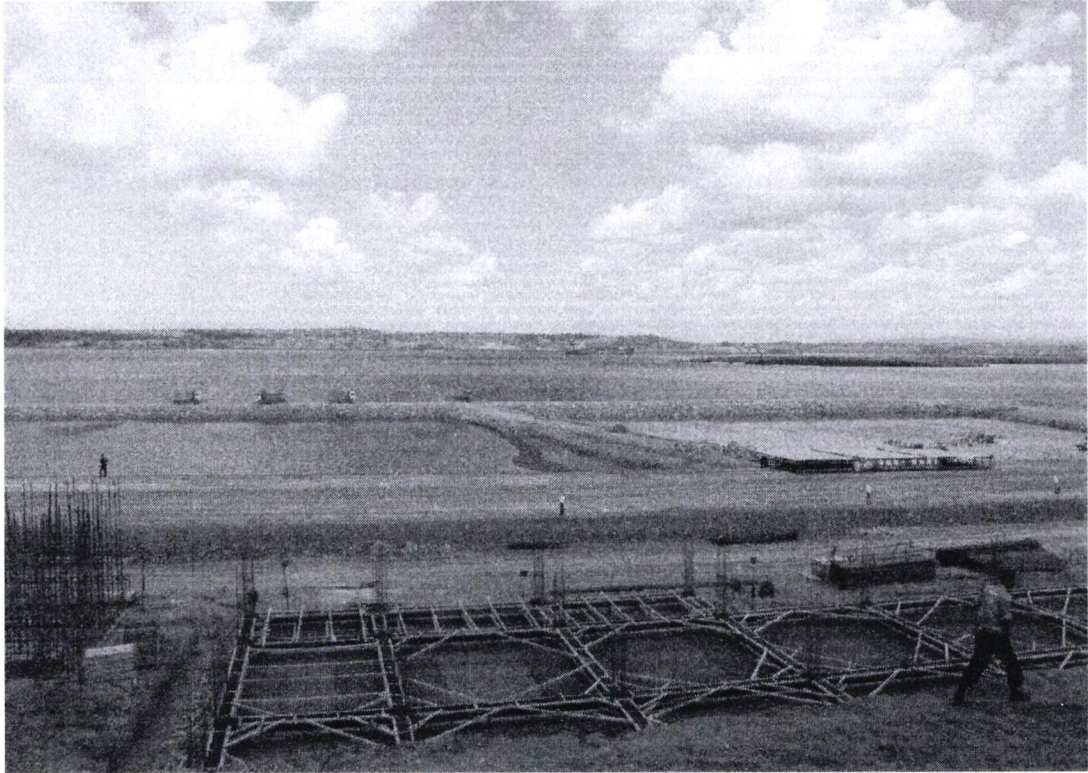
#### **4.11 Tour of Mombasa Port Reitz Station**

The Mombasa Port is the starting point of both the metre gauge railway and the standard gauge railway. The freight terminal will be located at the port.

Completion of the ongoing works at the Port will improve transportation capacity of Mombasa Port and promote the port-rail transportation. It is expected that the hauling capacity of Mombasa Port station will reach 14.55 million tonnes in 2025, among which container transport volume will be 6.33 million tonnes; handling capacity 25 million tonnes in 2035 among which container transport volume will be 10.35 million tonnes.

The Station will be a major station with functions of wagon accumulation, originating train marshalling, train arrival and breaking-up operations. Arrival–departure yard, shunting yard, cargo yard, bulk cargo yard, container loading and unloading, locomotive turn-around depot and comprehensive maintenance shop are established.





