



GHANA RAILWAY MASTER PLAN STAKEHOLDER WORKSHOP

PLANS AND DEVELOPMENTS ON THE RAIL NETWORK

**Ghana Railway Development Authority
(GRDA)**

15 MARCH, 2023

Outline

- ✓ About us
- ✓ What we do
- ✓ The existing narrow gauge railway network
- ✓ The Ghana Railway Master Plan
- ✓ Strategies for network development
- ✓ Ongoing projects
- ✓ Planned projects
- ✓ Studies
- ✓ Sustainability
- ✓ Other initiatives
- ✓ Institutional collaborations
- ✓ Opportunities for freight

About us



Our mandate – **RAILWAYS ACT, 2008 (ACT 779)**

The Ghana Railway Development Authority is a statutory body established by the Railways Act, 2008 (Act 779) to ensure the development and modernization of the railway systems, both national and sub-urban, in Ghana.

Objectives

- To promote the development of railways and railway services
- To hold, administer and improve the railway assets
- To promote the development and management of suburban railway

About us



MISSION

GRDA exists to develop, manage and regulate a safe, reliable, sustainable and efficient Railway system for the movement of persons and goods in partnership with key stakeholders

VISION

A provider of world-class, safe, efficient and reliable Rail transportation system that supports the socio-economic development of Ghana

CORE VALUES

- Integrity
- Safety
- Teamwork
- Innovation
- Efficiency

About us

What we do – RAILWAYS ACT, 2008 (ACT 779)



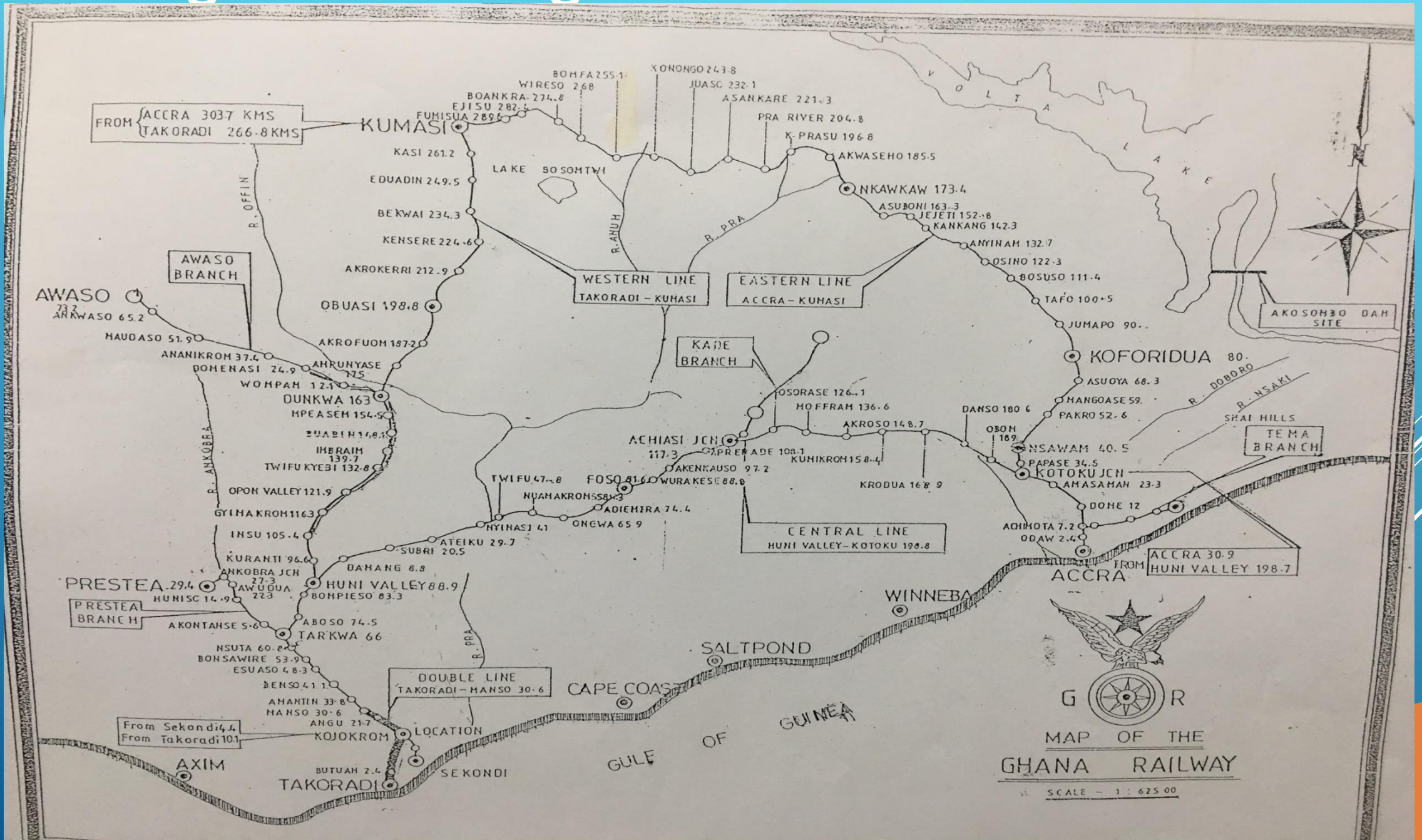
- Compliance with Part 2 of the Act
- Licensing, concessions and leases
- Ownership of assets
- Safety and Security Standards
- Regulation and monitoring



- Studies and research in railway development of master plans
- Administration of the RDF
- Collaboration with others
- Advisory services to Government
- Perform the functions of a regulator, subject to ministerial directives



Existing Narrow Gauge Network



The Railway Network

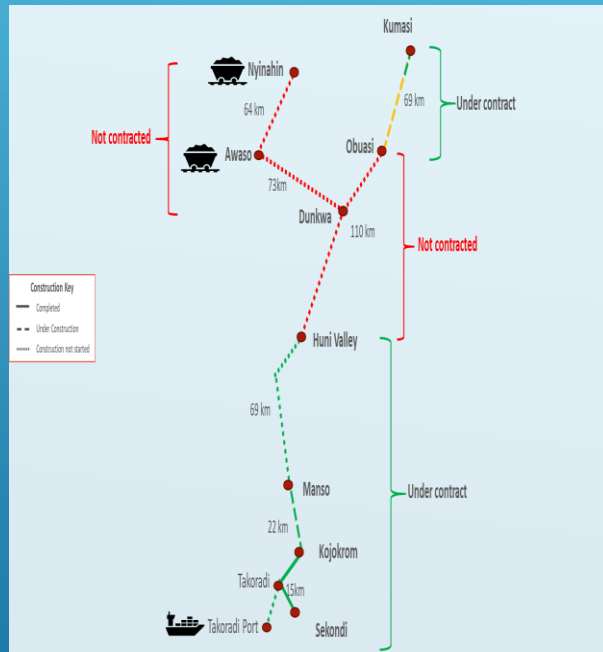
- ✓ The railway master plan
- ✓ Route length = 3,884km



