AZERBAIJAN REPUBLIC
MINISTRY OF TRANSPORT
ROAD TRANSPORT SERVICE DEPARTMENT

Regional Environmental Review, Environmental Assessment and Management Framework and Resettlement Policy Framework
Azerbaijan Motorway Improvement and Development

ENVIRONMENTAL ASSESSMENT & MANAGEMENT FRAMEWORK

November 2005

Scott Wilson Central Asia in association with VMV Ltd, Baku
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List of Abbreviations and Acronyms

BP  =  Bank Procedure
DRMU =  District Road Maintenance Unit
EA  =  Environmental Assessment
EA&MF =  Environmental Assessment and Management Framework
EIA =  Environmental Impact Assessment
EMP =  Environmental Management Plan
EP =  Environmental Protection
ESS =  Ecology & Safety Sector (Department in RTSD)
LAD =  Land Acquisition Department
LAP =  Land Acquisition Plan
MENR =  Ministry of Ecology and Natural Resources
NGO =  Non Government Organisation
OD =  Operational Directive
OP =  Operational Policy
PIU =  Project Implementation Unit
RAP =  Resettlement Action Plan
RER =  Regional Environmental Review
RPF =  Resettlement Policy Framework
RTSD =  Road Transport Service Department
SEA =  Strategic Environmental Assessment
SEE =  State Ecological Expertise
TOR =  Terms of Reference
UNECE =  United Nations Economic Committee for Europe
WB =  World Bank (i.e. IBRD and IDA)
Regional Environmental Review, Environmental Assessment & Management Framework and Resettlement Policy Framework

1 INTRODUCTION

1.1 Background Information

The Government of Azerbaijan has requested the World Bank’s support for improving several road segments to the west and south of Baku over a several year period. It is proposed that the Azerbaijan Motorway Improvement and Development or ‘Highway II’ Project (‘the Project’) would include the:

- Rehabilitation of existing roads between Baku and Shamakhi, a 120 km section of the east west transport corridor between Baku and Tbilisi; and

- Upgrade of the M3 Motorway between Alyat and Astara, including expansion of the existing 2 lane roadway to a 4 lane roadway, and construction of new 4 lane roads and bypasses around key towns.

The first year’s implementation programme will rehabilitate the first 22 km of the M3 Motorway south of Alyat and sections of the Baku – Shamaki road. These and other works planned under the Project are referred to as ‘sub-projects’. Other works will be advanced in year two or later.

On 11th July 2005, the Ministry of Transport’s Road Transport Service Department (RTSD) commissioned Scott Wilson Central Asia to prepare a Regional Environmental Review (RER), Environmental Assessment & Management Framework (EA&MF) and Resettlement Policy Framework (RPF) (‘the Project’) in connection with the above Project. The RER, EA&MF and RPF are presented as separate but inter-related documents.

The RER, EA&MF and RPF have been designed to facilitate Project implementation and to ensure compliance with Azerbaijan’s legislation, procedures and policies, international Conventions and WB safeguard policies, in particular in terms of environment, land acquisition and resettlement. The RER is a broad overview of the policy, environmental and socio-economic implications of the entire Project scope. The EA&MF and RPF outline the procedures for the management of environmental and social issues of sub-projects. These documents will be disclosed in country and in the WO InfoShop prior to WB appraisal. During implementation, appropriate and specific Environmental Impact Assessments (EIA), Environmental Management Plans (EMP) and Land Acquisition Plans (LAPs)/Resettlement Action Plans (RAPs), with adequate public participation and disclosure, will be prepared for sub-projects in line with the requirements of the EA&MF and RPF.

1.2 Purpose of Environmental Assessment & Management Framework

Environmental impact assessment (EIA) is a key WB environmental safeguard policy. The purpose of the EA&MF is to outline the procedures for the management of environmental issues related to Category A and B sub-projects during implementation of the proposed WB Motorway Improvement and Development Project.

1 The World Bank’s Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at WBs’ internet InfoShop and (ii) in-country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.