*Picture 13: Ongoing construction site at Port Reitz Station in Mombasa*



*Picture 14: PIC delegation addressing the Press at Port Reitz station, Mombasa*



## **5.0 COMMITTEE GENERAL OBSERVATIONS**

**The Committee made the following observations following the two-day tour of the Standard Gauge Railway –**

- (i)** Implementation of Phase I of the standard gauge railway is on course with substantial civil works, track works and procurement of installations of associated facilities and railway stations having been already done. With an overall of 81% progress of civil works achieved and 324 Km of track laid, the project is due for completion in June 2017 ahead of the scheduled date of completion of June 2019.
- (ii)** For long-term viability, the Project should incorporate future plans for expansion of the line to a double track with a high speed line and to create room for electric powered trains to save on costs for future expansion.
- (iii)** The Committee was informed that the construction period of the SGR was reduced by two years following an Executive directive. The KRC management and Project Consultant however assured the Committee that quality of works would not be compromised in executing the Executive directive on implementation of the project.
- (iv)** The timeline of completion of Phase I of the Project may not be realised following the ruling on Petition 171 of 2016 by Judge A. Omollo of the Environment and Land Court in Mombasa on 21st June, 2016 which temporarily halted construction of the railway. This petition was filed by landowners in Mombasa County who are yet to be compensated despite their land having been compulsorily acquired for construction of the railway.
- (v)** The successful completion of the SGR will significantly improve the passenger and freight transport in Kenya, boost the economy of the towns along its route, strengthen Kenya's political and economic status and promote integration process of East Africa Community.
- (vi)** There is an urgent need to interlink the SGR line with Jomo Kenyatta International Airport, Moi International Airport and the two major cities, namely Nairobi and Mombasa Central Business District to facilitate ease of transportation of freight and passengers.
- (vii)** The main contractor, China Road and Bridge Corporation (CRBC) has directly engaged local suppliers to supply materials and subcontracting services to the project, some of the local sub-contractors' input on the project include drainage works, grassing as well as supply of materials such as sand, cement, fuel and steel, however compliance of the forty per centum of local content engagement has not been achieved as per the contract.
- (viii)** The SGR project is viable as envisaged in the tripartite Agreement signed between the governments of Kenya and Uganda in 2009.
- (ix)** The Committee was informed that environmental impact assessment is taken into consideration at every stage during the construction of the Project and all the relevant

stakeholders are consulted.

- (x) The Committee was informed that the contractor has made provision for fibre optic cables and power lines for future internet and electricity connectivity along the Standard Gauge Railway.
- (xi) The Committee also observed that there is need to engage an independent quality assurer for purposes of inspection and laboratory testing of materials procured and used by the contractor to conform to standards as per the contract.

## **6.0 COMMITTEE RECOMMENDATIONS**

### **1. General Recommendations**

The Committee makes the following general recommendations: -

- (i) The urgency to complete and deliver the project two years ahead of the scheduled date should not compromise quality, scope and budget of the project. The Contractor should undertake the project in accordance with the contractual obligations and specifications.
- (ii) The Project should incorporate future plans for expansion of the line to a double track with high speed in addition to provision of fibre optic cables and power lines for future electrification of the line.
- (iii) KRC should consider an open-access model for the standard-gauge line where companies with their own trains can use the line at specified times and pay the Corporation an access fee.
- (iv) There is need improve road network along the railway and industrial areas to improve transshipment and connectivity and create efficiency and ease of transport.
- (v) There is need to expand the Standard Gauge Railway to other parts of the country with high business volumes.

### **2. Phase 1 Recommendations**

On Phase I of the Standard Gauge Railway, the Committee makes the following recommendations:

- (iv) To ensure the viability of the Phase 1 of the SGR, KRC should hasten construction of railway line to connect Nairobi SGR Terminus to Nairobi CBD, Jomo Kenyatta International Airport and the Inland Container Depot Terminal at Embakasi and also connect Mombasa West Station to Mombasa CBD, Wilson Airport and Moi International Airport to ensure enhanced efficiency in transport of passengers and freight in the two major Kenyan cities.
- (v) KRC should appoint an operator who is acceptable to the Contractor CRBC and China Exim Bank to initially operate the line to generate enough revenue to cover the cost of operation and maintenance of the line and rolling stock as well as meet external loan obligations and meet any revenue shortfalls when the line becomes operational.

- (vi) The Contractor, CRBC should endeavour to enhance skills and technology transfer to the local staff who will manage and operate the trains, rolling stock and the line after the handing over of the project to the Kenya Railways Corporation.

### **3. Phase 2 Recommendations**

On Phase 2 of the Standard Gauge Railway, the Committee makes the following recommendations:

- (iii) For Kenya to fully realize the benefit of the SGR project, the implementation of Phase 2 of the Project (Naivasha-Kisumu-Malaba) should be expedited to allow movement of cargo to the neighbouring countries as envisaged in the tripartite Agreements signed between the governments of Kenya and Uganda in 2009 and Kenya, Uganda and Rwanda in 2013.
- (iv) The Committee also recommends that a formal agreement be entered into with KRC, Kenya National Highways Authority and Kenya Wildlife Service to resolve any conflict involving the right of way of the SGR line as construction of Phase 2 commences.

# ANNEXURE

## MINUTES