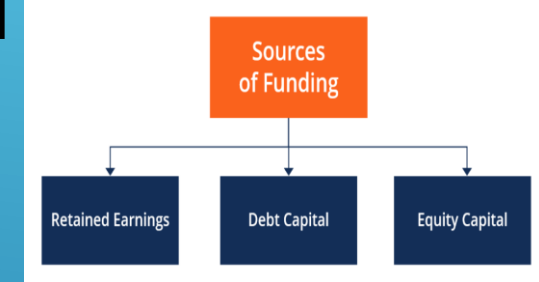
Strategies for network development



Phased development as per the railway masterplan



Mixed funding and financing options



Connectivity to targeted areas

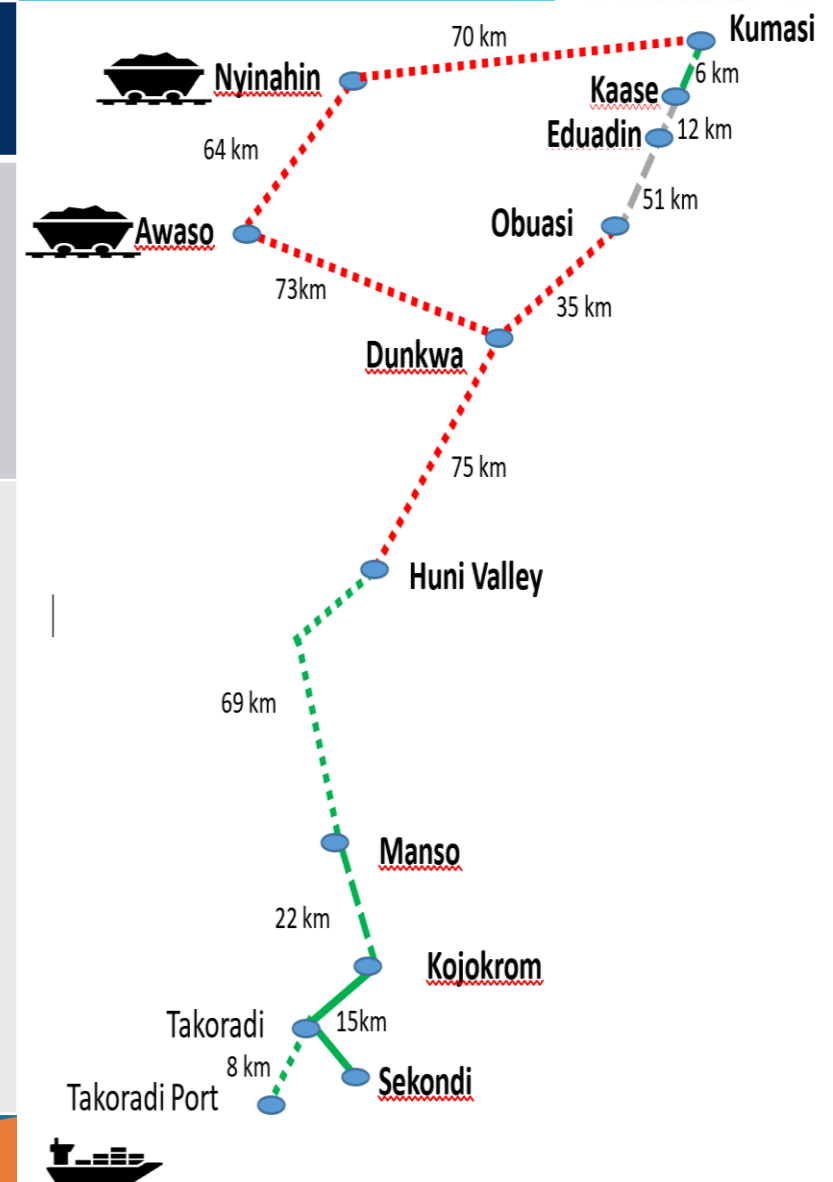


On-going projects

Western Railway Line – Kojokrom/Manso



| Section | Contract Price / Funding Source | Key Features | Status |
|---|---------------------------------|--|--|
| 1. Kojokrom through Eshiem to Manso (22km) | \$156.9m (GoG) | <ul style="list-style-type: none"> • Single Line • Track length: 22km • Stations: 2No. & 1 Halt • 360m Viaduct | <ul style="list-style-type: none"> • On-going (92% complete) • To be completed by April 2023 |
| 2. Takoradi Port, Manso to Huni Valley (78km) | €500m (Loan) | <ul style="list-style-type: none"> • Single line, double Infrastructure • Track length: 78km • Stations: 8No. • Rolling Stock: 2No. Locos, 64No. Wagons • Others: Workshop and Equipment • Provision for Capacity Building | <ul style="list-style-type: none"> • Construction ongoing. • Land acquisition and RAP under implementation in line with IFC PS • LRP in implementation • 42 months contract duration |