2 For definition of Category A and B projects, see Chapter 2.5.
One of the end objectives of the EA&MF is to ensure that the sub-projects meet national environmental requirements in addition to WB safeguard requirements. One of the roles of the framework is to distil these requirements into a single process/procedure to be applied by RTSD in the course of Project implementation.
2 APPLICABLE POLICIES

2.1 Environmental Institutions

The key environmental institution in Azerbaijan is the Ministry of Ecology and Natural Resources (MENR). MENR was established by Presidential Decree in 2001; an organisation chart is shown in Appendix A. MENR’s activities are sub-divided into six main areas:

- Ecological policy development;
- Ecological protection;
- Water monitoring and management;
- Protection of marine (Caspian Sea) bio-resources;
- Forest management;
- Protected areas.

The State Ecological Expertise (SEE) department, which operates under the MENR’s Environmental Policy and Environmental Protection Department, is responsible for the review and approval of environmental impact assessments (EIAs) submitted by developers.

The responsibility for ensuring the implementation of the recommendations contained in this Environmental Assessment and Management Framework and for ensuring compliance with national environmental standards lies with the Ecology and Safety Sector (ESS), a relatively new department established under RTSD’s Road Maintenance Unit. Appendix B contains the RTSD organisation chart and details of ESS’s responsibilities.

The institutional arrangements for environmental assessment in Azerbaijan are described in more detail in Chapter 3.

2.2 National EIA Policy

The current EIA system in Azerbaijan is rooted in the old Soviet central planning system and largely follows the procedure of State Ecological Expertise (SEE) adopted by the former Soviet Union in the late 1980s. Unlike EIA, and in line with the definitions of SEE in the Law on Environmental Protection (EP), the core purpose of the SEE system lies in the formal verification by state authorities of all submitted developments for their possible environmental impacts, regardless of their scale, sector type or nature. In addition to EIA, Strategic Environmental Assessment (SEA), which deals with policies, plans and programmes, is another task within the responsibilities of SEE administration. To date, however, SEA has never been carried out in the country.

The basic procedures for the conduct of EIA are laid down in the 1996 Handbook on the EIA Process in Azerbaijan. Although these provisions are not technically legally binding, compliance with them is to all intents and purposes regarded as mandatory.

Various independent and comprehensive studies on the environmental policy of Azerbaijan and the related legal and regulatory framework have recently concluded that there is an urgent need for preparing a new national EIA legislation. A specific issue raised in this context was the requirement to streamline the EIA process with the provisions of various international environmental Conventions that Azerbaijan is a party to (see section 2.3)\(^1\).\(^4\).

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\(^1\) Technical Assistance Consultancy for Institutional Strengthening (August / September 2004), which included a Legislative Gap Analysis and was conducted with support of the EU

It is understood from discussions with MENR’s SEE in August 2005 that a new guidance document for EIA is in the process of being prepared. The main difference between the existing guidance and the new one is the provision for public involvement in the EIA process and a screening list for projects requiring EIA. The policy of involving the public in the assessment of environmental impact is one of a range of measures included in the Azerbaijan State Programme on Poverty Reduction and Growth (SPPRED) due for implementation in the period 2003-2005. Legal status is also envisaged for this document through approval by the Cabinet of Ministers.

2.3 Legal and Regulatory Framework on EIA in Azerbaijan

The legal acts and documents that form the basis for Azerbaijan’s current EIA system are listed in the following table.

Table 2.1 Legislative Basis of EIA System in Azerbaijan

<table>
<thead>
<tr>
<th>Legislative Document</th>
<th>Year of Adoption</th>
<th>System Implied</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Handbook</td>
<td>1999</td>
<td>EIA</td>
</tr>
<tr>
<td>Law on Environmental Protection, Clause VIII: State Ecological Expertise (SEE)</td>
<td>1999</td>
<td>SEE</td>
</tr>
<tr>
<td>Decree on the Ratification of the Espoo Convention⁵</td>
<td>1999</td>
<td>EIA</td>
</tr>
<tr>
<td>Decree Accession to the Aarhus Convention⁶</td>
<td>2000</td>
<td>EIA</td>
</tr>
</tbody>
</table>

Law on Environmental Protection

Environmental protection in Azerbaijan is governed by the Law on Environmental Protection (EP) of 1999. The Law establishes the main environmental protection principles, and the rights and obligations of the State, public associations and citizens regarding environmental protection. The Law states that SEE is the official EIA procedure in Azerbaijan, but it is not a specific EIA related legislative document. According to Article 54.2 of the Law, EIAs are subject to SEE which means that the MENR is responsible for the review and approval of EIA reports submitted by developers. The Law on EP defines SEE as ‘the identification of conformity of the environmental conditions with qualitative standards and ecological requirements in order to identify, prevent and forecast the possible negative impact of an economic activity on the environment and related consequences’.

