

**REPUBLIC OF IRAQ
TRANSPORT CORRIDORS PROJECT
(P131550)**

**Environmental and Social Safeguards Audit
North – South Road Corridor (Segments 1 and 4)
Kurdistan Region**

October 25, 2013

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ENVIRONMENTAL AND SOCIAL SAFEGUARDS AUDIT NORTH – SOUTH ROAD CORRIDOR(SEGMENTS 1 AND 4) KURDISTAN REGION

I. EXECUTIVE SUMMARY

The World Bank will support the Government of Iraq, including the Kurdistan Regional Government (KRG) to implement its new vision toward modern road agencies. The Bank support will amount to US\$380 million, which includes counterpart financing of US\$30 million from KRG. Other sections of the Iraq transport corridors will be financed by the Government of Iraq, including KRG, and the Islamic Development Bank (IsDB). The project would finance: (i) The rehabilitation of R7 and R8 sections of Expressway No. 1 and (ii) The expansion of the North-South Road Corridor in KRG from a 2 lane to a 6 lane transport Corridor. The Client has agreed to apply Bank safeguards policies to the entire corridor, and since civil works on segments 1 and 4 are ongoing, it was agreed that an Environmental and Social Audit would be prepared. It was also agreed that the action plan prepared to address the findings of the audit would be implemented by GoI.

The audit broadly followed the Terms of Reference which had the following objectives:

- Develop clarity on, and summarize succinctly, (i) how potential social and environmental impacts for the non-Bank financed segments were assessed and (ii) monitored.
- Based on the social and environment impact summary, assess whether the mitigation measures are consistent with national environmental and social laws and regulations;
- Provide a summary comparison between the mitigation measures developed as per Iraqi and KRG standards vis-à-vis the policy requirements of Bank safeguards;
- Review the contracts for these sections and ascertain whether environmental and social management clauses were incorporated in the absence of prepared safeguards instruments, or what measures are in place to ensure compliance with domestic policies and regulations. The audit should also confirm if KRG, Iraqi environmental and social regulations were complied with.
- Through site investigations/visits, verify that the Occupational Health and Safety (OHS) requirements are being followed or adhere to in the ongoing civil works on the three sections.
- Prepare a practical remedial action plan, if necessary, to address any adverse environmental or social impacts that may have occurred. If such a plan is not needed, then a clear and robust explanation supported by evidence to demonstrate that sufficient due diligence was carried out.

Multiple site visits to Segments 1 and 4 by World Bank environmental and social safeguards specialists have been made throughout 2013, and as recently as September 2013. These visits also included other World Bank project team staff, General Directorate for Roads and Bridges (GDRB) Project Management Team (PMT) engineers, and Municipal representatives. Field interviews were held with the two contractors, their supervisory engineering staff, site workers, as well as with Project Affected Peoples (PAPs) and other local residents who stand to benefit or who might be adversely affected by the road works.

The audit reveals that the overall quality of construction works in KRG specific to Segments 1 and 4, meets KRG standards as well as Bank standards. Although there are lack of management plans to guide and ensure consistency on road engineering design and construction, both with regards to social and environmental safeguards aspects, the thoroughness, consistency, and monitoring associated with works supervision and identification and treatment of PAPs is high. That said, there are numerous areas where remedial work needs to be undertaken in order to bring the associated works of Segments 1 and 4 to parity with international practices. The most immediate of these remedial works to be addressed is the cultural heritage site of Besetky Village, which has been irreversibly damaged by the construction works and needs a remediation plan to preserve and maintain the remainder of the site.

There are other remedies which can be addressed immediately, such as increased attention to the wearing of personal protective equipment. Other identified deficiencies may require additional work in order to be remedied, such as the development and implementation of storm-water management, spill prevention and response, and waste management plans. Still other deficiencies require the requisition and purchase of equipment for air quality and noise monitoring.

Conservation of biological species as well as ecosystem conservation can be addressed by retrofitting of culvert and culvert areas to encourage species passage through these culverts as well as through post-construction planting of native species, especially ground cover, in order to restore roadsides damaged by construction materials, bypasses, and increased dust. Post-construction signage will need to include special provisions for areas where pedestrians are inclined to cross the new roads in large numbers, such as the factory in Segment 1 and the Derebune Collective School. The post-construction signage will also need to control on-and-off access to and from side roads.

Although there are numerous, minor gaps between KRG laws and regulations and applicable World Bank environmental and social safeguards policies, *KRG already has an established a precedent of going beyond the requirements of the Law* in dealing with environmental and social safeguards issues on road works projects. Specific areas where KRG appears to have fallen short in applying the requirement of the Law include embedding environmental and social compliance requirements into contractors' clauses as well as following cultural heritage laws and regulations.

There can be no doubt the construction works of Segments 1 and 4 are of good engineering quality and are being closely monitored and supervised by numerous institutions. The main road widening and rehabilitation will improve travel times on some of the most densely used segments of road used for truck traffic between KRG and its neighbors Syria and Turkey. This road improvement will also facilitate the mobility of rural communities to access markets and employment opportunities.

The widening of the road in segment 1 affected 21 structures, all of which were unlicensed and which encroached on the existing Right-Of-Way (ROW). According to the applicable national legislation, owners are not eligible for compensation but authorities have nonetheless provided compensation and established clear principles for estimating the compensation rates. The compensation offers made by the Committee were based on the market value of the structures to be removed following general assessment estimates developed by an established realtor entity. No compensation was offered for land value, since all structures encroach illegally on the ROW as confirmed by the Roads and Bridges Directorate letter no. 5560 dated July 29th, 2013. The compensation for structures in segment 4 followed the same procedures as for segment 1. No compensation was allocated for livelihoods losses. No compensation was allocated for employees working in the affected shops. However, site visits to many such entities show that the vast majority of these entities are owner-operated and do not hire employees. Nonetheless, there were undoubtedly a few employees who were adversely affected and who did not receive compensation. It is, however, very unlikely that these PAPs could be identified at this point.

Despite the absence of preparation of environmental, cultural heritage, and social assessments, the GDRB has complied with most of the elements of environmental and social laws which govern road rehabilitation and/or construction and have often, as is the case with social laws, gone well beyond what is legally required. Credit must be given to GDRB, Ministry of Construction and Housing (MOCH), and other relevant institutions, as only in recent months has the Ministry of Environmental Protection begun to put environmental policy and objectives into action. It may still be sometime before environmental assessment and social assessment becomes an enforced procedure for other than the large-scale natural resource extraction projects on which it now give focus. Even longer may be required for everyone from planners and project managers to contractor-employed workers to be sufficiently trained in order to be fairly accountable for the environmental and social consequences of their actions.

The Conclusion and Recommendations section gives a brief listing of the safeguards corrective actions detailed in the main body of the report, sorted by responsibilities and the suggested timeliness that these actions should be addressed and completed. The GOI has committed to implementing the works for Segments 1 and 4 of the KRG portion in accordance the terms and principles set forth in the RPF and ESMF for the project and to the corrective actions summarized in the following table.

Safeguards Corrective Action Plan

Action	Responsibility	Timeframe
1. Address management and mitigation of the cultural heritage site Besetky;	GDRB/ Contractor	December 2013
2. Remediate public and occupational safety concern associated with deep excavation interface with road in Segment 4;	GDRB /Contractor	November 2013
3. Ensure and document compliance with PPE guidelines;	GDRB	November 2013
4. Develop and/or document the Occupational Health Safety and Environment (OHSE) organization chart for each of the two contracts; (ii) site-specific OHSE plan and procedures; and (iii) record-keeping for traffic accidents and/or for occupational injuries specific to each Segment;	GDRB/SCRB	March 2014
5. Disseminate and apply Bank-compliant storm-water runoff and soil management, spill prevention and response, and waste management plans	GDRB/Contractor	December 2013
6. Purchase and use of air quality and noise volume monitoring equipment, with preparation and dissemination of a timetable for monitoring during construction;		December 2013
7. Retrofit culverts appropriate to small mammal crossings;	GDRB/ Contractor	March 2014
8. Prepare a site-management for the cultural heritage site Khirbet Srikani;	GDRB	March 2014
9. Operationalize a transparent, easily accessible and credible Grievance Redress Mechanism (GRM) initially for use by adversely affected PAPs on Segments 1 and 4 who have not received compensation (importantly, including employees of small businesses already removed from ROW) and maintain for use across all road Segments through duration of project activities and for one year after project completion.	GDRB	February 2014
10. Plan and hold open public consultations in Segments 1 and 4 to share information on mitigation/compensation processes applied to date; to announce the operation of the GRM; and to respond to complaints/concerns; later continue practice for Segments 2 and 3	GDRB	February 2014
11. Hire a social safeguards specialist to support the GDRB and the Compensation Committee in meeting World Bank social safeguards standards	GDRB	March 2014
12. Provide capacity building opportunities on the World Bank's social safeguards policies for officials, engineers, contractors and civil society	GBRD	June 2014

II. INTRODUCTION

Iraq has three main transport corridors: North-South from Turkey; South-North through its port of Um Qasr; and East-West from Baghdad to the Syrian and Jordanian borders. Other corridors link Iraq with Iran in the East and Saudi Arabia in the South-West.¹ Iraq is seeking to improve the efficiency of its transport corridor by improving related infrastructure and institutional barriers. A corridor approach will enable the country to focus on the areas that account for most of its transport and trade, ensuring that the measures implemented contribute to promoting national and international transport and trade and, ultimately, economic growth and development.