Compensation for PAPs completed except for Tarkwa Variant

On-going projects

Kojokrom-Manso



On-going projects

Kojokrom / Manso



On-going projects

Kojokrom / Manso



On-going projects



Kojokrom / Manso



On-going projects

Kojokrom / Manso



Manso Railway Station: 98% complete

✓ From Kojokrom towards the Eshiem Viaduct to Manso

Ongoing Works



✓ From Kojokrom towards the Eshiem Viaduct to Manso

Ongoing Works



✓ From Kojokrom towards the Eshiem Viaduct to Manso

Ongoing Works



✓ From Kojokrom towards the Eshiem Viaduct to Manso

Ongoing Works



✓ From Kojokrom towards the Eshiem Viaduct to Manso

Ongoing Works



Implementation Challenges: Kojokrom-Manso



Delay in payments

Land Acquisition / Compensation issues

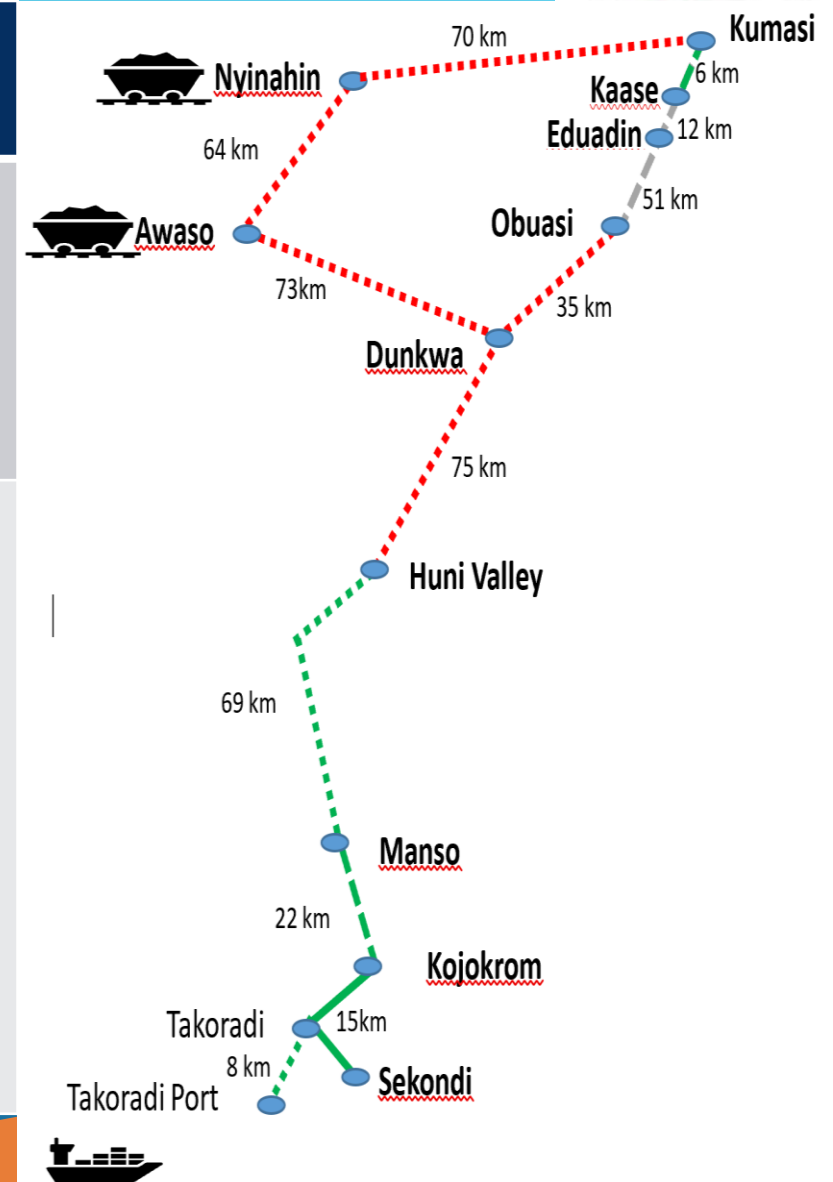
Delayed completion dates

On-going projects

Western Railway Line – Takoradi Port / Huni Valley



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Compensation for PAPs completed except for Tarkwa Variant