The Law on EP establishes the basis for the SEE procedure, which can be seen as a stand-alone check of compliance of the proposed activity with the relevant environmental standards (e.g. for pollution levels and discharges, noise). All EIA reports are prepared by developers and submitted to the environmental authority (MENR) responsible for SEE in accordance with Article 54.2 of the law. In addition, the Law on EP determines that projects cannot be approved without a positive SEE resolution.

In its Articles 81 and 82, the Law on EP specifically provides for the application of international agreements in case their provisions are different from those of the Azerbaijani legislation. This relates, among other things, to the Espoo and Aarhus Conventions, which therefore become directly applicable to the EIA process in Azerbaijan (see section 2.4).

⁵ UNECE Convention on EIA in a Trans-boundary Context
⁶ UNECE Convention on Access to Information, Public Participation and Decision Making and Access to Justice in Environmental Matters
The EIA Handbook

The procedures for the conduct of EIA are laid down in the *Handbook for the EIA Process in Azerbaijan* of 1996, which defines EIA as 'a process whereby the potential environmental consequences of development proposals are identified and evaluated from the point of view of the physical, biological, and socio-economic environment, and ways and means are developed by which negative impacts are either avoided or minimised to acceptable levels' (paragraph 1.1). This definition encourages developers to design their proposals in a way least harmful for the environment.

According to these procedures the following phases can be distinguished in the EIA process in Azerbaijan:

(i) **Submission of Application and Initial Examination**

The developer submits to MENR head office or any of its regional branches a formal application, the format and content of which must comply with the indications given in section 7.2 of the Handbook. During the first stage of the EIA process, which is one month, an initial examination of the application of the proposed activity is made by the MENR and the expected impacts of the proposed activity are considered. This may include preliminary consultations with other agencies, (non government organisations) NGOs, experts and initial public inquiries. On the condition that the activity is likely to cause only minor impacts on the environment, the application may be approved with some conditions. If the activity is assessed to result in significant impacts, a full EIA is required. A decision on processing charges is taken and a scoping meeting of representatives of the applicant, invited experts and invited members of the public is organized and chaired by the MENR. Based on the outcome of this meeting, the MENR will notify the developer on the required scope and depth of the investigation and public consultation during the EIA study.

(ii) **Review of EIA Report through MENR/the Environment Expert Review Group**

The second stage of the EIA process lasts three months, during which the EIA documentation that has been submitted by the developer is investigated by MENR. At this stage, an environment review expert group of 5-11 skilled and experienced members (e.g. members of the Academy of Science, university staff or officials from other ministries) is formed. There are no firm requirements on group composition, but MENR has a roster of experts and composes each commission based on case-specific considerations. This environment review expert group is chaired by MENR and carries out the public submissions, investigations and consultations. Finally, a written review of documentation together with recommendations is submitted by the environmental review expert group to the MENR.

(iii) **Decision by MENR**

At this stage, MENR decides on whether to refuse the application or to approve it, with or without conditions. Conditions for the approval that might be typically be considered in the present context mainly relate to the construction phase and may include site management; noise; dust, discharges to the air land, subsurface or water, solid waste management, fire risk, emergency contingency plans, etc. If the application is approved with conditions, either the activity starts or the developer decides to appeal against the conditions. If the application is accepted, the developer must provide a report to MENR on progress within 12 months of the MENR decision.

During construction of the project, the developer must monitor parameters as indicated in MENR's approval. If project designs change significantly from those studied in the feasibility phase EIA, additional reports on the impacts of the changes may be requested by MENR. Controls are made by MENR on the accuracy and the reliability of the developer's monitoring results. If it appears that there is a risk of the conditions being breached, the MENR will issue a warning on the developer. If the conditions are breached, the developer is obliged to stop whatever activity is causing the breach of the
conditions. In such a case the MENR may reconsider the approval, possibly with the participation of the Environmental Review Expert Group, and the conditions of approval may be reviewed.

