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GrCF2 W2 - Tbilisi Bus Phase III Project

Environmental and Social Assessment and Audit Report

NON-TECHNICAL SUMMARY

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1 Introduction

The Government of Georgia has requested a sovereign loan to the EBRD (“EBRD” or “the Bank”) of up to EUR 83 million to Georgia to be on-lent to Tbilisi City Municipality (the “City”) for the benefit of the Tbilisi Transport Company Ltd (the “Company”), a municipal company which operates buses, the metro system and cable cars in Tbilisi.

The City of Tbilisi (“Tbilisi” or the “City”) with a population of approx. 1.2 million, would like to improve standards of the urban transport system, namely through the continued renewal of its bus fleet.

The Project will assist implementation of the new bus network in Tbilisi, defined with the support of the Bus Route Restructuring study (a post-signing TC assignment under initial Tbilisi Bus Project, supported by the Bank). The study recommended selection of 18-meter buses for core bus routes to fully satisfy the City’s growing demands and provide sufficient capacity under a new optimised network. This moreover follows from Tbilisi’s GCAP adopted in 2017, which identified an expanded low-emission public transport system as a priority for the City.

The proposed loan will be structured in two tranches and will finance the acquisition of approximately 200 modern 18-meter low-floor articulated Compressed Natural Gas (“CNG”) buses (Tranche 1 – EUR 70 million) and the construction of a new depot for these buses (Tranche 2 – EUR 13 million) (the “Project”). The proposed new bus fleet will serve new routes under the new bus network and include ticketing system and real-time information systems.

The City’s transport department organises public transport, including traffic management and supervision of public transport including privately-run minibuses. The relations between the Company and the City are governed by the local legislation as well as the Company’s charter. Work is underway to finalise the development and approve the Public Service Contract (“PSC”) for bus operations, supported by previous Bank-supported TC for Corporate Development Programme.

The planned purchase of the new buses will improve the reliability and quality of public transport services for users, as well as improve air quality through reduced carbon emissions and better fuel efficiency, in compliance with objectives and commitments of the city. The investment in the new buses will result in a significant reduction in emissions (clean air and GHG related) from the urban bus sector.

This Non-Technical Summary (NTS) provides a description of the project and describes the potential benefits and impacts associated with its construction and operation. It also describes how these will be mitigated and managed through all phases of the project’s development. In addition, it provides a summary of the public consultation activities and the approach to future stakeholder engagement. The NTS has been prepared for the potential financing of the Project by the European Bank for Reconstruction and Development (EBRD).

2 Project Description

2.1 Project Concept and Components

Based on the analysis of the current bus operations in Tbilisi and actual demand and discussions held with the TTC and Tbilisi City Hall, Mott MacDonald as the technical consultants have proposed use of the new bus fleet. The project concept considers requirements for operation of the new bus fleet, including depot facilities and systems as required for new bus services.

The available budget of EUR 83 million will cover two project components:

- Purchase of approx. 200 18m CNG buses – EUR 70 million
- Design and construction of a new bus depot for the new fleet – EUR13 million

With the budget allowing a bus unit cost of approx. EUR 350,000 it will be seen during procurement whether the city can purchase the full 200 buses envisaged and whether it can increase the order to meet the city's changed fleet requirements.

2.2 Alternatives for the New Depot Site

Site Selection Stage 1.

No	Alternative Site	Comment
1	Saburtalo University Street	Ideal location with enough land – unfortunately this land was sold to a private owner so is not now available.
2	Extension of the existing Depot #2	Following a land ownership check all surrounding land is privately owned and therefore this is not now an option
3	Rebuild the Service Centre in Avchala	The access to this site is a key constraint having a weak culvert and a difficult turn off the main road – this has been discounted.
4	Use the remaining land from the former tram depot in Avchala	Considered as an alternative for analysis of alternatives at stage 2
5	Use a new site purchased by the TTC in Varketeli – see below	Considered as an alternative for analysis of alternatives at stage 2

Site Selection Stage 2.

Avchala Depot Site

This site was formerly a tram depot that opened in 1987 and closed in 2006. The land is currently owned by Georgian Railways and was being used by their railway bypass project –

the depot land is where the railway ended the bypass with a medium sized embankment and bridge. The area of land at the site is 88,363 m² but this is divided by the railway infrastructure works which as yet remain unfinished.

This land plot is estimated as a good location for the bus depot. However, under the city development plans discussed by the Tbilisi City Mayor's Office and the City Hall, the mentioned land plot has been foreseen for construction of new Tbilisi Bypass Railway line. The land plot is owned by the Georgian Railway and although the project is currently suspended, and it is unknown whether construction of the railway bypass will continue.

Varketeli Depot Site

The TTC owns a plot of land, reference 01.19.39.035.003 east of Varketeli in the eastern suburbs of the city which has an area of 76,137 m². The square plot in the south-east part of the land has now been sold to private owners. The plot is an uneven and slightly sloped site that may require additional earthworks. However, due to the above reviewed reasons, this land plot has been recognized as acceptable for arranging depot and as the best realistic alternative, not to delay the construction.