On-going projects

Western Railway Line



Contractor site office in Benso



Location plan

On-going projects

Western Railway Line



Trapezoidal drain construction



Drains being reinforced



Amantin Station under construction



Earth filling near Benso



Retaining wall construction near Amantin



Soil stabilization near Aboso

On-going projects

Western Railway Line



Road overbridge construction near Amantin

Implementation Challenges: Takoradi Port –Huni Valley



- a) Galamsey
- b) Land - Site Segmentation

Implementation Challenges: Takoradi Port –Huni Valley



**MAP OF ILLEGAL MINING ACTIVITIES
ALONG THE MANSO-TARKWA
(KM32+300 - KM42+800) STRETCH**



Galamsey

Land

Segmentation

Access site

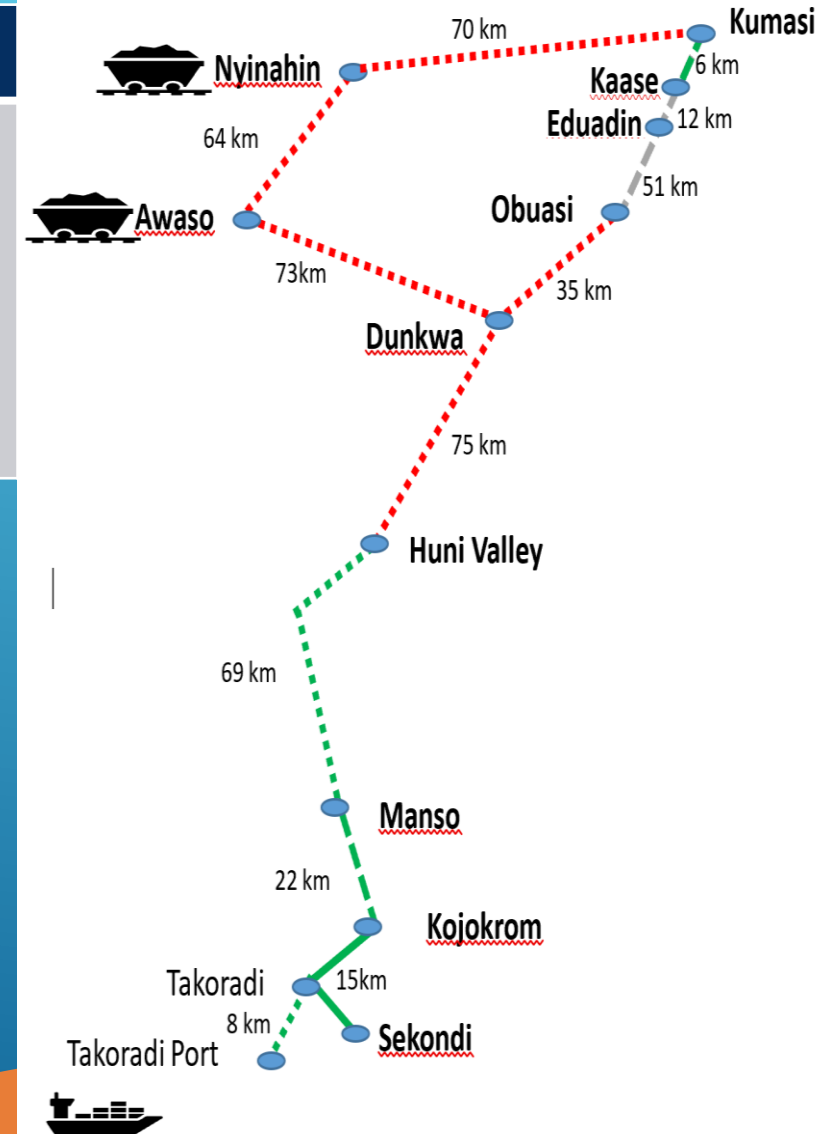


On-going projects

Western Railway Line – Kumasi (Adum) / Kaasi