Figure 2.1 shows the sequence of events and the actors involved at the various stages of the EIA process.

The procedures of the Handbook on EIA in Azerbaijan cover all major stages/components of the internationally recognized EIA process like screening, scoping, conduct of base-line studies, EA report preparation and review and post-EIA monitoring. The Handbook establishes the main principles and elements of the ‘western-type’ EIA process, i.e.

(i) the sequence of events, roles and responsibilities of developers and Government institutions, charges;
(ii) the purpose and scope of the EIA report;
(iii) public participation in the process;
(iv) the environmental review and decision;
(v) the process involves various stakeholders, considers public opinion and aims at environmentally conscious decision making.

A distinctive screening list with activities that are likely to cause significant environmental impact is not established either by the Law on EP nor by the EIA Handbook.

In relation to public participation, the Law on EP and the EIA Handbook do not contain clear regulations/procedures on public participation and the access for the public to the relevant information and thus do not meet international requirements for public participation at the present time. However, from discussions in August 2005 with MENR’s Deputy Director for State Ecological Expertise, it is understood that new national guidance incorporating these requirements is in the process of being prepared. Public consultation requirements for this Project are outlined in Chapter 5.
Figure 2.1 EIA Procedures According To: ‘Handbook for the EIA Process in Azerbaijan’ 1996

for a better overview this chart only shows the procedure for projects of expected significant environmental/social impacts requiring full EIA and does not cover the appeal process.

**Initial Examination**

within 1 month after submission of application

- Preliminary consideration of application and initial consultation with other agencies, experts and the public
- Decision on EIA to be conducted and determination of processing charges
- Scoping meeting with experts, community representatives and NGOs to determine the scope of the EIA study
- Notification of the developer on the scope and depth of the EIA study

**Env. Impact Study**

without time limit

- EIA Study / EMP including consultations & investigations
- Submission of the draft EIA report

**Review of EIA Report through MENR / Env. Review Expert Group**

3 months

- EIA document made available for public review
- Review of the draft EIA report and incorporation of public submissions
- Formulation of a recommendation and submission of review document to MENR

**Decision**

with a written explanation

- Publication of EIA review document and the decision on either approval or rejection
- Approval of the Project with conditions*
- Rejection of the Project

*once a permit/approval has been given the developer must commence work and submit a report of progress within 12 months

**Construction and Operational Phase**

- Compliance monitoring
- Surprise checks*

**Key Actors in the EIA Process:**

- Developer
- MENR (SEE Dept.)
- MENR's Environmental Review Expert Group

**Acronyms:**

- EIA: Environmental Impact Assessment
- EMP: Environmental Management Plan
- MENR: Ministry of Ecology and Natural Resources
- NGO: Non-Government Organisation
2.4 Relevant International Conventions

Based on article 151 of the Azerbaijan Constitution, international Conventions over-ride national laws if there is any conflict. With regard to the context of the present ‘Motorway Improvement and Development Project’, the Law on EP specifically states that SEE is guided, inter alia, by international legal obligations.

Azerbaijan is a party to the UN Economic Commission for Europe (UNECE) Convention on EIA in a Trans-boundary Context (or Espoo Convention), which stipulates the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. The Convention also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries. The present Project will be physically restricted to the territory of Azerbaijan, so that issues of serious trans-boundary concern are not anticipated. In addition, the feasibility study for the Alyat-Astara road is being undertaken by Iranian consultants and the Iran Government is proposing to part-fund the construction costs, so it can be reasonably assumed that Iran is aware of the proposed programme of works to upgrade the Alyat-Astara road. The fact, however, that Azerbaijan ratified this Convention suggests that the general and internationally accepted principles that apply to the EIA process and that are laid down in this Convention, are accepted. This becomes relevant with regard to the provisions of Appendix I, which contains a list of activities to which the Convention applies, to Appendix II, which describes the minimum information to be provided in the EIA documentation and finally regarding the provisions of Annex III, which determines criteria to assist in the determination of the environmental significance of activities not listed in Appendix I of the Convention.