Figure 1: Depot Site showing Access Roads

2.3 Depot Design

At present Mott MacDonald undertakes outline design for the selected site in Varketeli, as no design for a depot exists.

As part of the design it has been considered the dead kilometres for the entire fleet of articulated buses and looked at where the routes are in relation to this depot site and how this works operationally. The Design team have concluded that part of the fleet should be garaged

at depot #2 and the maintenance facilities for the whole fleet should remain at depot #4. In addition, some of the 12m buses should be assigned to depot #4 in exchange.

The preliminary design of the depot envisages following structures and facilities:

- shed with 10 wash bays
- a drive through maintenance hall with 16 bays
- a CNG compression and storage area
- a gas pipeline is available to reach the depot
- an administration building with offices and driver rest space
- the administration building will have sufficient space for a new bus control room.
- the depot has two entrances with security gates and parking areas for cars and cycles
- parking area for 150 18.75m buses and 55 12m buses
- fuelling gantries for all parking areas

The depot has been designed for one-way movement of buses and to separate them from other vehicles, cycles and pedestrians within the depot area. These can be seen on the diagrams shown below. There is still available space to increase the bus parking areas.

Having taken note of the condition of the TTC headquarters buildings near Station Square it has been planned a new headquarters building for TTC at depot #4 together with a new bus control centre. The depot also includes a new headquarters building for the TTC so that it can move out of the old Station Square buildings. This building has a floorplan of 114 by 60 metres and an area of 6840 m² per floor. This building has separate road access, is secure and has its own parking area. Depending on how many stories are built this would replace at least the bus and senior management areas.

Design team has considered the most likely routes for buses to access the depot. These have been tested using Vehicle Tracking in AutoCAD. The following three routes were tested:

- Route 1 – this route runs from the Kakheti Highway via Mikheil Gakhokidze Street, Evgeni Maisuradzisqucha Street and the depot returning via Aleksandre Tvalchrelidze Street to the Kakheti Highway.
- Route 2 - this route links Sakartvelos Ertianobisatvis Mebrdzolta Street, Mikheil Gakhokidze Street, Evgeni Maisuradzisqucha Street and the depot and links main bus routes in Varketeli.
- Route 3 - this route runs from the Kakheti Highway via Mikheil Gakhokidze Street, Evgeni Maisuradzisqucha Street and the depot returning the same way.

We examined any areas of these routes that were particularly narrow – that is less than 7.0 metres – which would cause potential issues for two buses to pass. There are a few areas of concern and they are shown in the related maps.