The World Bank will also support the Government of Iraq, including the Kurdistan Regional Government (KRG) to implement its new vision toward modern road agencies. The Bank support will amount to US\$380 million, which includes counterpart financing of US\$30 million from KRG. Other sections of these corridors will be financed by the Government of Iraq, including the Kurdistan Regional Government, and the Islamic Development Bank. In the context of Bank engagement in the transport sector, the Government of Iraq and KRG have committed to applying the principles of the World Bank safeguards policies to the transport corridors that are considered linked to the Bank's investments.² This includes the transport corridors sections that are not financed by the World Bank and also those sections on which road works have already commenced.

The traffic along the North-South Road Corridor in the Kurdistan Region is being served by the road between Ibrahim El Khalil and Batil. There are about 3,000 heavy trucks entering Iraq daily from Turkey through the Ibrahim El Khalil border crossing, and these trucks use the existing mountainous, two-lane, windy and dangerous road through Zakho to reach Batil, Duhok and the rest of Iraq. Under the proposed Transport Corridors Project³, the World Bank will co-finance the construction of one section of the Batil-Ibrahim El Khalil Transport Corridor (from Girsheen to Suheila Intersection – see Figure 1 below). Figure 1 below shows the routing of the Batil-Ibrahim El Khalil Corridor with the road sections which are the focus of the work detailed in this audit.

The Bank's involvement in the rehabilitation of this Transport Corridor means that Sections 1 and 4 of the road are deemed "associated facilities", and Bank safeguards policies would also apply. This document reports on the independent environment, social safeguards, and cultural heritage audit which have been undertaken for Sections 1 and 4.

¹A new corridor linking the Center with the North is in the planning and design stage led by MOCH in Baghdad.

² The policies of relevance to this TOR include the World Bank Policy on Environmental Assessment (OP4.01), Physical and Cultural Resources (OP4.011) and Involuntary Land Acquisition and Resettlement (OP4.12)

³ The approval date of this Project by the World Bank Board is scheduled for Dec 19, 2013.

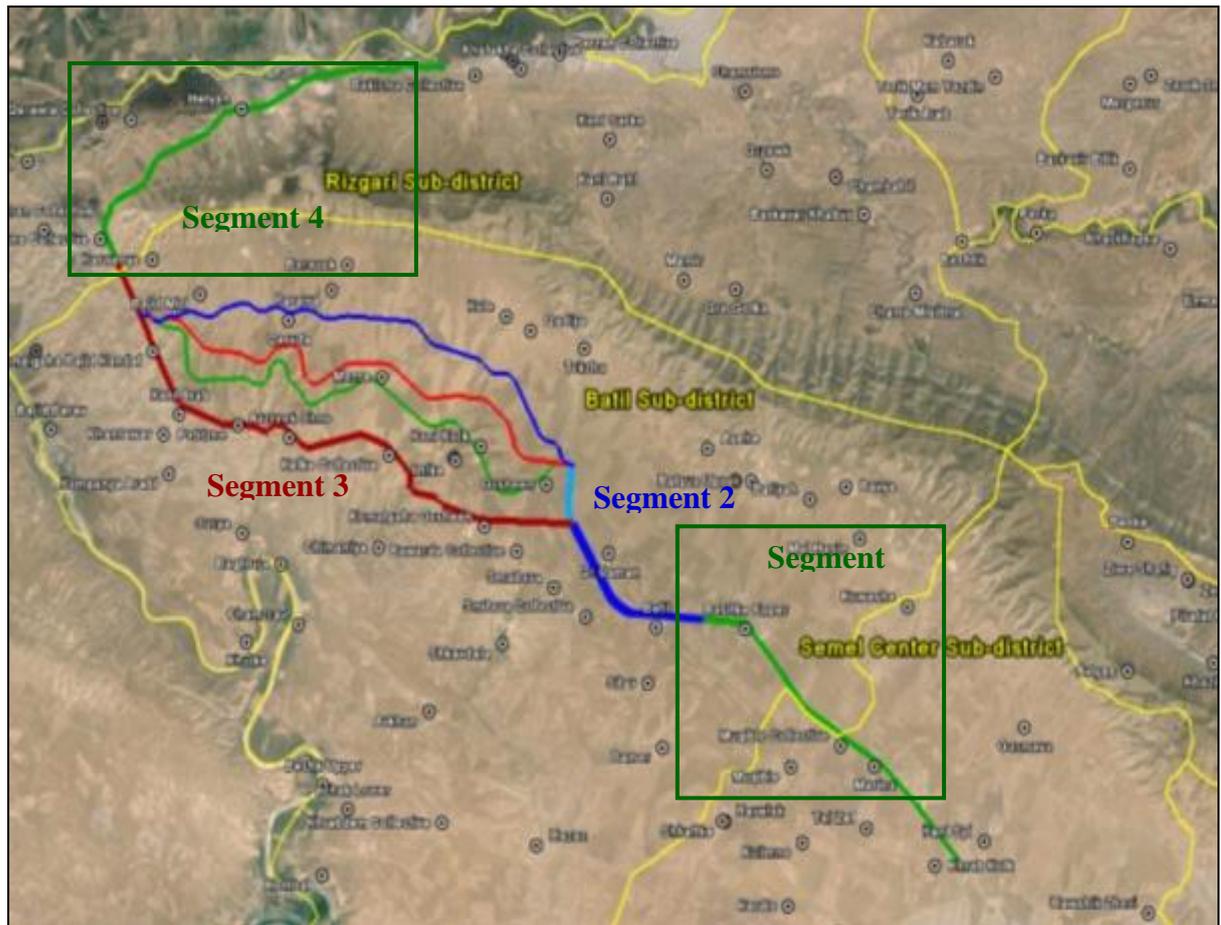


Figure 1: Batil – Ibrahim El Khalil Transport Corridor (North-South Road Corridor)

Specifics on the civil works being undertaken on Sections 1 and 4 are as follows:

Semel- Batil road segment (Segment 1) in KRG, Iraq, (North-South Road Corridor (15 kms) involves widening this segment from a 2 lane (1 lane each direction) to a 6 lane (3 lanes each direction) Corridor. The cross section includes also a 4 m median and 3 m shoulder on both sides. The pavement design consists of : 75 mm wearing course, 75 mm binder course, 200 mm base course , 200 mm subbase course and Topping C.B.R > 25% as per specifications. The contract started on Nov 20, 2011 with an estimated completion date on September 8, 2013.

Segment 1 (Figure 2) includes: an oil/gas pipeline under construction, which is expected to cross the segment; storm-water pipe culverts; access roads connected with the main road along the segment, these roads are the main connection between the main highway that will be under construction and the surrounding communities. Other utilities observed include electrical poles and high tension voltage towers.

With regards to biological/species concerns, most of Segment 1 adjoining lands consists of cultivated agricultural lands, which still support some bird species such as white stork, harrier and small passerines, as well as small mammals. These species are less threatened by road upgrading than by hunting and degradation of agricultural lands.



Figure 2: Location of Segment 1 (green) Showing Districts (yellow) and Settlements

Suheila Intersection to Ibrahim El Khalil road segment (Segment 4) in KRG, Iraq (North-South Road Corridor, 14 km) involves widening this segment from two lanes (one lane each direction) to a 6 lane (3 lanes each direction) corridor. The cross section includes also a 4 m median and three m shoulder on both sides. The pavement design consists of : 75 mm wearing course, 75 mm binder course, 200 mm base course, 200 mm sub-base course and Topping C.B.R > 25% as per specifications. The contract started on April 16, 2013 with an estimated completion date on November 4, 2014.

The Suhaila Intersection - Ibrahim Al Khalil Segment (Figure 3) includes high tension towers, these towers are not located completely inside the ROW of the road however, and the ones within the ROW include protective retaining walls which were constructed to maintain soil stability under the foundations of the towers. In addition to the above, electrical poles were also observed which provide electricity to the nearby communities; these poles are mainly outside the ROW of the road. Furthermore, unpaved access roads were observed along this segment which mainly serve the adjacent farms and cultivated lands at both sides of the road.

This report presents the findings from an independent environmental and social audit. The audit had the following objectives:

- Develop clarity on, and summarize succinctly, (i) how potential social and environmental impacts for the non-Bank financed segments were assessed and (ii) monitored.

- Based on the above social and environment impact summary, assess whether the mitigation measures are consistent with national environmental and social laws and regulations;
- Provide a summary comparison between the mitigation measures developed as per Iraqi and KRG standards vis-à-vis the policy requirements of Bank safeguards;
- Review the contracts for these sections and ascertain whether environmental and social management clauses were incorporated in the absence of prepared safeguards instruments, or what measures are in place to ensure compliance with domestic policies and regulations. The audit should also confirm if Iraqi environmental and social regulations were complied with.
- Through site investigations/visits, verify that the Occupational Health and Safety (OHS) requirements are being followed or adhere to in the ongoing civil works on the three sections.
- Prepare a practical remedial action plan, if necessary, to address any adverse environmental or social impacts that may have occurred. If such a plan is not needed, then a clear and robust explanation supported by evidence to demonstrate that sufficient due diligence was carried out.