| Section | Contract Price / Funding Source | Key Features | Status |
|---------------------------------|---------------------------------|--|---|
| 3. Kumasi (Adum) to Kaase (6km) | \$48.8m (GoG) | <ul style="list-style-type: none"> • Double track • Track length: 15km • Stations: 2No. & 3 Halts | <ul style="list-style-type: none"> • Construction work. • Site clearance substantially completed • 12 months contract duration |



On-going projects

Western Railway Line – Kumasi (Adum / Kaasi)



On-going projects

Western Railway Line – Kumasi (Adum) / Kaasi



On-going projects

Western Railway Line – Kumasi (Adum) / Kaasi



On-going projects

Western Railway Line – Kumasi (Adum) / Kaasi



Implementation Challenges: Kumasi / Kaasi



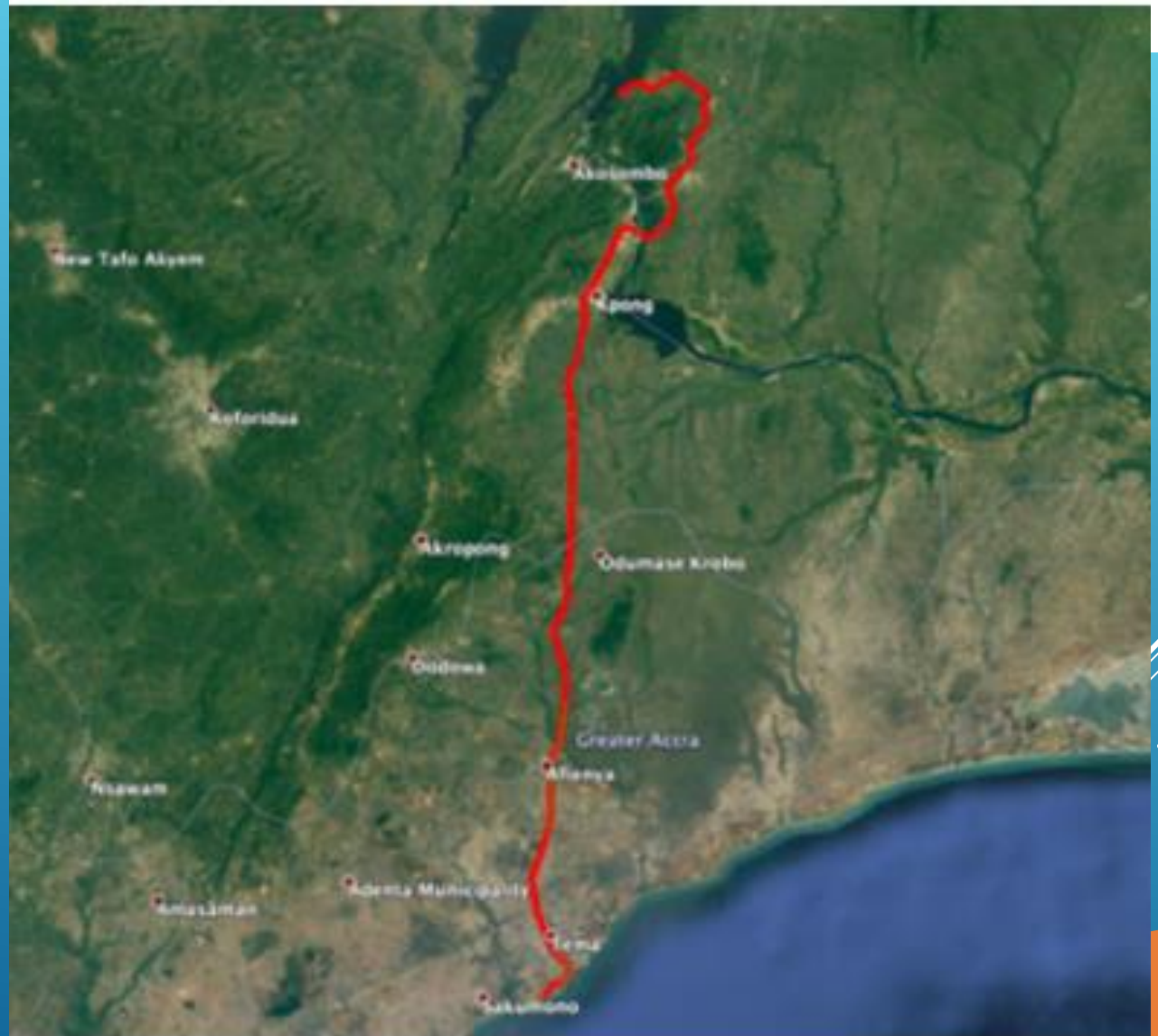
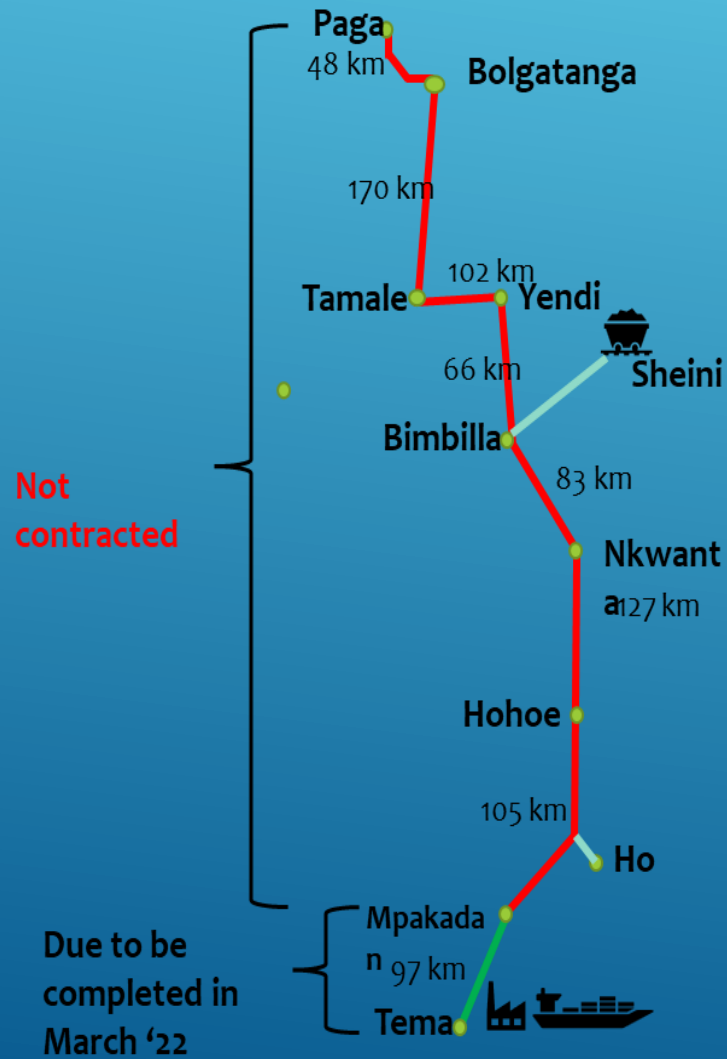
Funding (GoG)