The objectives of the Convention on Wetlands of International Importance as Waterfowl Habitat (‘Ramsar Convention’) are to stem the progressive encroachment on and loss of wetlands now and in the future, recognising the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value; and to coordinate international efforts for this purpose. Signatories are obliged to: (i) specify at least one wetland on a List of Wetlands of International Importance; (ii) encourage the wise use of wetlands; (iii) establish wetland reserves, cooperate in the exchange of information and shared wetlands species.

The Convention on Biological Diversity seeks to ensure conservation of biological diversity and sustainable use of its components. WB is one of the Implementing Agencies for channelling resources available from the Global Environment Facility (GEF) to viable biodiversity projects in developing countries and is engaged in project lending for environmentally sustainable development. The first national report on Azerbaijan’s biodiversity was issued in April 2004.

The UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (also ‘Aarhus Convention’) establishes a number of rights of the public (citizens and their associations) with regard to the environment. Public authorities (at national, regional or local level) are to contribute to allowing these rights to become effective. The Convention provides for:

- the right of everyone to receive environmental information that is held by public authorities (‘access to environmental information’). This can include information on the state of the environment, but also on policies or measures taken, or on the state of human health and safety.

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7 ratification 01.02.1999
8 point 7 of the List of Activities reads: (a) Construction of motorways, express roads 2/ and lines for long-distance railway traffic and of airports 3/ with a basic runway length of 2,100 metres or more; (b) Construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road, or realigned and/or widened section of road, would be 10 km or more in a continuous length.
10 ratification 09.11.1999
where this can be affected by the state of the environment. Citizens are entitled to obtain this information within one month of the request and without having to say why they require it. In addition, public authorities are obliged, under the Convention, to actively disseminate environmental information in their possession;

- the right to participate from an early stage in environmental decision-making. Arrangements are to be made by public authorities to enable citizens and environmental organisations to comment on, for example, proposals for projects affecting the environment, or plans and programmes relating to the environment, these comments to be taken into due account in decision-making, and information to be provided on the final decisions and the reasons for it (‘public participation in environmental decision-making’);

- the right to challenge, in a court of law, public decisions that have been made without respecting the two aforementioned rights or environmental law in general (‘access to justice’).

### 2.5 Relevant World Bank Environmental Safeguard Policies

WB environmental and social safeguard policies are regarded as a cornerstone of its support to sustainable poverty reduction. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide guidelines for the WB and borrowers in the identification, preparation and implementation of programmes and projects.

*Environmental Impact Assessment* (EIA) is one of 10 environmental, social and legal safeguard policies of the WB. EIA is used in the WB to identify, avoid and/or mitigate the potential negative environmental impacts associated with lending operations. The purpose of EIA is to improve decision making, to ensure that project options under consideration are sound and sustainable, and that potentially affected people have been adequately consulted. The WB’s environmental assessment policy and recommended processing are described in Operational Policy (OP)/Bank Procedure (BP) 4.01: Environmental Assessment. This policy is considered to be the ‘umbrella’ policy for WB environmental ‘safeguard policies’. For the present Motorway Improvement and Development Project, the relevant safeguard policies to be considered at all stages of preparation and planning are:

- Involuntary Resettlement (World Bank OP/BP 4.12);
- Natural Habitats (World Bank OP/BP 4.04: Natural Habitats 2001);
- Forestry (World Bank OP/BP 4.36);
- Management of Cultural Property (World Bank OP 11.03).

The WB’s requirements on Information Disclosure are detailed in *The Disclosure Handbook 2002*.

The WB OP/BP on **Involuntary Resettlement** requires WB-assisted projects to avoid or minimize involuntary land taking. If such cannot be avoided, displaced persons need to be meaningfully consulted, compensated for lost/damaged assets and assisted in restoring or improving their living standards and livelihood. The policy requires that if involuntary land taking and resettlement become necessary, a clear plan for compensating and assisting displaced persons be prepared by the borrower by appraisal for WB review. Such a plan must be substantially completed prior to the commencement of civil works.

The WB OP/BP on **Natural Habitats** seeks to ensure that WB-supported infrastructure and other development projects take into account the conservation of biodiversity, as well as the numerous environmental services and products which natural habitats can provide to human society. The policy strictly limits the circumstances under which any WB-supported project can damage natural habitats, i.e. such land and water areas where most of the native plant and animal species are still present. Specifically, the policy prohibits WB support for projects which would lead to significant loss or degradation of any Critical Natural Habitats, whose definition includes those natural habitats which are either:
In other (non-critical) natural habitats, WB-supported projects can cause significant loss or degradation only when:

- there are no feasible alternatives to achieve the project’s substantial overall net benefits; and
- acceptable mitigation measures, such as compensatory protected areas, are included within the project.