Figure 3: Location of Segment 4 (green) Showing Districts (yellow) and Settlements

With respect to the methodology, the audit relies heavily on the Environmental and Social Impact Assessment Framework (ESIAF) for the Semel-Ibrahim Al Khalil Road Corridor, disclosed August 2013; field observations and discussions held with Government officials, PAPs, as well as contractors and their supervising consultants.

With regards to photographic documentation, although many photographs were taken during the field visits, only those which contribute to a better understanding of safeguards deficiencies to be addressed were included in order to keep this report to a reasonable size.

This audit report also draws from:

- Multiple visits along the entire Transport Corridor by consultants and Bank environmental and social safeguards specialists.
- Collection and examination of photographic and cartographic documentation and Google Earth maps.
- Review of engineering designs to determine whether ongoing construction has followed design plans and complied with KRG environmental and social safeguards requirements.
- Consultations with individual PAPs and community representatives to assess the social impacts and examine whether national laws/regulations and mitigation requirements have been fully complied with.

- Reviews of legal documents filed in the MoCH pertaining to land acquisition, appropriation and demolition of structures on the ROW, and mitigation agreements signed by PAPs.

In addition, meetings were held with the KRG General Directorate for Roads and Bridges (GDRB), Duhok Governorate, including the GDRB General Manager and the Project Manager designated for the Transport Corridors Project (TCP). Among the specific topics discussed with GDRB were:

- The extent of available documentation available as desired to complete the Audit;
- The institutional relationships between GDRB, the Dohuk Governorate Supervision Directorate for Roads and Bridges (SDRB) and its monitoring unit, Council of Ministers, local Municipalities and Collectives, and traffic police;
- The extent of use of warning and penalty letters sent to Contractors;
- Monitoring systems for evaluating contractor progress and quality of work;
- The application of national social safeguards laws and regulations and mitigations provided to PAPs;
- The extent to which the public and PAPs were engaged in planning and decision-making on the road works through public consultations, and the extent to which PAPs were informed of their rights if they were likely to be adversely affected by the road works;
- Whether grievance redress mechanisms and procedures have been established and are being effectively operated.

Finally, meetings were also held with Contractors and Project Engineers for both Segments 1 and 4. These meetings were held at the Contractors' base camps next to their respective road corridors.

The meetings with contractors focused the following:

- Contractor team staffing, including expertise and roles of engineering staff;
- Workers' hours and extent of employment of PAPs;
- Access to medical care;
- Inventory of vehicles used in rehabilitation;
- Access to and use of borrow pits and quarries;
- Materials' storage/warehousing specifics;
- Coordination with traffic police.

III. FINDINGS AND DISCUSSION OF FINDINGS

Social and Environmental Impact Summary Germane to Sections 1 and 4

The environmental and social impacts observed for Sections 1 and 4, which do not substantially differ one from another (see exceptions below), include:

- Potential small-scale impacts from the blocking, diversion and/or reduction of natural flow for seasonal surface water due to culvert construction, which may lead to or increase soil erosion;
- Potential impacts on surface water resources from accidental spillage and sedimentation;
- Increase in noise levels during construction activities such as excavation, movement of vehicles and heavy equipment;
- Dust generation due to earthworks, construction machinery and stockpiling of construction material.
- Potential for increased pedestrian and vehicular accidents due to disruption in previous traffic flows, low-quality of service roads being used for traffic detours, and lack of road shoulders;
- Loss of structures (shops, dwellings) for some PAPs, most of which have already received a fair market value compensation; those not yet compensated are currently negotiating compensation; following application of clear compensation principles and negotiation and arbitration procedures.
- Loss by some farmers of strips of State-leased agricultural lands for which compensation has been provided consistent with legal requirements, which, consistent with OP4.12, compensation has been based on the productive potential of the land and following the use of negotiation procedures.;
- Public consultations have been limited to discussions directly with adversely affected PAPs;
- An unknown, but likely very small, number of employees who worked in structures on ROWs that were demolished have not been compensated. At this point it is unlikely that it will be possible to locate these adversely affected PAPs.
- Impact on proximal physical and cultural resources.

Following a review of all documentation on the application of national environmental safeguards laws in Section 1, a site inspection of Section 1 was undertaken on October 11, 2013 with extensive stops being made. Identified gaps between national laws and regulations and World Bank safeguards policies are attached in **Annex 1**.

Environmental

Ecological Restoration of Segments 1 and 4

The contractor, in collaboration with the GDRB/SDRB, Municipalities, and Ministry of Agriculture has done an excellent job of relocating what were fairly newly-planted trees which were planted in the new construction ROW. However, there has been destruction of the already-imperiled ecosystem along the roadside. The ecosystem is very fragile: the biodiversity of some parts of the project corridor has been altered either due to agricultural expansion or natural habitat degradation, all of which preceded this road construction. The biodiversity of the Segment at the lower lands around the alignment of the segment is almost totally destroyed due to historically intensive agricultural activities. ROW of the segment under construction almost lacks any natural vegetation cover.

Upon initial inspection, the trees planted may not be native to the area, and may or may not be able to take be sustained either by rainfall or intermittent watering. Dust is exacerbated by road construction as well as the lack of ground cover.

Biodiversity Conservation Segments 1 and 4

The small wadis crossing the road along with under construction culverts are considered ecological corridors for some mammals' species that are mainly active at night such as Eurasian Badger and Red Fox which are common in the area. The Environmental and Social Review of Segments 1 and 4 note that construction activities at night may be of concern regarding impacts on these species. There seem to be no at-night construction activities ongoing.

According to the IUCN Red List, the Eurasian Badger (*Meles Meles*) is listed as Least Concern in view of its wide distribution, relatively large population, it occurs in a number of protected areas, and because it is unlikely to be declining at nearly the rate required to qualify for listing in a threatened category. Its decline in some agricultural areas has been attributed to land-use changes causing a loss of suitable habitat. The species is sensitive to habitat fragmentation and the size of the remaining patch is important for the continued survival of the species.

Similarly, the IUCN Red List notes that the Red Fox (*Vulpes Vulpes*) is also listed as Least Concern in view of its large geographical range, behavior as adaptable and opportunistic omnivores. In many habitats, foxes appear to be closely associated with man, even thriving in intensive agricultural areas as well as in urban areas. Its main threats include habitat degradation, loss, and fragmentation, and exploitation, and direct and indirect persecution. However, the Red Fox's versatility and eclectic diet are likely to ensure their persistence despite changes in landscape and prey base.

With respect to Segment 1, information obtained anecdotally suggests that the presence of the Eurasian Badger and Red Fox have already been substantially diminished by the conversion of lands to agricultural use. This may also have preceded road construction. However, in Segment 4, there is a mix of agricultural lands with rangelands which may support what is an ever-decreasing habitat range for these two species.

Finally, with respect to the European Otter which resides in and alongside the Kabour River, on-site inspection confirms that the buffer between the road and the river is quite wide (5 to 10 kms). This buffer area contains exclusively cultivated agricultural lands. It is the threat of agricultural extensification as well as riverine pollution that may pose long-term threats to the European Otter, and not road rehabilitation.

Public and Occupational Safety, Segments 1 and 4

The standard contract signed between the Ministry of Construction and Housing and the Contractor includes a number of articles that stress on environmental protection issues and some public and occupational health and safety measures. The Project Management Team (PMT) in the GDRB and the Environmental Protection and Improvement Board (EPIB) are to ensure compliance with the signed contractual obligation on environment and social aspects through joint technical supervision and monitoring missions during civil works. The GDRB has sent several warning letters specifying public and occupational safety violations in accordance with the contract, either levying penalties or threatening to levy penalties. There are several over-arching deficiencies to be addressed in Segments 1 and 4, as follows: (i) absence of an Occupational Health Safety and Environment (OHSE) organization chart; (ii) absence of OHSE plan and procedures; (iii) no record-keeping for traffic accidents and/or for occupational injuries. Annex 2 provides more details on this.

Additionally, one area for improvement in the use of PPE is 100% compliance with the wearing of orange vests or other PPE which can readily identify workers as working on the road construction, both for their personal safety as well as for contractor liability.

In the context of this audit, there has been no access to a post-construction signage plan for Segments 1 and 4. Such a plan will need to control for increased possible speeds due to the improved road surface, including differential speeds for trucks and cars, as well as increased attention to on-and-

off side road access in order to decrease probability of accidents due to merger on and off the main road.

Public and Occupational Safety, Segment 1

There is a new factory built roadside to Segment 1, which is across the road from a petroleum station with a mini-market and restaurant. At present, factory workers are crossing from the factory, down the soil slope, walking across the construction zone, up the soil slope, and also crossing the existing lanes of traffic, to access the other side of the road. It is unclear how this pedestrian traffic is being managed during this ongoing construction phase as well as how it will be managed during operational phase.

Public and Occupational Safety, Segment 4

For most of Segment 4, the current traffic is driving directly alongside the new construction, with a drop of approximately 2-3 meters between the current traffic lane and the new construction's deep excavation. At current there are faded non-reflective flags strung along the length between these two lanes. There is no shoulder for stopping on one side, and an accident might throw a vehicle off the current lanes onto the construction, including the construction workers. There is a school located in Derebune Collective not far from the ROW. It is clear that students cross the road to attend class. The improved road will most likely allow for increased speeds of vehicular traffic. Schoolchildren will need guidance in order to cross safely.