Land availability

Hydraulic and soil issues

Ongoing Projects

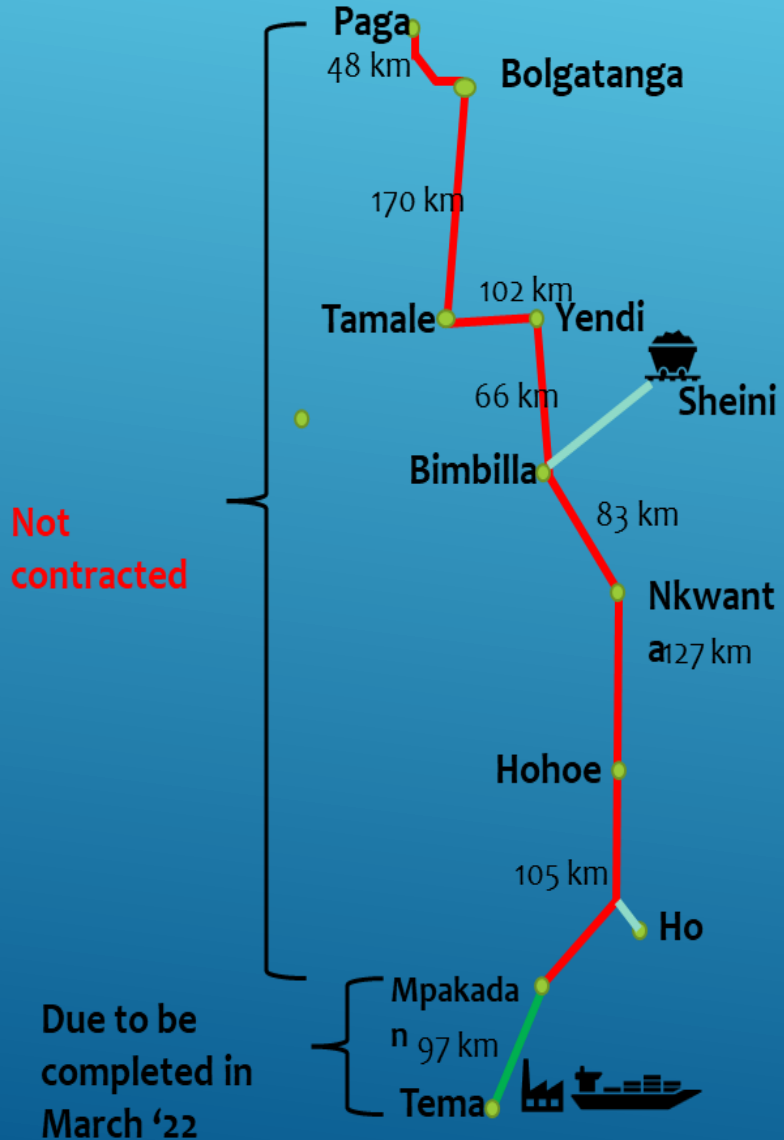
Eastern Expansion - Tema / Mpakadan



Railway alignment from Tema to Mpakadan

Ongoing Projects

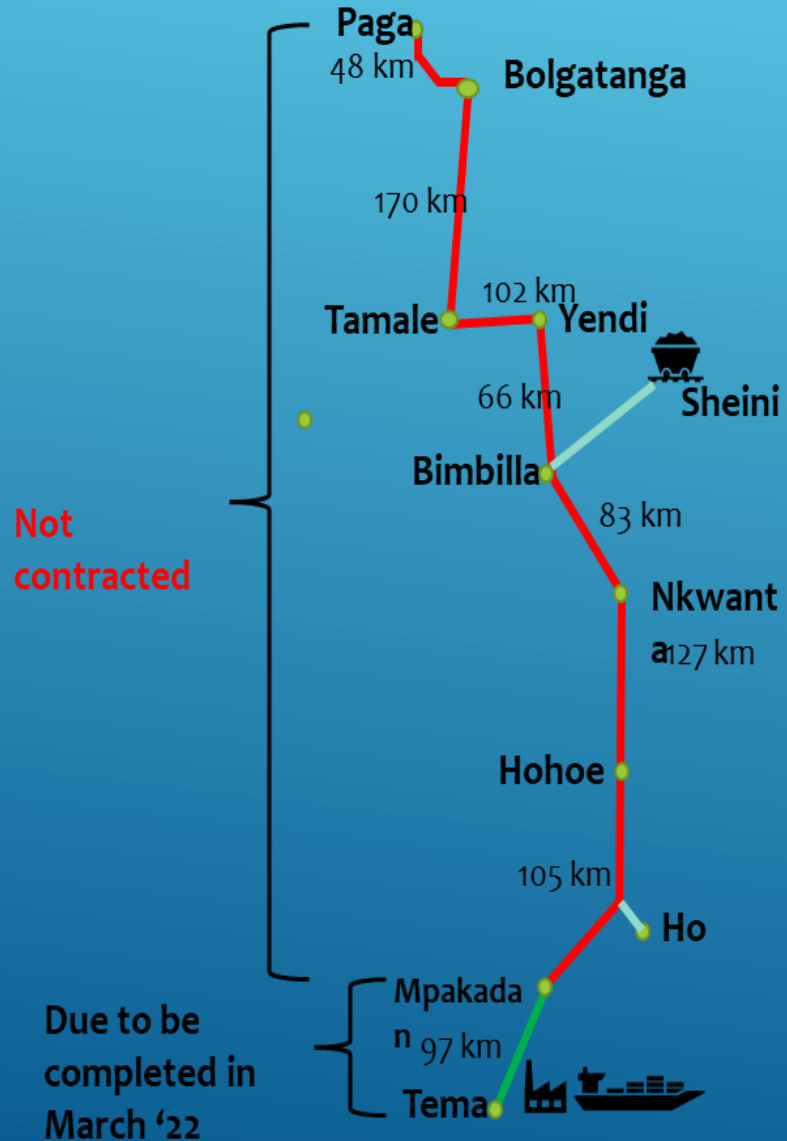
Eastern Expansion - Tema / Mpakadan



The Volta Bridge

Ongoing Projects

Eastern Expansion - Tema / Mpakadan



The Volta Bridge

Due to be completed in March '22

Not contracted

Ongoing Projects

Eastern Expansion - Tema / Mpakadan



The Volta Bridge

Ongoing Projects

Eastern Expansion - Tema / Mpakadan



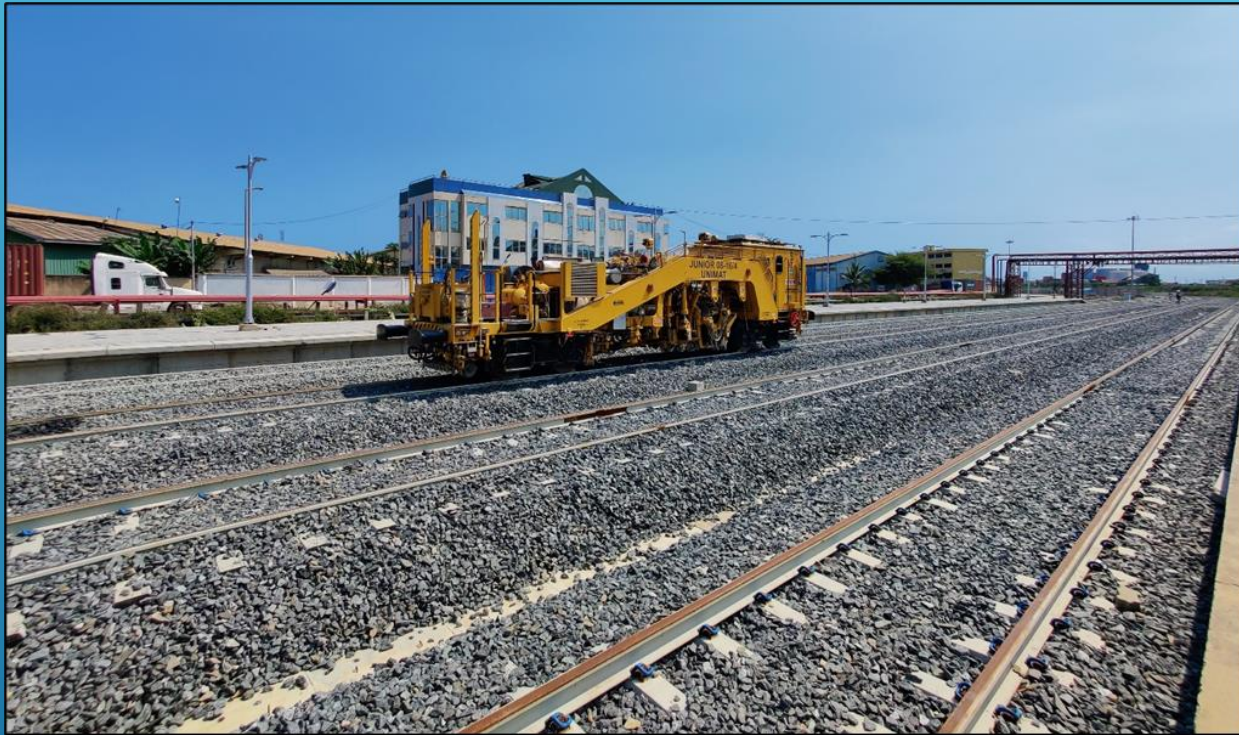
Handrails fixed and tracks laid



Man refuge and ladder

Ongoing Projects

Eastern Expansion - Tema / Mpakadan



Tamping machine at work



Tamping completed

Ongoing Projects

Eastern Expansion - Tema / Mpakadan



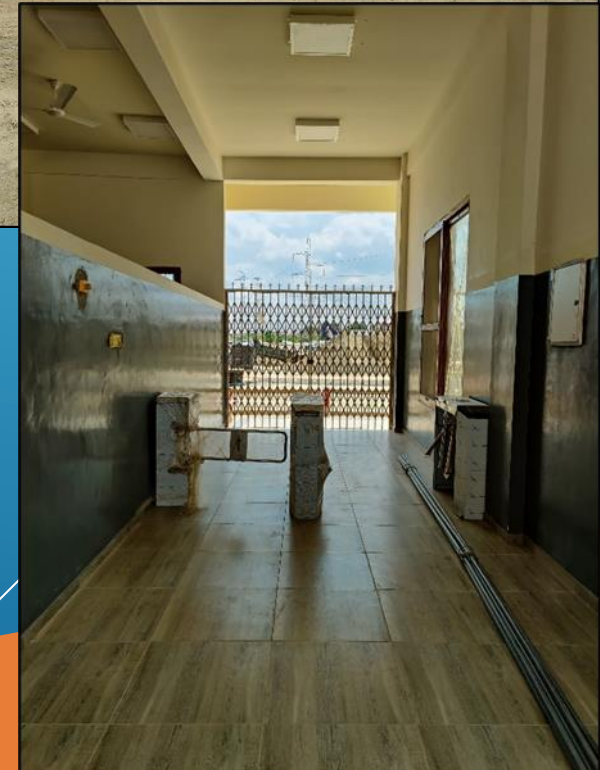
Ongoing Projects

Eastern Expansion - Tema / Mpakadan



Ongoing Projects

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Ongoing Projects

Eastern Expansion - Tema / Mpakadan

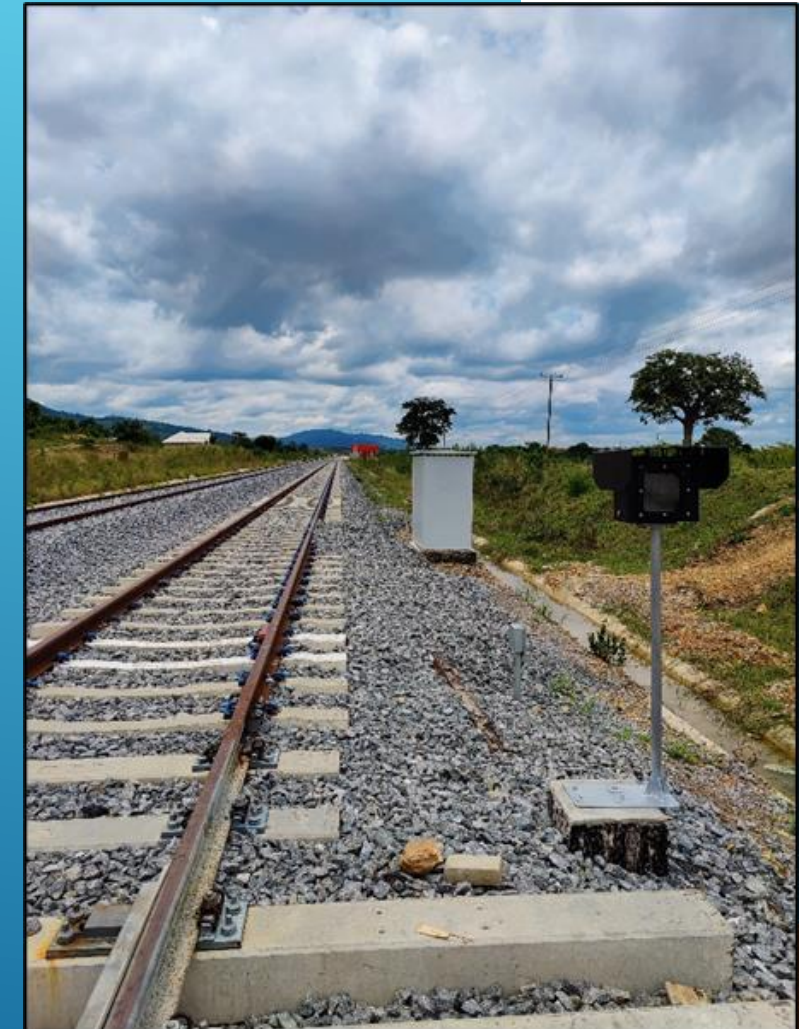


Ongoing Projects

Eastern Expansion - Tema / Mpakadan



Shai Hills



Kpong

Ongoing Projects

Eastern Expansion - Tema / Mpakadan



Ongoing Projects

Eastern Expansion - Tema / Mpakadan



Mpakadan Railhead (Km 96+000) – Operational Building



Mpakadan Railhead (Km 97+000) – Warehouse



Doryum-Kordiabe Station (now Doryum-Jorpanya-Kordiabe) Km 35+025



Mpakadan Railhead (Km 97+000) – Slope dressing



Cut section (Km 94+200 – Km 94+600 approx.) – Overview

Implementation challenges



- a) Enchroachment of RoW between Tema and Afienya
- b) Illegal access on the completed line
- c) Tema Railhead designated site encroached upon
- d) Absence of rolling stock and installation of on-board S&T equipment
- e) Late availability of about 850m of land (Tropo Farms)
- f) Compensation funds exhausted
- g) Theft of installed components

CONCLUSIONS



- a) Early access to land by Contractors has been a challenge due to illegitimate construction of permanent structures on railway right of way. New approaches and legal support is needed to avoid delays
- b) A railway-specific punitive legislation is required to punish perpetrators and to stop theft and vandalism of railway assets. Persons in possession of railway assets (thieves and buyers alike) should face long jail sentences to deter repeat actions
- c) Delay in release of funds is hampering delivery; MoF support to the industry is needed to ensure early project delivery to meet the aspirations of Government and the tenets of the Railway Master Plan