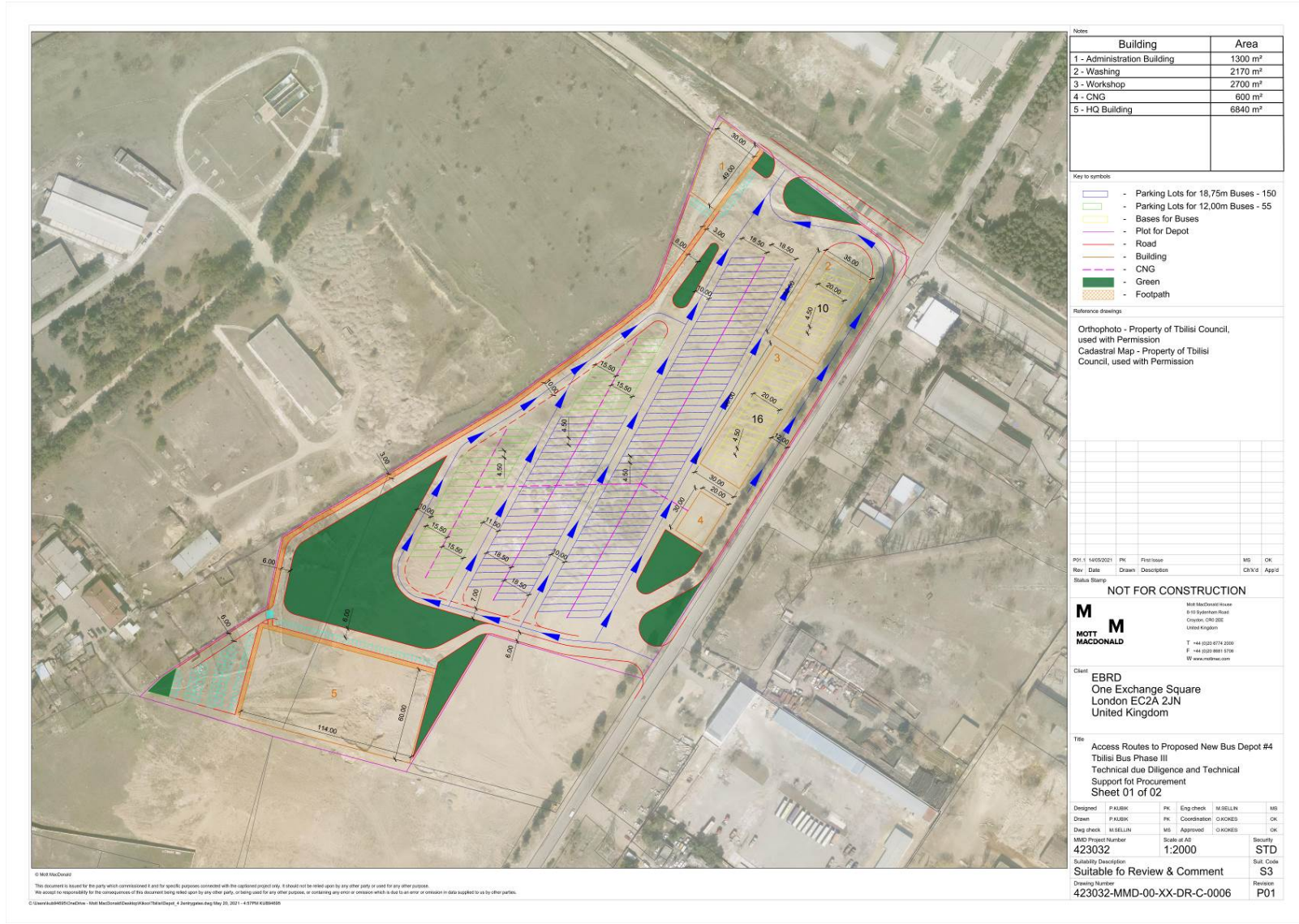


Figure 2: Proposed layout for new Depot

3 Major Environmental Features of the New Depot Site

3.1 Physical and Biological Environment

Topographically the site is partly plain, but uneven with slight sloping. There are no any signs of erosion and risks of development of hazardous geological processes, like landslides or land subsidence.

Territory represents a degraded urban landscape, a wasteland with poor vegetation. No sensitive habitats and ecological receptors are represented here.



Figure 3: Views of the new depot territory

The site is quite far from the major surface water receptors, like the river Mtkvari (4.5 km) or Tbilisi Water Reservoir (Tbilisi Sea – 900m). However, a concrete paved irrigation channel is located in close vicinity of the site, at a distance of 25m from the North-East border of the site. This channel should be considered as an important environmental receptor to be protected.

The important feature of the site, identified during the site visual assessment, is existing contamination by irregularly and illegally disposed waste. The site has been used for disposing construction wastes. Visual observation shows that most part of waste represents inert construction materials. No asbestos remains have been noticed. However, the waste is mixed and may contain hazardous waste, like remains of batteries, old TVs and light bulbs. More serious issue is that the site has been used for disposal of biological waste: the site is full of animal carcasses.

3.2 Social Environment

The site is surrounded by wastelands of the abandoned old industrial facilities and the settlements. The residential areas are intensively developing and becoming quite densely populated. Tbilisi Sea recreational zone is located at a distance of 900m from the North-East border of the site.

One settled area is located quite close to the South-West borders of the territory. The distance from the closes residential building to the border is 40m. The main group of closest residential houses is within the area located at a distance from 150- 400m from the South-West border. The project land is mostly a wasteland not used by any private user, leaseholder or illegal squatter. Only a small area (0.42 ha) is occupied by illegitimate users for gardening. This issue is discussed in details in chapter 4.1

Officially, the sanitary protection zones are not any more applicable in Georgia for the objects like bus depot (only water supply headworks and groundwater wells have SPZ). The Technical Regulations on Environmental Protection (of 2014) only recommended to locate the stationary sources of emission and noise at a distance from the houses, in a such way that the maximum admissible levels of pollutants and noise are not exceed at the border of the residential area (Resolution No 17 of 2014 of Georgian Government on Technical Regulations on Environmental Protection).



Figure 4: Illegally dumped waste at the new depot area

The ESA includes requirements for monitoring the noise, emissions and dust for the construction stage but is missing this part for the depot operations stage. This should be added in the final version of the document.

4 Environmental and Social Impacts and Mitigation Measures

4.1 Land use and resettlement

Impact

The site selected for the new depot No 4 was a State owned land parcel and now is registered as the TTC ownership under the cadastral # 01.19.39.035.003. The land is of non-agricultural category and represents a wasteland with total area of 7.6 ha (76,137 sqm).

The South-West corner of the TTC land as it is currently registered in NAPR, comprises a land plot of about 0,42ha (4200sqm), part of which is illegitimately fenced and used for gardening by the residents of the neighboring houses, and the other part is used for locating public infrastructure (see the polygon outlined in green on the maps below). This portion of land is topographically separated from the rest part of the TTC land: most of the TTC land is located on an elevated plateau surrounded by local dirt roads, while the part of the land used by the residents as small urban gardens and orchards, is located 4-5m below this plateau and is separated by dirt road.