Water and Soil Management, Landscape and Visual Impacts, Segments 1 and 4

Requests for information specific to the development, implementation, supervision, and monitoring of the following did not yield any information to confirm that environmental standards have been applied commensurate with World Bank standards:

- Storm-runoff management plan and/or measures;
- Spill prevention and leakage plan specific to water and soil quality conservation;
- Waste management plan specific to soil quality as well as landscape and visual impacts;

See Annex 2 for a more detailed discussion of borrow pits, quarries, and conditions of base camps.

Air Quality and Noise Assessment, Segments 1 and 4

There have been neither pre-construction baselines set, nor any quantitative measurement of air quality or noise volume during construction. There is no record air quality assessment or noise during construction in order to ensure that these parameters are within KRG national policy guidelines. Neither the GDRB/SDRB nor the contractors own or have access to, portable air quality and noise monitors, and thus air quality and noise is measured qualitatively. In general the project area is agricultural lands that do not include any major sources of noise pollution. Traffic on the existing road is considered a noise source considering the high volume of trucks and vehicles using the road.

Cultural Heritage

KRG laws governing antiquities and cultural heritage are comprehensive and largely consistent with World Bank policies. KRG laws also cover "chance find" situations. However, in the course of site visits undertaken non-compliance with the national laws and the Bank's Physical Cultural Resource policy was found.

Cultural Heritage Concerns, Segment 1 -- Besetky Village

Within the Semel – Batil Segment, the remains of a major site named Basteky Village is present near the existing road alignment, and dates back to the Islamic and Byzantine period. This site was recorded during the preliminary site survey (**Figure 4**). The archeological site found at this location is the only site that exists within the ROW of the road that is under construction. This site has been subjected to damage. A section of the original site has been removed by construction activities.

Originally, the site was estimated to be around 63,000.00 m² and it is now considerably smaller. The observed boundary of the current site is only 12 m far from the centerline of the ROW.



Figure 4: **General view of Basteky site alongside existing road**

The site has been irreversibly damaged by the road construction activities. The current interface of the site with the road and the ongoing construction has the potential to erode the site further because of the slope it is situated on top of (see **Figure 4, above**). There is no protection of the site from construction works nor is there demarcation of the site.

Cultural Heritage Concerns, Segment 4 -- Khirbet Srikani

Figure 5 below shows the remains of a shrine in Khirbet Srikani, which is well-known to the Yazedeyeh sect as a sacred area. A medium-sized white shrine was built over a grotto in a cave. Natural pools as well as a cemetery are still used by local inhabitants of the village. Very rare pottery shards have been found on the ground surface, which indicated early occupation in the site dated broadly to the classical – Islamic era.



Figure 5: **Close-up of Khirbet Srikani**

Located 220 meters from the centerline of the ROW, there are several other significant cultural sites that are closer to the ROW. However, what imperils this site is the increased visibility of the site due to the height of its shrine's peak. Due to the height of its spire, it may also be more vulnerable to construction-associated dust and vibration. It is suggested that Khirbet Srikani have a post-construction management plan, to be further described in the Safeguards Corrective Action Plan.

Adversely Affected PAPs on Segment1 (Semil to Batil)

Figure 1 in the Introduction shows the communities and villages which road Segment 1 passes by or through. This segment, which commences at Semel center and ends at Batil center, passes through KhrabKulk, Marina, Muqible Collective and Bastike Upper communities. Table 1 below provides population and housing information for these communities.

Table 1: Population Data for Semel – Batil Segment⁴

Village	Population	Houses No.
KhrabKulk	12,500	2,100
Marina	265	133
Muqible Collective	442	60
Bastike Upper	1,060	120
Total	14,267	2,413

The widening of the road at this segment affected 21 structures, all of which were unlicensed and which encroached on the existing ROW. According to the applicable national legislation, owners are not eligible for compensation. Nonetheless, owners have received cash compensation which has been based on structure replacement estimates prepared by an independent realtor, and following negotiation and arbitration (if necessary). Each PAP was contacted and 18 agreed to cash compensation negotiated on the basis of an offer made by the established Committee which drew on current market value information. These PAPs signed legal forms acknowledging their agreement and receipt of the compensation. Three other PAPs are in the process of negotiating settlement through arbitration. All affected structures are small business concerns which include small shops, workshops and parking areas, all of which are unlicensed and encroach on the existing ROW. Figure 4 provides a Google Earth view of the encroaching entities vis-a-vis the established ROW.

The compensation offers made by the Committee were based on the market value of the structures to be removed following guidelines prepared by an independent realtor; no compensation was offered for land value, since all structures encroached illegally on the ROW of the existing road as confirmed by the Roads and Bridges Directorate letter No. 5560 dated July 29th, 2013. The very few employees who would have worked in these shops did not receive compensation (most of these small shops are owner-operated and do not hire employees). It is very unlikely at this point that any such paid employees could be located.

Adversely Affected PAPs on Segment4 (Suhaila Interchange-Ibrahim Al-Khalil)

Figure 7, below, shows the communities and villages which road Segment 4 passes by or through.

This segment is currently under construction and begins at the Suhaila interchange and ends at Ibrahim Al Khalil. It passes through the village of Derebune Collective and nearby Hetyan village. The widening of the road at this segment affected 14 structures and required acquisition of 11 separate strips of agricultural land which is State-owned land leased to farmers.

⁴Source: GIS data from General Directorate for Roads and Bridges and Construction and Housing in Duhok Governorate



Figure 7: View of Encroachers on Row at Marina Village (green lines show existing ROW)

Population data for these communities is provided in Table 2:

Table 2: Population Data for Suhaila Interchange – Ibrahim Al-Khalil Segment⁵

Village	Population	Houses No.
Derabune Collective	238	30
Hetyan	400	40
Total	638	70

Five of the structures were dwellings and the remaining 9 were shops. All these structures were built illegally within the existing ROW. The government has provided compensation to all 14 owner PAPs. All owner PAPs were contacted and negotiations proceeded under the guidance of the established Committee and procedures. The 9 shops owners all agreed to the compensation as determined by the compensation committee and their shops have been demolished. The 5 owners of the dwellings likewise agreed to the compensation offered, but the dwelling structures have yet to be removed. All PAPs have signed legal agreements confirming their acceptance of the compensation and agreement to removal of the structures.

The compensation for these structures was estimated based on their market value as assessed per guidelines developed by an independent realtor; no compensation was paid for land value, since all structures were built on the ROW. As was the case for segment 1, no compensation was made for livelihoods losses of shop owners or for employees working in the shops. .

All affected leasees of the 11 agricultural strips of land acquired were not compensated for the agricultural land acquired because it was state-owned and leased. It was not owned by the affected PAPs. However, the affected PAPs did receive compensation for the value of that year’s crop production consistent with national law – which requires that cash compensation be paid equivalent to

⁵ Source: GIS data from General Directorate for Roads and Bridges and Construction and Housing in Duhok Governorate

the value of the crops for that year on both the acquired land and on the remaining unacquired section of leased agricultural land.

IV. SAFEGUARDS CORRECTIVE ACTION PLAN

Environmental

Ecological Restoration

In order to retain and enhance soil alongside the roads, which serve as a buffer often to agricultural lands, it is recommended to put into place an ecological conservation program which would plant native species of vegetation found along similar roads.

Biodiversity Conservation

It is recommended to gather all available information as baseline data on the population and movement of the Eurasian Badger and the Red Fox in the areas of Segments 1 and 4. More specifically, information of the population group density as well as travel range and patterns will help determine how many of these species may be crossing Segments 1 and 4 as well as where they are crossing. The design works of the culverts should be reviewed with respect to the recommended aspects noted above to facilitate small mammal movement. Culvert completion should include those design elements which can be implemented, such as natural vegetation and fences.

An open field of view with suitable habitat clearly visible on the other side must exist in order for these species mammals to use a culvert. Structures should be placed with a frequency that corresponds to the spatial scale over which targeted species move based on the ranges of the species. Ideally, in order to facilitate wildlife crossings encompasses more than a ½ mile of roadway, structures should be incorporated every 500 to 1,000 feet.

Medium mammal preferences are generally for structures that are taller in height, shorter in length, with larger cross-sectional areas. The cross-sectional area of the structure entrance should become larger as the length of the structure increases to maintain a minimum openness ratio of 0.4. For a typical four-lane road (approximately 60 feet wide), the cross-sectional area of the structure opening should be 24 square feet.

Public and Occupational Safety Generic to Segments 1 and 4

GDRB, along with the contractors need to develop (i) an Occupational Health Safety and Environment (OHSE) organization chart for each of the two contracts; (ii) site-specific OHSE plan and procedures; (iii) record-keeping for traffic accidents and/or for occupational injuries specific to each Segment. Additionally, both contractors need to stress, and enforce the wearing of orange vests or other PPE which can readily identify workers as working on the road construction, both for their personal safety as well as for contractor liability.