As mentioned earlier, Azerbaijan is a signatory to the Convention on Biological Diversity, which seeks to ensure conservation of biological diversity and sustainable use of its components. WB is one of the Implementing Agencies for channelling resources available from the Global Environment Facility (GEF) to viable biodiversity projects in developing countries and is engaged in project lending for environmentally sustainable development. WB may assist parties to meet their obligations under the convention, including the following:

- development and implementation of national strategies, plans or programmes for the conservation and sustainable use of natural resources;
- integration of conservation and sustainable use of natural resources into relevant sectoral and cross-sectoral plans, programmes and policies.

At the Project level, WB seeks to ensure that its lending operations comply with international obligations to protect biodiversity. EIAs for WB should take into account the impacts of proposed projects on a country’s biodiversity.

The WB OP/BP on Forestry aims to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty and encourage economic development. The policy defines a forest as an area of land of not less than 1.0 ha with a tree crown cover (or equivalent stocking level) of more than 10% that has trees with the potential to meet a minimum height of 2 m in situ (in its original position). The WB does not finance projects that, in its opinion, would involve significant conversion or degradation of critical forest areas or related critical natural habitats. Critical forest areas are natural forest lands which are:

- existing protected areas and areas officially proposed by governments as protected areas, areas initially recognized as protected by traditional local communities, and sites that maintain conditions vital for the viability of these protected areas;
- sites identified by WB or an authoritative source, such as areas with known high suitability for biodiversity conservation and areas that are critical for rare, vulnerable, migratory or endangered species.

The WB OP on Cultural Property is based on the acknowledgement of cultural resources as sources of valuable historical and scientific information, as assets for economic and social development, and as integral parts of a people’s cultural identity and practices. WB policy as stated in Operational Directive (OD) 4.50 is to: (a) assist in protecting and enhancing cultural property through specific project components and (b) decline to finance projects which significantly damage cultural property, and assist only those that are designed to prevent or minimize such damage.

WB policy on Public Consultation and Disclosure follows specific procedures: EIA reports will be presented to both the Government of Azerbaijan and WB Management and serve as a background document for approval by the competent authority. In accordance with OP/BP 4.01, the Borrower (i.e. the Government of Azerbaijan) will have to make the draft EIA Report and Land Acquisition Plan
(LAP) available in Azerbaijan at a public place accessible to project-affected groups and local NGOs. The Borrower must also officially transmit the EIA report and LAP to WB. Once the EIA report and LAP have been locally disclosed and officially received and approved by WB, the WB will also make them available to the public through its Infoshop.\(^\text{11}\)

As regards WB’s internal EIA procedure, \textit{Environmental Screening} is an important step at the stage of project preparation through which proposed projects are attributed to the appropriate extent and type of EIA. In practice, the significance of impacts, and the selection of screening category accordingly, depends on the type and scale of the project, the location and sensitivity of environmental issues, and the nature and magnitude of the potential impacts.

Projects are classified into \textit{Category A} if they are ‘likely to have significant adverse impacts that are sensitive, diverse, or unprecedented, or that affect an area broader than the sites or facilities subject to physical works.’ Hence, the EIA for a Category A project examines a project’s potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the ‘without project’ situation), and recommends any measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental performance. The EIA of a Category A project considers both the social and the physical environmental impacts. Socioeconomic environment includes themes such as land acquisition and resettlement; indigenous or traditional populations, cultural heritage, aesthetics and landscapes, noise and human health and safety. For Category A projects, the borrower should consult with project affected groups at least twice:

- the first consultation takes place shortly after screening and before the TOR for the EIA are finalized, involving discussion on issues to be addressed in the EIA;
- the second consultation takes place once a draft EIA is prepared, involving discussion of issues raised in the EIA.

In addition, the borrower consults with such groups throughout project implementation as necessary to address EIA related issues that affect them.