In the North-East corner of the polygon outlined in green a fenced territory of 6sqm is located with a water supply infrastructure (well with installed metering gauge). Apart from that the land within this polygon is crossed by the underground water supply mainline (cadastral No 01.01.834). Within the polygon outlined in green fall 7 land parcels used as urban gardens and orchards. Different fruit-bearing trees, grape and annual crops and mixed vegetables are cultivated on these plots. All of the plots are fenced. On one plot a small garden-house of 16sqm is located (owner – Nodar Apkhazishvili). On the neighboring plot a small metal kiosk is placed (5sqm). No annual crops are cultivated on the other parts of TTC land and no signs of any land use activities is noticed. The only point is, that on some sections of the land plot few young (not fruit bearing) walnut trees are grown. According to the preliminary survey the walnut trees are not planted specially but grow as a natural expansion of the urban greenery (a big walnut tree grows outside the TTC land on the other side of the street. The tree has been planted as a part of the urban greenery plantation consisting of mixed species of trees. The wind protection belt along the road, bordering with the TTC consists mostly of pines and other coniferous trees).

At present there is no design of the depot and no layouts demonstrating the physical borders of depot (location of fences and infrastructure). Thus it is difficult to say whether there are any plans to occupy and use for depot needs the land plots used by the squatters as gardens. However, it is clear that construction plans would be limited by the existence of the water supply mainline.

Mitigation

Despite the fact that the land plots within the polygon outlined in green are used by the squatters illegally, in case if these land plots will be occupied by TTC for the Depot construction, the owners of the affected plots will be identified and the losses will be compensated according to the requirements of PR 5 - Land Acquisition, Involuntary Resettlement and Economic Displacement. In particular, the garden-house, kiosks and other minor structures, including fences and concrete pylons will be compensated at replacement cost. The perennials will be valued according to their age, productivity, market cost of the fruits and the years needed to grow a fruit bearing tree of the similar productivity. Annual crops will be compensated at least for one year harvest and its market value. The mitigation/compensation measures will be structured in a form of Abbreviated RAP. The need of the livelihood restoration measures will be discussed under the RAP (Most of the affected persons are the workers or ex-workers of the water supply company settled in the apartment block-houses in close vicinity with the affected plots. Agriculture is not a main source of income for these APs and plays only supporting role. However, a brief livelihood impact analysis should be provided within the Abbreviated RAP)

4.2 Soil, surface water and groundwater contamination

Impact

The potential contamination of the site is related to generation of construction wastes, as well as the waste produced by future bus fleets operation. Fueling and car washing operations may cause pollution by oil, fuel and contaminated water.

The primary receptor for contamination is soil. However, if not properly manage the spillage and waste contamination impacts may extend to groundwater. The irrigation channel is located North-East from the depot site at a distance of 25m and also could be contaminated in case of gross negligence.

Mitigation

The mentioned potential impacts are easily manageable by application of common waste management and pollution prevention practices. TTC has elaborated and agreed with MoEPA the Waste Management Plan (WMP) and Pollution Prevention Plan (PPP). The plans provide general principles, procedures and measures aimed on pollution prevention and match requirements of PR 3. However, detailed site-specific WMP and PPP should be elaborated to address specific impacts related to this construction and operation of depot No 4.

In particular, before the start-up of any construction works it is necessary to conduct following managerial actions:

- Anthrax survey at the place of disposal of the animal carcasses and remains
- Hazardous waste survey and preparation of the WMP aimed on proper disposal of the construction and domestic waste illegally disposed at the project sites. The plan should be developed, agreed with MoEPA and EBRD and implemented before the civil works start.

During the construction and operation of the depot TTC will ensure compliance with the WMP and PPP procedures through internal monitoring and management system and Contractors management procedures. Waste storage and car washing areas will be arranged in accordance with WMP and international standards.

4.3 Water and energy resources

Impact

Water consumption is necessary during the construction and for the depot operations (mostly for car washing). The city water supply and wastewater sewage systems are available and depot will be connected to these systems. Electric power consumption usually is not very intensive in the depot.

Mitigation

Resource saving modern car-washing systems will be installed in new depot. The office premises, workshops and other buildings will be designed and constructed with due regard to energy-efficiency construction principles.

4.4 Air quality, emissions and potential air pollution; noise and vibration

Air emission impacts are the most important impact category that is relevant for the project.

Construction Phase:

Impacts

Vehicle and construction machinery emissions and dust, as well as noise and vibration are the potential impacts to be regarded. The level and character of potential impacts is typical for the small and medium size constructions: levelling and earth-works, as well as transportation of materials is connected to the dust generation and emission of exhaust gases, noise and vibration.

Mitigation

The mentioned potential impacts are easily manageable by application of common waste management and pollution prevention practices and construction standards and norms. TTC has elaborated the Waste Management Plan (WMP) and Pollution Prevention Plan (PPP), as well as Contractors Management Plan. The plans provide general principles, procedures and measures aimed on pollution prevention and match requirements of PR 3. However, detailed site-specific EMPs should be elaborated to address specific impacts related to this construction and operation of depot No 4.