Public and Occupational Safety, Segment 1

The factory, Duhok Governorate, GDRB, and contractor need to collaborate in developing a safe crossing for the factory workers. Although there may be a bus which transports workers from one side to the other, this is not a workable solution, as evidenced by pedestrian traffic observed. A site-specific management plan that would include a robust traffic management plan is needed

Public and Occupational Safety, Segment 4

It is recommended that these faded non-reflective flags be updated with one of more of the following: (i) new reflective flags; (ii) concrete barriers, where possible; (iii) stronger signage and enforcement of reduced speed in this area; and (v) temporary rumble strips, which could either be placed alongside and near the vertical drop-off to alert drivers when they are too close to the edge and/or rumble strips placed horizontal to the vertical drop-off and incrementally closer together upon approach and exit from the dangerous portion of the road. For the schoolchildren crossing at Derebune Collective, there must be a site-specific pedestrian plan. This might include lower speeds

denoted by signs at the entrance and exit to the Collective, school crossing signage, speed breaks, rumble strips as one nears the road crossing from either direction, a painted crosswalk for students to use, and/or an parent volunteer or other audit posted at the crosswalk to shepherd students across the road prior to and after school.

Water and Soil Resource Management, Landscape and Visual Impacts

It is suggested that, if these plans currently exist, they be analyzed with reference to Bank standards for such plans in order to remediate gaps and suggest reasonable immediate measures to bring such plans up to full compliance.

Furthermore, it is suggested that for the Bank-financed portions of road, the above management plans include a detailed gap analysis of KRG regulations versus Bank safeguards in order to ensure that the management plans meet both standards. In addition, it is imperative that these management plans are known to the contractor, with adequate quantitative indicators, supervisory and monitoring measures, and, lastly reporting templates to document any spills and responses as well as documentation of waste disposal.

Air Quality and Noise Assessment Corrective Actions:

The local GDRB and/or environmental quality unit should acquire portable air quality testing equipment to measure PM, NO_x, and SO_x. Similarly, noise volume portable equipment should be acquired. A discrete timetable needs to be established for consistently of results. A proxy for baseline should be established by measuring within a nearby Segment not yet under construction (e.g. Segment 3). At the least, GDRB/SDRB Duhok needs to obtain portable air quality and noise monitors so as to measure baselines, monitor construction phase thresholds, and continue to monitor operational phase thresholds in sensitive areas, such as near schools or collectives. Contractors can then be held to quantitative thresholds through contract directives, for which the contractor can be held responsible to self-monitor and/or be subject to penalties if not in compliance. It is recommended to carry out noise level monitoring survey along the existing road alignment and at the residential areas and any other sensitive receptors on the road and close to it that could be impacted by project construction and operation activities.

Cultural Heritage

Cultural Heritage Concerns, Segment 1 -- Basetky Village

An immediate site-specific impact assessment and mitigation plan is needed for Basetky, which is suggested to be phased into construction and post-construction mitigations so that construction phase mitigations can be taken immediately. The impact assessment should consider the following: (i) the level of irreversibility of both current and potential impacts; (ii) the extent of the damage; (iii) the likelihood of potential impacts as well as (iv) the duration of potential impacts. A mitigation plan for Basetky might include the following: (i) a permanent protection barrier between the completed road and the site; (ii) a protected access to the site away from the road; and (iii) demarcation of the site with signage to prevent roadside access to the site.

Cultural Heritage Concerns, Segment 4 -- Khirbet Srikani

Post-construction impacts to Khirbet Srikani need further investigation, with a site-specific management plan designed to ensure that access to the site, including by side road, is effectively managed. A site-specific management plan might consider the following: (i) whether there should be fencing around the site, with one entrance to manage foot traffic; (ii) demarcation of the site by roadside signage; and/or (iii) an enhanced side road so as to channel traffic and to prevent dust damage to the site.

Social

The social safeguards Audit identified a number of gaps between the requirements of KRG Laws and the Bank's social safeguards policies, and also showed that these gaps are reduced to some extent by the way the government has chosen to apply these Laws – notably the practice of providing compensation to adversely affected PAPs even when the Law does not require this. The Audit also found that KRG has adopted standardized and transparent procedures in determining compensation based on market values assessed by independent entities and also, importantly, provided for effective representation of PAPs and supporting authorities (their local Agricultural Association heads; other selected representatives) in the decision-making meetings on compensation payments..

These extra-Legal procedures applied to compensate adversely affected PAPs have gone some considerable way towards reducing the gap between the written Laws and the Bank's safeguards policies. The exception is in the case of any employees who worked in the roadside shops who did not receive compensation. However, the vast majority of all small roadside shops are owner-operated so the number of these adversely affected PAPs is likely to be very low. At this point it is unlikely that any such PAPs could be traced.

A number of sound recommendations emerge from the Social Safeguards Audit process which will further help formalize government efforts to extend the application of Laws so mitigation/compensation measures applied and are consistent with Bank policies. These recommendations will also serve to further increase the transparency of these processes so citizens can be fully informed of their rights and be more actively engaged in road project planning and monitoring.

These recommendations are:

- ***Publication of the structure, objectives and procedures of the specially established Compensation Committee and of the market value estimates it applies in assessing compensation*** amounts for lost structures, agricultural outputs, etc. Information on the Committee should be made widely accessible to the public, as should annually updated information on market value estimates. In cases where adversely affected PAPs are still being identified (ie. in Segments 2 and 3) information on the Committee and market compensation values should be disseminated at public consultation fora.
- ***A standardized approach to estimating and compensating adversely affected PAPs for livelihoods losses*** incurred in the course of relocation should be developed and utilized in all future relocations of PAPs on the north-south Transport Corridor.
- The north-south Transport Corridors PIU in the ***MoCH should recruit and train a social safeguards specialist*** who would be charged with supporting both the MoCH and the Compensation Committee in the application of mitigation/compensation measures consistent with the Bank's safeguards policies. This person should receive special training on the Bank's safeguards policies.
- MoCH officials, members of the Compensation Committee, legal officers and the appointed social safeguards specialist should be provided with ***specialized training on the Bank's social safeguards policies and requirements*** prior to project effectiveness of the Iraq Transport Corridors Project, and with follow-up training annually for the life of the project.
- The MoCH should ***put in place a transparent and easy-to-use Grievance Redress Mechanism (GRM) for both Segments 1 and 4***. The establishment of this Mechanism should be widely publicized and it should be made clear that any PAPs who have been adversely affected or whose livelihoods have been harmed by road works, and who have not been identified for compensation can lodge a case through the GRM providing they have appropriate documentation to support the case.
- The ***MoCH is strongly encouraged to hold public consultations*** in communities in both Segments 1 and 4 to share information on: the mitigation/compensation processes applied to date; the structure and operation of the Compensation Committee; progress and timelines for the remaining road works; and on the establishment and operation of the new Grievance

Redress Mechanism system. These public consultations should also allow participants to voice issues and express concerns about the ongoing construction activities.

Application of these above recommendations to Segments 1 and 4 will, to the extent possible at this stage, go some way towards retroactively reducing the gap between KRG Laws and their application and World Bank social safeguards policies. Their quick adoption will help KRG move positively towards the application of Bank social safeguards policies for Segments 2 and 3 on which road works have yet to commence.

V. CONCLUSIONS AND RECOMMENDATIONS

There can be no doubt that construction works of Segments 1 and 4 are of good engineering quality and are being closely monitored and supervised by numerous institutions. The main road widening and rehabilitation will improve travel times on some of the most densely used segments of road used for truck traffic between KRG and its neighbors Syria and Turkey. This road improvement will also facilitate the mobility of rural communities to access markets and employment opportunities.

Despite the absence of preparation of environmental, cultural heritage, and social assessments, the GDRB has complied with most of the elements of environmental and social laws which govern road rehabilitation and/or construction and, in the case of the social laws, has gone considerably beyond what is legally required in terms of mitigation/compensation. Credit must be given to GDRB, MOCH, and other relevant institutions, as only in recent months has the Ministry of Environmental Protection begun to put environmental policy and objectives into action. It may still be sometime before environmental and social assessment becomes an enforced procedure for other than the large-scale natural resource extraction projects on which it now give focus. Even longer may be required for everyone from planners and project managers to contractor-employed workers to be sufficiently trained in order to be fairly accountable for the environmental and social consequences of their actions.

In respect of specific recommendations for Segments 1 and 4 reviewed under the terms of this Audit, the following remedial actions below are proposed. This audit is mindful that it may not have all information in hand and will be grateful to be notified if any of the below recommendations have already been addressed.

Short term Corrective Actions

- Address management and mitigation of the cultural heritage site Besetky;
- Remediate public and occupational safety concern associated with deep excavation interface with road in Segment 4;
- Ensure and document full compliance with PPE guidelines;
- Develop and/or document the Occupational Health Safety and Environment (OHSE) organization chart for each of the two contracts; (ii) site-specific OHSE plan and procedures; and (iii) record-keeping for traffic accidents and/or for occupational injuries specific to each Segment;
- A Grievance Redress Mechanism (GRM) should be operationalized for Segments 1 and 4 so any adversely affected PAPs who have not received compensation can, with appropriate documentation, be considered for compensation. This applies particularly for any employees of the small businesses which were operating on the ROW.
- Plan and hold well-publicized open consultations in communities in both Segments 1 and 4 to share information on: the mitigation/compensation processes applied to date; the structure and operation of the Compensation Committee; progress and timelines for the remaining road works; the planned traffic signage and pedestrian crossings in the operational phase; and the establishment and operation of the new Grievance Redress Mechanism system. These public consultations should also allow participants to voice issues and express concerns about the ongoing construction activities.
- Hire a social safeguards specialist to support both the MoCH and the Compensation Committee in the application of mitigation/compensation measures consistent with the Bank's safeguards policies most immediately for Segments 1 and 4 but also for Segments 2 and 3 as planning advances for road works on those segments.