The impacts of \textit{Category B} projects are ‘site-specific in nature and do not significantly affect human populations or alter environmentally important areas, including wetlands, native forests, grasslands, and other major natural habitats. Few if any of the impacts are irreversible, and in most cases mitigation measures can be designed more readily than for Category A projects.’

For both the Category A and B projects, an Environmental Management Plan (EMP) needs to be established in accordance with the Bank’s OP 4.0, which identifies EMPs as an essential feature of category A projects; for category B projects, the EIA may result in development of an EMP only, with no separate EIA report. The specific requirements relating to EMPs are set out in Annex C to WB’s procedure 4.01 (BP 4.01) - which is mandatory.

3 INSTITUTIONAL ARRANGEMENTS FOR ENVIRONMENTAL ASSESSMENT

3.1 Overview of Institutional Arrangements

At the level of the MENR, the State Ecological Expertise (SEE) department is the body responsible for carrying out SEE and making decisions on environmental soundness of development activities through issuing environmental permits. A further responsibility is to establish and maintain co-ordination with other parties to the EIA process through various meetings, round tables, discussions and consultations.

Regarding the proposed Project, the RTSD and its PIU, together with foreign and international organisations, will develop and implement the various sub-projects. The PIU will also be in charge of project management to ensure that appropriate budget is provided (funded by the proposed WB Loan) for the conduct of project-specific EIAs, for the subsequent implementation of mitigation measures and for monitoring programmes so that the various safeguard measures and contract provisions may be properly implemented.

RTSD’s ESS together with the Land Acquisition Department (LAD) will have responsibility for the coordination of future sub-projects of the present Project, including sub-project preparation, the review of draft EIA reports, and coordination of all required consultation and disclosure. The ESS will be responsible for liaison with the relevant ministries and agencies regarding environmental approvals and clearances.

During construction and operation, the district offices of the RTSD (District Road Maintenance Units) and the Regional Monitoring Departments of the MENR will be responsible for the supervision and enforcement of environmental management plans (EMP) and carrying out routine monitoring during the operational phase of the projects. With regard to the latter, RTSD will report to MENR on compliance with the environmental conditions at regular intervals.

Construction contractors will be responsible for implementing the EMPs that are developed for sub-projects during the construction phase.

3.2 Assessment of Institutional Arrangements

The following provides a brief overview and assessment of the current EIA practise and institutional arrangements/capacity regarding the key stages of the EIA process as they fall under the responsibility of RTSD’s ESS.

Screening

With regard to screening and as has been explained earlier, the EIA Handbook lays down a two-tiered EIA procedure, according to which the developer (RTSD) must submit an application or ‘project brief’ based on which MENR’s SEE department would decide on whether or not a full EIA is required. In the absence of screening lists, any project at its initial stages would have to undergo this procedure, which normally involves internal consultations with other agencies, experts and the affected public as required.

To date and with regard to internationally funded projects, MENR and RTSD do not currently appear to play the active role that the official national EIA procedures attribute to them at this level. The present procedure in the road sector is that international organisations carry out initial screening and formulation of TORs according to their own procedures and environmental safeguard policies. Despite the provisions of the EIA Handbook, the MENR is normally only involved in the process at a much later project stage, i.e. when the draft EA report is submitted for review and approval. Early involvement of MENR by the developer in the planning of any project for which environmental approval will be required is strongly recommended.
Review of EIA Report and Decision

RTSD’s ESS will have the responsibility for formally reviewing the draft EIA report of the sub-
projects. This review will assure that all relevant issues have been dealt with in accordance with
national and international requirements and that WB safeguard provisions have been adequately
considered and documented.

To date, no procedures, checklists or other tools exist to support the review stage. RTSD’s ESS do not
currently have the skills to carry out such review and the basic knowledge about the processes and
requirements is lacking.

Supervision and Enforcement of EMPs

EMP’s are largely overlooked by both the Law on EP and the EIA Handbook so that this tool, that is
mandatory for all WB funded EIAs, has not yet been officially introduced into the environmental
management process in the road sector. At present, practical experience in the implementation and
management of EMP’s appears to be lacking and skilled technical staff are not currently available at
either the central or the district level, where EMP implementation will have to be monitored.

Institutional strengthening requirements are outlined below. In addition, a sample EMP is provided in
Appendix G.