Depot Operations Phase:

Impacts

The emission of toxic substances and Greenhouses Gases by the operation of the new fleet should be compared with the current situation to estimate the impact of the project. Emissions assessment has been conducted by Mott MacDonald team.

This chapter summaries the key findings resulting from emission analysis. The main task of emission analysis was the assessment of modernization of vehicle fleet in Tbilisi.

In existing case the affected routes are serviced by diesel and CNG buses and minibuses with Euro II, Euro III and EURO VI emission standards. In project options these vehicles are replaced by articulated CNG buses of EURO VI emission standard.

Modernization of vehicle fleet including CNG EURO VI lead to significant reduction of emissions in the Project scenario. This modernization will result in a reduction in the amount of toxic air emissions, especially NO_x and particulate matter (PM), the latter of which includes black carbon (PM_{2.5}), identified as a Short-lived Climate Polluter (SLCP). In

addition, the replacement of old buses or minibuses will help to improve local air quality markedly and bring substantial economic and public health benefits.

Due to new modern EURO VI, GHG and Air pollution emissions will be reduced in the Project option. We have compared emission per passenger kilometres and place kilometres as required in the document “Taxonomy report: Technical Annex” issued by Technical expert group on Sustainable finance in March 2020. Emissions per pass-km and place kilometre included in environmental analysis are shown in tables and chart below.

Table 1: Emission summary per place km

Scenario	Unit	PM	SO ₂	NO _x	GHG
Basic option	mg of pollutant per place km	3.086	0.043	119.963	29,737
Project option	mg of pollutant per place km	0.021	0.038	6.202	15,637
Difference	Difference in %	-99%	-12%	-95%	-47%

Table 2: Emission summary per passenger-km

Scenario	Unit	PM	SO ₂	NO _x	GHG
Basic option	g of pollutant per pass-km	6.10	0.085	0.24	58.8
Project option	g of pollutant per pass-km	0.06	0.116	0.02	47.9
Difference	Difference in %	-99%	37%	-92%	-18%

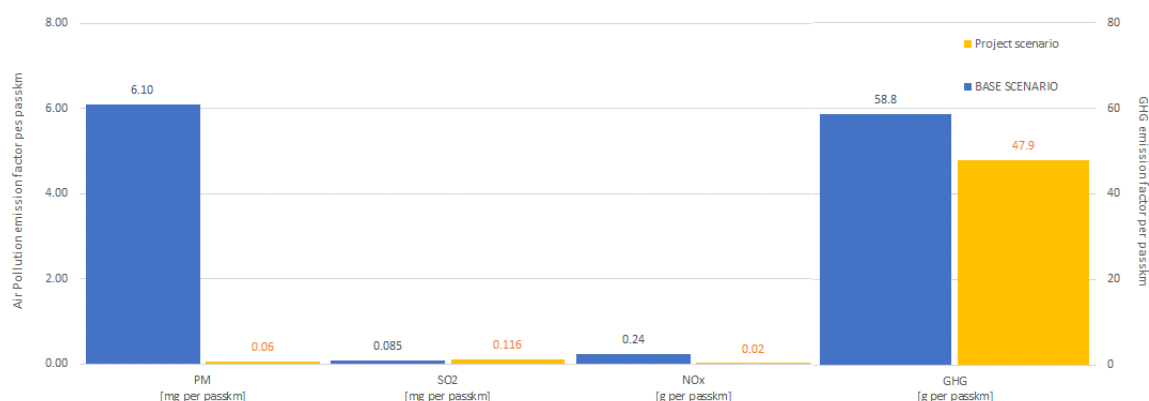


Figure 5: Estimated emissions of air born pollutants

The document “Taxonomy report: Technical annex” published in March 2020 sets key indicators for project. The value 50 g of direct CO₂eq emission per pass-km is key value for successful project set by this document. As can be seen in the table above, emission factor per pass-km in the Project scenario reached the lower value than 50 g CO₂eq per pass-km. The key indicator g of CO₂eq per pass-km reaches value of 47.9 in Project scenario.

With the above assumptions and economic values according to EBRD¹ the total monetized benefits have been calculated.

¹ Methodology for the economic assessment of EBRD projects with high greenhouse gas emissions

Table 3: Emission analysis summary

Emissions	Base case [tonne]	Project case [tonne]	Saving per 12-year period [tonne]	[%]	Value per tonne [€]	Total benefits [€mil]
Particulate matter (PM)	47.531	0.472	47.058	-99%	28,732	1.352
Nitrogen oxides (NO _x)	1,848	142	1,706	-92%	8,010	13.664
Sulphur dioxide (SO ₂)	0.663	0.867	-0.204	31%	8,313	-0.002
Carbon dioxide (CO ₂)	458,008	357,337	100,671	-22%	46.4-63.1	5.351

CO₂ average annual reduction is estimated to reach 8,389 tons from the current estimated total of 38,167 tons of CO₂ emissions from the affected routes. At EUR 46.4 to EUR 63.1 per tonne/CO₂ over an evaluated period of 12 years, the total benefits would be EUR 5.35 million.