Planned Projects

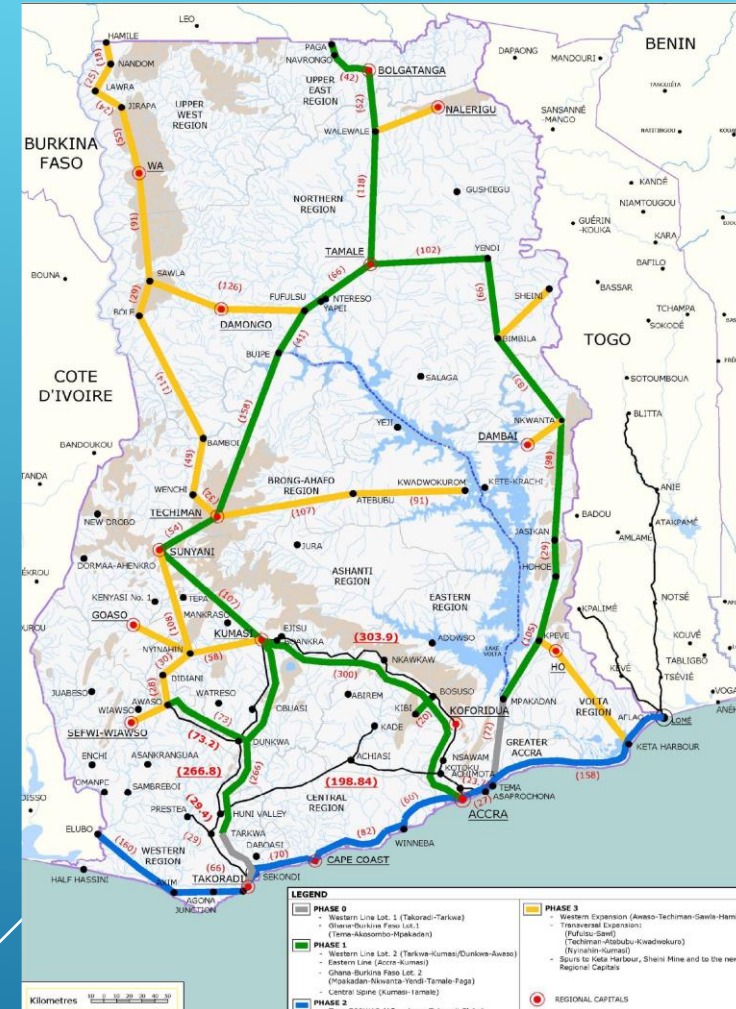


| Section | Contract Price / Funding Source | Key Features | Status |
|---|---------------------------------|---|--|
| <p>1. Accra/Achimota/ Adjin Kotoku with a branch line to Nsawam (43km)</p> <p>KEC Int Ltd</p> | <p>\$265.2mn (Loan)</p> | <ul style="list-style-type: none"> • Single SG line • Culverts, bridges etc • Rolling Stock: 2No. DMUs, 2 motor cars, 4 trailing cars • Others: Workshop and Equipment • Provision for Capacity Building | <ul style="list-style-type: none"> • Under discussion |
| <p>2. Eduadin to Obuasi (51km)</p> <p>Afcons</p> | <p>\$419.7m (Loan)</p> | <ul style="list-style-type: none"> • Single SG line • Culverts, bridges etc • Rolling Stock: 2No. Locos, 20 coaches, 64No. Wagons • Others: Workshop and Equipment • Provision for Capacity Building | <ul style="list-style-type: none"> • VfM completed • Financial closure awaits • 36 months contract duration |

FEASIBILITY STUDIES

□ Western Railway Line:

- 2010 Feasibility Studies covering Sekondi-Takoradi to Kumasi and the Dunkwa to Awaso branch to be updated.
- Studies to also cover the greenfield extension from Awaso to Kumasi through Nyinahin.
- Procurement process on-going through ICT:
 - *Central Tender Review Committee approval obtained in July 2022.*
 - *Final Entity Tender Committee approval obtained in Sept. 2022.*



FEASIBILITY STUDIES

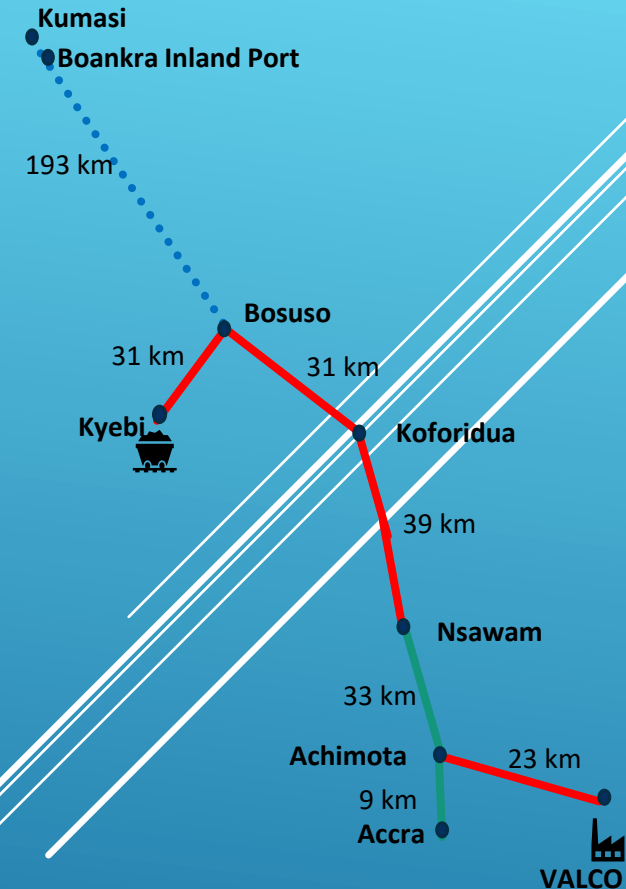
□ Eastern Railway Line:

- 2016 Feasibility Studies covering Accra to Kumasi and the Achimota to Tema branch to be updated.
- Studies to also cover two (2) greenfield branches from Bosuso to Kyebi and Ejisu to Eduadin.
- Contract signed in June 2022.
- Studies currently on-going.
- Consultant's Inception Report reviewed in September 2022.



DEVELOPMENT OF THE EASTERN RAILWAY LINE

- ❑ Accra – Achimota – Tema section of the existing narrow gauge is operational for passenger services.
- ❑ Maintenance works are on-going in order to restore passenger operations on the Achimota-Nsawam section.
- ❑ The line is earmarked for development on a standard gauge from Accra through the Boankra Inland Port to Kumasi.
- ❑ It will also include the development of the branch lines from Achimota to Tema, Bosuso to Kyebi and from Ejisu to Eduadin.
- ❑ Financing arrangements are on-going with the India EXIM Bank and Deutsche Bank for the development of the Accra to Nsawam and the Nsawam through Bosuso to Kyebi sections respectively.



SUSTAINABILITY

□ Environmental and Social Impact Assessments:

- Balancing economics, construction and the environment
- Empowering people through local content and integration
- Ensuring compliance to environmental and social legislation and standards
 - EPA Act 1994 , Act 490 and LI 1652 for EIA
- Integrate environmental and social impact assessment and mitigation into projects
- Environmental and climate change issues
- Equator 4 Principles; IFC Performance Standards and World Bank Standards



SUSTAINABILITY



**Community engagement
in Tarkwa**



**Community event
in Aboso**



SUSTAINABILITY

□ Achievements:

- Successfully set up and EHSU
- Extensive community engagements
- Deliver EI for compulsory land acquisition
- Compensation payment to Project Affected Persons
 - **Crop = 799 claims (98%)**
 - **Structures = 427 claims (97%)**
(Except for Tarkwa Variant)
- Balancing economics, construction and the environment
- Empowering people through local content and integration
 - **Resettlement Action Plans**
 - **LRP**



Fig 5: A meeting with MCE, MCD and some staff of Prestea Huni Valley Municipal Assembly

KEY INSTITUTIONAL COLLABORATIONS

- MORD
- GRCL
- GIADEC
- GMC
- GIISDEC
- GPHA
- MRH, GHA, DFR, DUR
- MoT and its agencies
- Attorney General's
- MLNR
- Lands Commission and its Divisions
- Security Agencies
- MMDAs in project catchments
- Contractors
- Consultants



Fig 5: A meeting with MCE, MCD and some staff of Prestea Huni Valley Municipal Assembly

Other Initiatives: Rail-Port Interconnection

- ✓ Rail-Port Interconnectivity Design Committee
- ✓ Objective is to reconfigure the rail tracks inside Takoradi Port for bauxite and manganese haulage / stockpiling
- ✓ Team Engineering S.p.A concluding the railway alignment for integration into the Port Master Plan