Medium to Long term Corrective Actions

- Purchase and use of air quality and noise volume monitoring equipment, with preparation and dissemination of a timetable for monitoring during construction;
- Retrofit culverts appropriate to small mammal crossings;
- Disseminate and apply Bank-compliant storm-water runoff and soil management, spill prevention and response, and waste management plans;
- Prepare a site-management for the cultural heritage site Khirbet Srikani;
- Maintain the operation of the GRM so it is transparent, easy-to-use, and credible for Segments 1 and 4 and expand its coverage to Segments 2 and 3 as project activities get underway there.
- Ensure MoCH officials, members of the Compensation Committee, legal officers and the appointed social safeguards specialist are provided with practical training on the Bank's social safeguards policies, and follow-up with training annually over the life of the project.
- Institutionalize the practice of holding open public consultations in each of the 4 road segments so PAPs have opportunities to obtain information on project activities; are well-informed of their rights if adversely affected by project activities; and so they can provide input and lodge any complaints on project activities.
- Prepare and implement a timetable for dust and noise monitoring during operations, especially in urbanized areas;
- Finalize and disseminate for comment and review an operational-phase traffic signage and enforcement management plan, especially with regards to potential areas of high pedestrian crossings, such as at the factory and Derebune Collective School; high vehicular crossings, such as major side roads; as well as within municipality and collective limits.

The Safeguards Corrective Plan table below provides the actions, responsibility and timeframe when the suggested actions should be addressed and completed.

Table 3: Safeguards Corrective Action Plan

Action	Responsibility	Timeframe
1. Address management and mitigation of the cultural heritage site Besetky;	GDRB/ Contractor	December 2013
2. Remediate public and occupational safety concern associated with deep excavation interface with road in Segment 4;	GDRB /Contractor	November 2013
3. Ensure and document compliance with PPE guidelines;	GDRB	November 2013
4. Develop and/or document the Occupational Health Safety and Environment (OHSE) organization chart for each of the two contracts; (ii) site-specific OHSE plan and procedures; and (iii) record-keeping for traffic accidents and/or for occupational injuries specific to each Segment;	GDRB/SCRB	March 2014
5. Disseminate and apply Bank-compliant storm-water runoff and soil management, spill prevention and response, and waste management plans	GDRB/Contractor	December 2013
6. Purchase and use of air quality and noise volume monitoring equipment, with preparation and dissemination of a timetable for monitoring during construction;		December 2013
7. In populated areas, reduce working night shifts ss much as possible and apply road watering after heavy movements	Contractor	During Construction
8. Use Personal Protective Gear by workers, and make first	Contractor	During

Action	Responsibility	Timeframe
aid available onsite.		Construction
9. In traffic management provide warning signs at suitable distance around working areas as well as flag-persons where needed	Contractor	During Construction
10. Retrofit culverts appropriate to small mammal crossings;	GDRB/ Contractor	March 2014
11. Prepare a site-management for the cultural heritage site Khirbet Srikani;	GDRB	March 2014
12. Operationalize a transparent, easily accessible and credible Grievance Redress Mechanism (GRM) initially for use by adversely affected PAPs on Segments 1 and 4 who have not received compensation (importantly, including employees of small businesses already removed from ROW) and maintain for use across all road Segments through duration of project activities and for one year after project completion.	GDRB	February 2014
13. Plan and hold open public consultations in Segments 1 and 4 to share information on mitigation/compensation processes applied to date; to announce the operation of the GRM; and to respond to complaints/concerns; later continue practice for Segments 2 and 3	GDRB	February 2014
14. Hire a social safeguards specialist to support the GDRB and the Compensation Committee in meeting World Bank social safeguards standards	GDRB	March 2014
15. Provide capacity building opportunities on the World Bank's social safeguards policies for officials, engineers, contractors and civil society	GBRD	June 2014

The GOI has committed to implementing the works for Segments 1 and 4 of the KRG portion in accordance the terms and principles set forth in the RPF and ESMF for the project.

Annex 1: Identified Gaps Between KRG Laws and Regulations and World Bank Safeguards Policies

KRG's laws and regulations on environmental aspects, land acquisition for public roads, and preservation of antiquities and cultural heritage sites relating to road works largely follow national Iraqi national laws developed around 2002. KRG has, however, updated aspects of these laws and the associated regulations towards the end of the decade.

The work for this audit has identified clear gaps between national laws and regulations and the Bank's safeguards policies; the national laws and provisions are not as comprehensive as the Bank's policies.

The table below provides a high level identification of the main gaps and/or differences on scope between national laws and the Bank's safeguard requirements relevant to this project.

Identified Gaps between KRG Laws and World Bank Safeguards	
Key Issues Corresponding World Bank Safeguards Policies And National Legislation	Nature of Identified Gaps
Physical Environment	
<ul style="list-style-type: none"> • KRG: The Law of Environmental Protection and Improvement in Iraqi Kurdistan Region, No 8, 2008 • The Regulation for the Protection of Rivers No. 25, 1967 (and Instruction Corrections issued in pursuance to provision of article 16 of the regulation) • Regulation for the Preservation of Water Resources, No.2, 2001 • Instruction No. (2), 2011 for Ambient air quality • Instruction for the Environmental Protection and Improvement • Board No. (1), 2011 for maximum allowable noise limits • WBG: OP/BP 4/01 Environmental Assessments 	<p style="text-align: center;">KRG: The national legislation lacks a framework for preventive measures or mitigation measures, or tools for implementation.</p> <p style="text-align: center;">WBG: The OP/BP 4.01 takes into account air, water and land, human health, public health and safety and social aspects and includes comprehensive measures in preventing and assessing any harmful effects to the environment or public health. It defines responsibilities, tools for implementation and actions to be undertaken by the Bank and Borrower. Provide measures for minimizing of prevention potential impacts, guidelines for monitoring, developing management plans for projects and takes into account all environmental aspects and receptors.</p>
Biological Environment	

<ul style="list-style-type: none"> • KRG: The Law of Environmental Protection and Improvement in Iraqi Kurdistan Region, No 8, 2008 • Law on the protection of Wild Animals and Birds No. 17, 2010 • The Forestry Law, No. 30, 2009 • WBG: OP/BP 4.01 Environmental Assessments; OP/BP 4.04 Natural Habitats; OP/BP 4.36 Forests 	<p>KRG: The law on protection of wild animals is general and discusses issues related to hunting, and is more like a regulatory framework that lacks information on conservation methods or clear definitions of main concepts such as conversion, degradation, conservation and mitigation measures, critical habitats and so forth.</p> <p>Similarly the Forestry law mainly discusses issues related to tree cutting and lacks guidelines for screening of potential impacts, and forest types definitions provided are considered brief.</p> <p>WBG: On the other hand, the Bank's Operational Policies define responsibilities, tools and actions, in addition they provide measures for minimizing of prevention potential impacts, and guidelines for monitoring, and developing management plans for projects and takes into account all environmental aspects and receptors.</p>
Socioeconomic / Land Acquisition	
<ul style="list-style-type: none"> • KRG: Law No. 35 on Public Roads of 2002 • WBG: OP/BP 4.12 Involuntary Resettlement 	<p>KRG: The law does not provide for mitigation /compensation or persons who operate a business on road ROWs without a license; as this is considered an illegal practice.</p> <p>WBG: OP/BP 4.12 aims to avoid or minimize involuntary resettlement and where this is not possible, to assist displaced persons in improving or at least restoring their livelihoods or standards of living in real terms relative to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher. This applies whether or not PAPs are occupying land legally or illegally and whether the adverse effects of project activities are temporary or long-term.</p>
Archeological Resources & Cultural Heritage	
<ul style="list-style-type: none"> • KRG: The Law of Antiquities and Heritage No. 55, 2002 • WBG: OP/BP 4/01 Environmental Assessments; OP/BP 4.11; Physical Cultural Resources 	<p>KRG: The law is quite inclusive in terms of providing provisions to protect, restore and preserve any archaeological or cultural heritage property. It also contains clear definitions, and provides means for communicating with relevant authorities in case of chance finds and unanticipated discoveries.</p> <p>WBG: OP/BP 4.11 addresses physical cultural resources and methods for preserving cultural resources and avoiding their damage or destruction, and defines resources of cultural and archaeological significance. It also provides guidelines for managing such resources and addressing them within the scope of an environmental assessment, and identifies the required actions by the Bank and Borrower.</p>

Annex 2: Review of Contracts vis-à-vis JRG Environmental Policies and Regulations and Occupational Health and Safety (OHS) Adherence

The contractual obligations included in the contracts signed with the contractors for Segments 1 and 4 must comply with the Law of Environmental Protection and Improvement in Iraqi Kurdistan Region, No 8 for 2008, specifically Clause no. 5, Article (12) which is related to Environmental Assessments and Environmental Permits. The applicable terms of contract relevant to environmental and social/health and safety issues are as follows:

- Contractors are obliged to protect the Environment, including dust control management;
- Contractors are obliged to provide all health and safety procedures and protective equipment such as provision of traffic safety signage and warning signs which must include three languages: English, Arabic and Kurdish;
- Contractors are obliged to provide Personal Protective Equipment (PPE) for workers;
- All works must comply with Iraqi technical specifications relating to roads and bridges (SORB) in addition to special standards and specifications provided in the plans, and to comply with the necessary general conditions of contract; and the instructions of implementing governmental contracts for the year 2011 issued by the Ministry of Planning of the Kurdistan Regional Government, Iraq.