Nitrogen oxides, the average annual NO_x reduction is estimated to reach 142 tons from the current estimated total of 154 tons of NO_x emissions. At EUR 8,010 per tonne/NO_x over an evaluated period of 12 years, benefits of reduced NO_x emissions would be EUR 13.66 million.

For particle matter (including PM_{2.5}, also referred to as black carbon), the average annual PM reduction is estimated to reach 3.92 tons from the current estimated total of 3.96 tons of PM emissions from the affected routes. At EUR 28,732 per tonne/PM over an evaluated period of 12 years, benefits of reduced PM emissions would be EUR 1.352 million.

SO₂ average annual increase is estimated to reach 0.017 tons from the current estimated total of 0.055 tons of SO₂ emissions from the affected routes. At EUR 8.313 per tonne/SO₂ over an evaluated period of 12 years, the total disbenefits would be EUR 0.002 million.

Total benefits from reduced GHG and toxic emissions would be 20.365 million in the Project scenario.

4.5 Biodiversity, Habitats, Flora and Fauna

Generally, there are no sensitive habitats and ecosystems under the project impact. No special biodiversity or habitat protection measures are required apart from the general pollution prevention measures discussed above.

4.6 Raw material sourcing and transportation, including borrow pits

Impact

The depot site is located a bit higher than the surrounding territories and access roads and topographically forms a low plateau (about 2m height). During the depot construction the local soil will be used as a fine material and very limited amounts of the gravel and other raw materials will be required. Thus the impact is not significant.

Mitigation

Only licensed suppliers will be used and the provisions of the Contractors Management Plan will be implemented.

4.7 Traffic Safety

Impact

Traffic safety is a minor issue for construction stage but is specific and significant issue for the operations of the bus fleet.

Mitigation

At the construction stage the traffic safety is regulated through the Contractors Management Plan. The site specific EMP covering the construction related impacts and mitigation measures, will include the details of the traffic management for construction of the depot No 4.

In relation with the traffic safety of bus operations, it is important to stress that TTC is currently in process of ISO 39001 implementation - Road Traffic Safety (RTS) Management System. Moreover, all the transportation activities will be in accordance with Law of Georgia on Roads (N1830-RS).

4.8 Occupational health and safety issues, including explosives safety

TTC has corporate health and safety management system and currently is focusing on **ISO 45001 implementation** in bus depot □2. The same will be applied to the new depot No 4.

The key area of finding relates to the fire safety, hazardous works risk management, obsolesces management standards, gaps in basic H&S programs and leak of HSE behavior focused trainings for employees. It's highly recommended further develop health safety management system in line with ISO 45001 and best available practices, implement OHS management system for all facilities and activities of TTC.

Disruption, health and safety during construction

These matter will be managed through the Contractors Management Plan and Procedures and site-specific EMPs to be developed for the project by the CW Contractor. Periodical audit process of construction activities by HSE specialists from TTC is recommended to provide.

4.9 Cultural heritage, impacts and management measures

No impacts on objects of cultural heritage are expected to have in place. However, the visual Archaeological Survey will be conducted in accordance with the procedures for obtaining Construction Permit and the Chance Finding Procedures will be developed in accordance with the EBRD PR 8 and Georgian legislation.

4.10 Cumulative impacts

The detailed assessments of cumulative impacts as well as induced impacts supposed for performing after the project design documentation finalizing.

4.11 Consistency with policy, law and other plans

The proposed project activities will be implemented according to the existing Georgian legislation and developed corporate management system.

Georgia is currently not a Part to the UNECE's Espoo Convention on the Environmental Impact Assessment (EIA) in a Transboundary Context and its Protocol on Strategic Environmental Assessment (SEA). The country signed, but has not ratified the SEA Protocol

4.12 Environmental management plans, mitigation measures and compensatory measures

The Projects overall are considered to have a relatively low potential impact on the environment. Considering the positive aspect of infrastructure development, all of the impacts in general are considered of low overall significance.

TTC has already developed environment management system and is in process of **ISO 14001 certification**.

With appropriate mitigation measures the Project can be developed in accordance with EBRD PRs.

5 Social Benefits, Adverse Impacts and Mitigation Measures

Socio-economic impacts, including gender and management measures (considering gender specificities and needs).

A significant impact on raising the level of employing women makes an Equality Policy of Tbilisi Transport Company (signed in 2019). Since 2017 TTC has made tremendous progress in promoting and putting in practice an Equal Opportunities Strategy. On November 19th, 2019 TTC organized a Forum supported by UN-Women organization to raise awareness of female employees in transport sector among the country. TTC was the only one company represented on the Forum with such a high level of developed equal and gender politics and strategy.

Impacts on businesses and employment. Impacts to existing infrastructure and public services. Local traffic and access impacts

The most important social benefit of the project is the improvement of transportation service for citizens and H&S conditions for employees of TTC.