The contractors are, by and large, complying with the terms of the contracts which they have signed with the KRG, which concord with KRG policies and regulations. Areas of safeguards gaps are further addressed in the Occupational Health and Safety (OHS) Adherence section below.

Specific to OHS compliance, both Segment 1 and 4 contractors are performing well. Areas of strength within individual areas of OHS include the following:

- The Segment 1 and 4 contractors have adequate sleeping accommodations and canteens for workers in rented quarters alongside the segments being constructed;
- The contractors have employed a local doctor who is on part-time availability exclusively to the contractors and on round-the-clock on call status;
- There are daily working hours set, with timed work breaks, which appear to be generally followed;
- The workers have been provided with adequate quality of Personal Protective Equipment, which they are generally using on a day-to-day basis. Most workers are wearing headgear which is protective from the sun and/or hardhats, depending on their work role.
- Quality of civil works and overall project implementation plans. The contractors appear to be providing good quality of implementation with regards to soil sloping, culvert construction, and layers of road construction.
- Borrow pits and quarries. Borrow pits and quarries are approved and licensed by each Municipality Committee. This Municipality Committee includes representatives from local NGOs, technicians/engineers, environmental specialists, and neighborhood leaders. The license gives the borrow pit or quarry authorization to sell only to wholesale buyers, such as contractors. The license also assigns responsibility to one party per location to clean, audit, and sell materials. The borrow pits and quarries are either located in or managed out of the Industrial Area of Duhok Municipality. Each sale is recorded by type of material, volume, sale price, and date. Quality is checked periodically by engineer employed by the relevant Municipality.
- In terms of institutional arrangements for quality of works supervision, including OHS adherence, the Contractor is to have on-site a senior supervisory engineer at all times, who is tasked with overseeing OHS compliance according to the terms of the contract. There exist three levels of supervision with respect to quality of works, including OHS adherence, as follows:
 - The project or PMT has a reporting manager responsible for supervision of contract works, who is to conduct on-site supervision on a weekly basis to Segments 1 and 4. His reports are delivered to the PMT Director on a weekly basis, and are compiled into monthly reports. On a quarterly basis, the GDRB Director sends a quarterly report on

- each work under supervision to the Minister of Construction and Housing (MOCH) as well as the Governorate.
- The Ministry of Construction and Housing, on the basis of information received in the quarterly reports, conducts ad-hoc supervision visits to the construction sites, often to conduct independent audits on the GDRB quarterly reports as well as to conduct independent materials testing. On the basis of its on-site supervision, the MOCH will forward a report to the Ministry of Planning as well as the Prime Minister's Office cited below, copied to the GDRB and relevant Municipalities.
 - The Prime Minister's Office has an Office of Monitoring and Evaluation with respect to Strategic Projects, which sends an engineer or engineering team once per quarter to compare the above-detailed GDRB and MOCH reports with on-the-ground results. Its independent assessment is sent directly to the Prime Minister. The Prime Minister's Office will also step in to investigate any complaints registered by environmental or social NGOs or other parties, in order to maintain a degree of independence from the authorities mentioned above.
 - Each Municipality may also conduct independent supervision within its Municipality boundaries, especially with regards to quality of curbs and curb cuts, traffic signage, pedestrian crossways, post-construction beautification, etc.

Areas of safeguards gaps appear to be where there are gaps between KRG policies and regulations and World Bank safeguards policies; these gaps are addressed in the Public and Occupations Safety Corrective Actions Generic to Segments 1 and 4 Section in the main text of this audit. To summarize, these gaps are as follows:

- (i) an Occupational Health Safety and Environment (OHSE) organization chart for each of the two contracts;
- (ii) site-specific OHSE plan and procedures; and
- (iii) record-keeping for traffic accidents and/or for occupational injuries specific to each Segment.

Comparison of Law 35 and World Bank Policies

The Public Roads Law No. 35 of 2002 details procedures and practices to be followed on resettlement and acquisition of land and property relating to road construction and rehabilitation, and builds on Iraq's earlier Law No. 12 of 1981 on Land Acquisition. It should be noted that for legal purposes land in KRG is all state-owned. Few instances of privately held land exist and these are almost entirely in urban areas. State-owned agricultural land is often leased and, in such cases, is often commonly referred to as "private land" by leases.

Some of the key provisions under Law No. 35 for Public Roads are that the state -owned lands can be acquired from users of such lands. The law provides that the State can acquire up to 25% of the leased State land without compensation being provided in the form of new land lease allocations. However, compensation in the form of cash is provided for the loss of the 25% of state-leased agricultural land, and this compensation is equivalent to the yield value of crop production on both the 25% of leased land taken plus the yield value of crop production on the remaining parcel of state leased land for one year's crop production. Cash compensation amounts for various types of crops and trees are based on the Council of Ministers' Decision No. 360 of 2008.

In instances where an entire packet of leased land must be acquired from a leasee, cash compensation is provided for the value of the crops on that land for one year, and the leasee is also compensated by the allocation of 12% of the total land packet to him/her as "privately" owned land. In practice, however, there are some instances where this land compensation has been provided in an urban rather than agricultural area.

There are also instances where state-owned land along public roads has been allocated for the operation of small businesses which have applied for, and been granted, the appropriate license. If the land on which these businesses exist and operate is required for road works/widening, the law provides that the license can be revoked and the land reclaimed without compensation. The license issued to the business owner specifies that such appropriation may be made and that no compensation will be provided for structure and equipment losses or livelihoods losses in such instances.

Additionally, Land Acquisition Law No. 12 of 1981 specifies that the State has the right to remove encroachers' state-owned lands without compensation. This provision represents the main gap between KRG, Iraq, laws and regulations and the Bank's OP 4.12. National laws also do not require consideration of alternatives to relocation of affected peoples who are encroaching on state lands. Given the gap between GOI laws and OP 4.12, the GOI has agreed that the Bank's OP4.12 will apply to project activities and guide preparation of all social safeguards instruments such as the RPF and RAPs under the project. It should be noted; however, that some precedents have been set whereby the Government has compensated unlicensed and encroaching occupants on road ROWs. In these cases, compensation amounts were determined by a committee comprised of:

- the Deputy Provincial Governor (head of the committee);
- the Director of the Roads and Bridges;
- the Real Estate Registration Office Director;
- the Agriculture Director;
- Representative from the Agricultural Associations;
- the State Properties Representative in the Governorate;
- the Affected Person or anybody representing him/her

Table 3: Comparison of Law 35 and World Bank Policies

Key Issue	WB	Law 35
Policy of avoidance or minimization of displacement of persons	Avoid or minimize by exploring all viable alternatives; If resettlement required – execute as sustainable program;	Not specified (but common practice by the Government has been to minimize this to the extent possible)
Definitions of Adversely Affected Persons	People impacted by: 1. Involuntary taking of land 2. Loss of shelter, assets, income sources or livelihood 3. Involuntary restriction of access to protected areas resulting in adverse impacts on livelihood	People impacted by involuntary taking of land resulting in loss of land, assets and livelihoods
Requirement for Resettlement Action Plan (RAP)/ Resettlement Policy Framework (RPF)	Full RAP required for 200+ adversely affected people. Abbreviated RAP for less than 200 adversely affected people	Law provides for identification through land title registration and a compensation committee is formed to verify adversely affected persons The law provides for cash compensation for one year of crops lost for the entire packet of land leased/owned by the PAP. . Council of Minister’s Decision No. 360 of 2008 identifies compensation amounts for crops, trees, etc. 25% of agricultural land can be acquired by the State without compensation. If the entire packet of land is acquired the PAP is provided with cash compensation equivalent to 12% of the state assessed land value.
Consultations	Affected persons, communities, local authorities, NGOs – on eligibility criteria for compensation and assistance; Displaced persons & their communities and host communities – participate in planning, implementing and monitoring resettlement; PAP’s will be meaningfully consulted	The only consultation requirement is the negotiation procedure between affected parties with the compensation committee
Impact on Informal Settlers	Included, but only entitled to resettlement assistance for structure other assets lost (not land), and livelihood losses during resettlement.	Law does not provide for resettlement assistance or mitigation for informal/illegal settlers. However, in practice mitigation (cash) is often provided.
Compensation for Housing/Structures	Replacement structures provided or full replacement costs	Cash compensation for these assets as per established public valuation records.
Compensation for Land	Land in urban areas: market value of land of equal size/use w/similar public infrastructure and services in same vicinity, plus cost of any transfer taxes (BP 4.12) also	Law provides for acquisition of 25% of land without compensation. Acquisition of whole packets of leased state land provide for compensation of 25% of that land packet size, sometime in

Key Issue	WB	Law 35
	known as replacement cost; Agricultural land: market value of land of equal productive potential in vicinity plus the cost of preparing land to levels similar to affected land plus cost of transfer taxes & registration (BP 4.12); “Land” also includes anything growing or permanently affixed to land – including crops (OP 4.12);	agricultural areas and sometimes in urban areas.
Livelihood Support/ Transitional Assistance	Provide mitigation to fully redress livelihood losses including cash compensation, short-term employment opportunities on project activities, development assistance such as land preparation, credit facilities, training or job opportunities (also includes business premises); (For impacts on agricultural land – PAPs that are actively cultivating affected land are given combination of training, money to invest to improve productivity, agricultural extension and income restoration allowance).	Not provided for.

As was evident from Table 6, above, gaps exist between KRG’s applicable Laws and regulations and World Bank policies. Important gaps in the written Laws where remedial actions are needed include the following:

- Public Roads Law No. 35 of 2002 as referring to acquisition of agricultural lands: Almost all agricultural land in KRG is State-owned. This law specifies that up to 25% of leased State land can be acquired without compensation, except for cash compensation provided to cover associated crop losses, with these losses being estimated based on the assessed value of all crop production on the full package of leased land for one year.
- Public Roads Law No. 35 of 2002 as referring to licensed businesses operating along public roads: This law specifies that in instances where small businesses have applied for, and been granted, a license to operate on land adjacent to a public road, that such licenses can be revoked at any time and the land reclaimed without compensation for loss of structures or livelihoods losses. This information is provided on the licenses when issued.
- Land Acquisition Law No. 12 of 1981 as referring to encroachers on State-owned lands The Law does not require relocation or compensation of affected encroachers on State lands (including ROWs). Provisions of this Law are thus quite divergent from those in the Bank’s OP4.12 on Resettlement which requires that all adversely affected PAPs, including illegal encroachers, receive mitigation to fully remedy any livelihoods losses or harmful effects.

Comparison of Public Roads Law 35 with World Bank OP 4.12

KRG has agreed that the Bank’s Social Safeguards policies and requirements will take precedence over national laws and confirmed that, where necessary and feasible, measures to address harm done

will be undertaken, and decisive steps taken to prevent such future harm from occurring during the construction of the north-south Transport Corridor.

In considering national laws relating specifically to resettlement, however, it is important to be cognizant of the fact that, in practice, the government of Kurdistan very actively seeks to avoid displacement and/or relocation of communities and individuals in any public works project. Their approach reflects the hardships the Kurdish people suffered under Saddam Hussain who razed over 4,000 communities in KRG, relocating residents to towns and cities. These actions caused great social and economic hardship for the Kurdish people whose livelihoods were based on agriculture and livestock herding. National sensitivities to these past hardships mean the government goes to unusual lengths to avoid settlement, frequently going beyond legal requirements. Such is the case for Section 3 of this North-South Road Corridor where the government is seeking new road alignments to minimize the need for resettlement. The government has also been seen to engage in extensive and prolonged negotiation with people, including those encroached illegally on right-of-ways, to reach a mutually agreeable solution.

However, and importantly, as discussed above, ***KRG already has an established precedent of going beyond the requirements of the Law*** in dealing with social safeguards issues on road works projects. Given this precedent and observed documentation relating to mitigations previously provided, the effective gap between government ***application*** of the Laws and Bank safeguards policies is smaller than would initially appear from a reading of the Law.

It is thus necessary to compare KRG’s practical ***application*** of its Laws with the Bank’s OP4.12, to more accurately assess gaps between the government’s legal applications for the north-south Transport Corridor road and the Bank’s OP4.12. This is done in table below:

Comparison of Public Roads Law 35 with World Bank OP 4.12

Key Issue	World Bank OP 4.12	Application of Law 35
Policy of avoidance or minimization of displacement/relocation of persons	Avoid or minimize by exploring all viable alternatives; If resettlement required – execute as sustainable program;	Not specified but evidence exists that government goes to great lengths to minimize displacement and relocation to the extent possible (example is ongoing realignment of Segment 3 of north-south Transport Corridor)
Definition of Project Affected Persons (PAPs)	People impacted by: 1. Involuntary taking of land 2. Loss of shelter, assets, income sources or livelihood 3. Involuntary restriction of access to protected areas resulting in adverse impacts on livelihood	People impacted by involuntary taking of State-owned, State-leased or private land resulting in loss of land, assets and livelihoods No provision has been made under the application of this Law for compensation for employees of agricultural or business concerns affected; only owners/leasees have received compensation.
Requirement for Resettlement Action Plan (RAP)/ Resettlement Policy Framework (RPF)	Full RAP required for 200+ adversely affected people. Abbreviated RAP for less than 200 adversely affected people	Law and its application identifies PAPs through examination of land title registrations. Compensation is applied as follows: • Loss of State-leased agricultural lands: if entire package of leased land is acquired cash compensation

Key Issue	World Bank OP 4.12	Application of Law 35
		<p>is provided for value of crop production for one year on the land and 12% of the total leased land area is transferred to PAP as “privately owned” land. In some cases, the land compensation has been provided as an urban rather than agricultural plot.</p> <ul style="list-style-type: none"> • Loss of State-leased agricultural land: if strips of State-owned leased land must be acquired the Law specifies that no compensation is required for take equivalent to 25% of the land area or less. Cash compensation is, however, provided for lost productive output of crops on the acquired area for a one year period, with amount paid based on Council of Minister’s Decision No 360 of 2008 with value updates. • Licensed small businesses on ROW: licenses specify that if land area is needed business will be closed and demolished without compensation. However, cash compensation is commonly paid with amount determined by special Committee with representation by PAP. Legal documentation of such agreements are held by MoCH lawyer and have been seen. • Unlicensed small businesses encroaching on ROW: Law does not provide for any compensation by in practice cash compensation is provided following representation of the PAP at special Committee. Signed legal agreements are held by MoCH lawyer and have been seen. Notably, encroachers around the Marina area of Segment 1 have not agreed to offered compensation amounts and negotiations continue and demolition of their business entities is on hold.
Consultations	Extensive open public consultations with PAPs are required and must followed guidelines. Adversely affected PAPs must also be provided with information on their rights to mitigation/compensation in advance, be meaningfully	The Law provides only for consultation during the negotiation procedure between affected parties with the compensation committee. In practice, however, some public consultations are held. Also notable is the fact that the adversely affected PAP’s local Agricultural Association is

Key Issue	World Bank OP 4.12	Application of Law 35
	engaged in project planning, implementation and monitoring, and be provided with opportunities for appeal and access to Grievance Redress Mechanisms.	represented in compensation Committee determination meetings and the PAP has the right to choose any person they deem appropriate to represent their interests at the Committee meetings. No Grievance Redress Mechanism is typically established.
Impact on Informal Settlers	Included, but only entitled to resettlement assistance for structure and/or other assets lost (not land), and livelihood losses during resettlement.	Law does not provide for resettlement assistance or mitigation for informal/illegal settlers. However, in practice mitigation (cash) is often provided.
Compensation for Housing/Structures	Replacement structures typically provided and, in some instances, full replacement costs provided	Only cash compensation provided for such assets as per established public valuation records and determinations by special Committees.
Compensation for Land	Land in urban areas: market value of land of equal size/use w/similar public infrastructure and services in same vicinity, plus cost of any transfer taxes (BP 4.12) also known as replacement cost; Agricultural land: market value of land of equal productive potential in vicinity plus the cost of preparing land to levels similar to affected land plus cost of transfer taxes & registration (BP 4.12); “Land” also includes anything growing or permanently affixed to land – including crops (OP 4.12);	Law provides for acquisition of 25% of state-leased land without compensation. Acquisition of whole packets of leased state-owned land provide for compensation of 25% of that state-owned land packet size, sometimes in agricultural areas and sometimes in urban areas, plus compensation for loss of productive value of crops grown on that land for one year.
Livelihood Support/ Transitional Assistance	Provide mitigation to fully redress livelihood losses including cash compensation, short-term employment opportunities on project activities, development assistance such as land preparation, credit facilities, training or job opportunities (also includes business premises); (For impacts on agricultural land – PAPs that are actively cultivating affected land are given combination of training, money to invest to improve productivity, agricultural extension and income restoration allowance).	Not provided for.

Annex 4:List of Documents Consulted

- Environmental and Social Impact Assessment Framework for Semel-Ibrahim El Khalil Road Corridor, August 2013.
- Resettlement Policy Framework for August 2013 Semel-Ibrahim El Khalil Road Corridor, August 2013.
- Environmental and Social Review for Semel-Batil and Suheila Intersection-Ibrahim El Khalil Segments, August 2013.
- Draft Resettlement Action Plan (RAP) for the Rehabilitation of Expressway 1, August 2013.
- Draft Environment and Social Impact Assessment (ESIA) for the Rehabilitation of Expressway 1, August 2013
- Contract for Segment 1 (7 pages in Arabic)
- Contract for Segment 4 (6 pages in Arabic)
- Seven (7) Samples of Warning Letters to Contractor about Environmental Safeguards compliance for Segment 1
- Four (4) Samples of Warning Letters to Contractor about Environmental Safeguards compliance for Segment 4
- Section of Cross Slope drawing (2 pages)
- Environmental Safeguards Audit Field Notes, September, 2013
- Social Safeguards Audit Field Notes