Social management plans, mitigation measures and compensatory measures

Environment and Social Management Plan is already developed and followed by TTC. Based on the foregoing, the Project's potential adverse future environmental and social impacts this project is Category B project. Category B projects require an Environmental Analysis to assess any potential future environmental impacts associated with the proposed project, identify potential environmental improvement opportunities, and recommend any measures needed to prevent, minimise, and mitigate adverse impacts. TTC should continue to implement an ESMS proportionate to the impacts and risks in accordance with PR and monitor and report on the project's compliance with the PRs.

Community health impact and mitigation measures against COVID-19

The major risk consists of gathering of workers, bringing the workers from different side of city/country, work in close spaces (while reconstructing buildings), lack of disinfection materials. Therefore, to use all preventive measures is mandatory in order to significantly decrease possibility of infecting.

There is no specific OHS standard covering COVID-19. However, some requirements may apply to preventing occupational exposure to COVID-19. Among the most relevant are:

- Using gloves, eye and face protection, and respiratory protection. When respirators are necessary to protect workers, employer must provide a comprehensive number of respirators for protection
- Employer shall furnish to each worker “employment and a place of employment, which are free from recognized hazards that are causing or are likely to cause death or serious physical harm.”

There are also number of general recommendations that shall be implemented during the pandemic:

Social distancing

Effective way to slow the spread of COVID-19 is making a conscious effort to keep a physical distance between each other. Social distancing is proven to be one of the most effective ways to reduce the spread of illness during an outbreak. Major measures:

- Avoiding non-essential gatherings;
- Avoiding common greetings, such as handshakes;
- Avoiding crowded places;
- Limiting contact with people at higher risk like older adults and those in poor health;
- Keeping a distance of at least 2 arms-length (approximately 2 metres) from others.

Hygiene

Proper hygiene can help reduce the risk of infection or spreading infection to others:

- Wash hands often with soap and water for at least 20 seconds, especially after using the washroom and when preparing food;

- Use alcohol-based hand sanitizer if soap and water are not available;
- Avoiding touching eyes, nose, or mouth with unwashed hands;
- Clean the following high-touch surfaces frequently with regular household cleaners or diluted bleach (1-part bleach to 9 parts water): toilets, phones, electronics, door handles.

Wearing masks

For healthy individual, the use of a mask is not recommended for preventing the spread of COVID-19. Wearing a mask when person not ill may give a false sense of security. There is a potential risk of infection with improper mask use and disposal. They also need to be changed frequently. However, it can be a recommendation to wear a mask if person experiencing symptoms of COVID-19 while seeking or waiting for care. In this instance, masks are an appropriate part of infection prevention and control measures.

Employer shall implement the next steps to promote mitigation measures against COVID-19:

- Actively encourage sick employees to stay home or separate sick employees if it was noticed at the workplaces;
- Review human resources policies to make sure that policies and practices are consistent with public health recommendations and are consistent with existing state workplace laws;
- Explore whether possible to establish policies and practices, such as flexible worksites (e.g., telecommuting) and flexible work hours (e.g., staggered shifts), to increase the physical distance among employees and between employees and others if state and local health authorities recommend the use of social distancing strategies;
- Identify essential business functions, essential jobs or roles, and critical elements within supply chains (e.g., raw materials, suppliers, subcontractor services/products, and logistics) required to maintain business operations;
- Set up authorities, triggers, and procedures for activating and terminating the company's infectious disease outbreak response plan, altering business operations (e.g., possibly changing or closing operations in affected areas), and transferring business knowledge to key employees;
- Plan to minimize exposure between employees and also between employees and the public, if public health officials call for social distancing;
- Establish a process to communicate information to employees and business partners on Companies infectious disease outbreak response plans and latest COVID-19 information. Anticipate employee fear, anxiety, rumors, and misinformation, and plan communications accordingly.

6 Monitoring of Impacts

There will be a need in fully implementing the requirements of the Environmental and Social Action Plan (ESAP) developed for this Project, general EMP and particular Management

Plans (e.g. WMP; PPP etc.). This includes a requirement to monitor the implementation of the ESAP and monitor ESHS performance.

Monitoring during construction stage should include:

1) Air quality monitoring and pollution prevention

Monitoring inspections should control:

- technical conditions of the vehicles and construction machinery, control of exhaust gases;
- storage and transportation of bulk materials by a construction Contractor;
- limit use of roads in populated areas;
- protection for the optimal speed of the traffic (especially on earth roads);
- possibility to shut engines or working with a minimum rotation when they are not used and ensure proper maintenance of the all machinery;
- covering properly the vehicles while transporting materials from which dust is expected to be easily spread and provide special pavement or watering in the storage areas for such materials from which dust is expected to be easily spread.

2) Water quality

Monitoring inspection should include control of:

- contaminated water discharge during the earth works;
- discharging vehicles or equipment for wash down waters;
- proper management of contaminated wastewater generated from construction sites, management of storm waters;
- storage and transportation of liquid materials by a construction Contractor;
- removal of all potential pollutants after the completion of works.

3) Chemical usage and hazardous materials monitoring

- ensure to check MSDS before purchasing materials for construction activities;
- check PPE for work with chemicals according to recommended in MSDS;
- preventive measures from soil contamination and compliance to rules of storage-usage of fuel and lubricants;
- provide the required by national legislation and international regulations measures for safe handling and storing the hazardous materials.

4) Waste management

Monitoring inspection should include control of:

- daily management of wastes generated at the construction site;

- collection and removal after completion of construction works, all kind of wastes (including hazardous wastes) from the area;
- management of municipal and other solid wastes (contaminated wipes used for equipment cleaning, dirty work gloves)
- compliance with the restriction for onsite waste incineration by a construction Contractor;
- removal of hazardous wastes for further management by the licensed contractor.

5) Noise / vibration

- Monitoring inspection should include hours of operations (in order to exclude noisy works in proximity to residential areas during night hours).

6) OHS

- provide monitoring according to Construction and Environment Management Plan;
- follow risk assessment and permit to work process for high dangerous works, provide periodical check of compliance;
- for better control over construction subcontractors' EHS performance it is recommended to apply the same Health and Safety requirements for contractors as for own staff;
- periodical safety walks and behavior observation visits from site management team (unsafe conditions and unsafe behavior registration, check of necessary PPE, etc.).

7) Socio-economic and cultural issues including community safety

- since there is always a possibility for revealing of archaeological items during the excavation works the personnel dealing with excavation should be instructed on monitoring of the soil in pits and extracted spoil for presence of archaeological items;
- develop monitoring frequency by OHS TTC specialist (ones or twice a month audit the construction activities);
- record complaints and relevant response to them.

Monitoring during operation phase

1) Climatic conditions

Emissions of GHG should be monitored and reported once a year. The EBRD's Methodology for Assessment of Greenhouse Gas Emissions can be used for accounting of the emissions.

2) Surface and ground water quality

TTC should monitor the quality of storm water (subject to discharge to rivers) after the onsite treatment on a regular basis. The frequency and scope of sampling will be defined in the course of development of Discharge Specification.

3) Air quality

The quality of air should be monitored by TTC. The scope and frequency of sampling will be defined in the course of development of background documents for obtaining a permit for emissions for the depot. Air quality at depot site, as well as vehicle emission characteristics are subject for permanent monitoring.

4) Socio-economic and cultural issues

Client should spread its OHS monitoring system to the bus depot □4 and new bus fleet operations. Standard transportation KPI's should be developed and measured in order to meet the transportation demands in an optimal way.

7 Stakeholder Engagement Plan (SEP)

A Stakeholder Engagement Plan (SEP) has been developed by TTC in 2019 with the objective of identifying key stakeholders and ensuring that, where relevant, they are informed in a timely manner of the potential impacts of project. The SEP also identifies a formal grievance mechanism to be used by stakeholders. As the TTC activities change and new activities relating to stakeholder engagement commence, TTC has updated the SEP in 2020 and the latest update is executed in 2021 to address the specific issues of this particular project.

The SEP includes the following:

- Public consultations and information disclosure requirements;
- Identification of stakeholders and other affected parties;
- Overview of previous engagement activities;
- Stakeholder Engagement Programme including methods of engagement and resources;
- Grievance mechanism with a template for provision of comments/complaints.

Stakeholders could be individuals and organisations that may be directly or indirectly affected by the project either in a positive or negative way, who wish to express their views.

As for the date of the audit (June 2021), company has a Passengers' service quality department, which manages a hotline where 14 people are employed. All information received via the hotline (TTC customer hotline +995 32 293 44 44) is daily reflected in the company's database.

The e-mail of TTC is managed by the Company's Office. The website is managed by the TTC media relations manager - Tamaz Robakidze (Director General's Office). Information regarding complaints is not received on the website. In the nearest future, an online support service will be launched on the website and it will allow users to receive information, express their claims and make complains online. The online support service will be provided by the hotline operators.

The Company's Facebook page is managed by two employees: Tamaz Robakidze - TTC media relations manager at Director General's Office and PR manager of Tbilisi City Hall - Lela Seturidze. Different kind of information is received on Facebook page: notifications on the schedules, bus services issues, information about fines, tabloids, various misconceptions. Based on the contents of the information received, the message is addressed to the appropriate services for responding. If requested by the customer, he/she receives feedback about the measures taken regarding the information provided by him/her.

Basically, news and information on the ongoing projects is spread via media. Besides, information regarding the company's service delays are spread indenting timely warnings of the customers with the delays and temporary restriction of service. News is prepared in agreement with the PR service of the City Hall. This information is then technically distributed to social and traditional media and is covered by all news channels: television, radio, newspaper, and social media. Tbilisi City Hall is a

100% shareholder of Tbilisi Transport Company; accordingly, any process in TTC is managed by the City Hall's active involvement.

8 Further Information

Contact information for this project is provided below:

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