3.3 Requirements for Institutional Strengthening

Environmental Aspects of Project Preparation

The issue of the RTSD’s ESS present limited management and technical capacity, particularly in
relation to environmental/social qualifications and experience in all EIA-related matters, has been
addressed recently in the frame of various WB and ADB funded EIA reports. Moreover, RTSD itself
brought this aspect to the attention of the WB and asked for assistance in strengthening ESS’s
technical capacity to manage the EIA process related to highway rehabilitation and development.

In response to this request, WB is currently preparing a TOR for a three month period of ‘on-the-job’
training for RTSD’s ESS and Land Acquisition Department (LAD). According to the draft TOR,
training will specifically provide a practical overview of the following issues:

- national environmental assessment and management requirements and World Bank safeguard
  policies as they relate to highway rehabilitation and construction.
- environmental and social assessment, management, monitoring and auditing aspects of highway
  projects, including examples and case studies of existing or planned highways in the European
  Union or North America.
- all phases of highway development from Project/sub-project preparation to construction and
  operation, outlining the interfaces between technical/engineering programmes and environmental
  and social assessment and management.
- environmental and social issues, including land acquisition and public participation, linked to the
  preparation and implementation of the projects envisaged under the WB Highway I and II projects.
- permitting and review processes (from the perspective of RTSD), explaining the rationale for the
  selection of recommended environmental and social mitigation measures and monitoring
  programmes.
The training programme will support RTSD’s ESS with the development and practical implementation of procedures for managing/monitoring all of the environmental and social activities at each stage of project development, and for communications with, and dissemination of information to, MENR, the public and contractors responsible for the implementation of environmental and social management programmes.

If this training is implemented as foreseen, RTSD’s ESS should be in the position to perform all of the required steps in project preparation.

**EMP Supervision and Enforcement**

There is no current proposal to purchase environmental monitoring equipment for RTSD’s ESS or DRMUs under the Project. Instead, practical classroom- and site-based training associated with road construction projects is recommended as outlined below.

In relation to EMP supervision and enforcement, there are a number of construction supervision projects in Azerbaijan which are either currently being implemented or are planned for implementation in the near future. These include the WB funded Tovuz Bypass (Highway I) project which includes a training component for RTSD staff. It is important that training initiatives are coordinated to avoid unnecessary duplication, promote consistency and completeness of the overall training initiative, and enhance the training through close cooperation between the individual projects.

Whereas the proposed WB Highway II training project outlined above will provide training across the broad spectrum of environmental and social assessment, particularly including pre-contract issues such as resettlement and land acquisition, it is recommended that the training focus under other WB funded construction supervision projects is more on the practical aspects of environmental monitoring and mitigation during the project preparation and implementation stages.

There is often a gap between the preparation of the EMP and incorporation of the requirements for environmental mitigation and monitoring in the contract documents. This in turn leads to a lack of proper enforcement since the objectives and procedures for attaining those objectives are not clearly stated in the contract. It is recommended that training under the construction supervision contracts concentrates on raising the level of awareness and practical skills within RTSD’s ESS and includes the following issues:

- Preparation of EMPs and incorporation of associated requirements in contract documents and specifications for Consulting Services and Works contracts
- Procedures for monitoring implementation including target parameters, frequency, responsibilities and means of monitoring
- Health and Safety procedures

The training programme would typically be delivered through short classroom training followed by more intensive on-the-job training site visits where relevant RTSD staff would participate directly with the international environmental specialist/construction supervision staff in reviewing the Contractors submissions, carrying out periodic monitoring inspections, attending meetings on environmental issues with the Contractor and other stakeholders, and environmental reporting. The training site visits would be timed to coincide with peak work activity in order to provide a good cross-section of monitoring activities typically including visual inspection of:

- Environmental permits
- Discharges to watercourses
- Dust suppression
- Exhaust emissions
- Noise abatement measures
Regional Environmental Review, Environmental Assessment & Management
Framework and Resettlement Policy Framework

- Protection against oil spillage
- Site health and safety, sanitary facilities, etc.
- Public safety, traffic management, child safety, etc.
- Registering and dealing with public complaints

It is important that flexible training programmes are developed that are responsive to emerging project needs and compatible with environmental training initiatives on other highway projects. The effectiveness of the training should be evaluated through a combination of feedback questionnaires and performance evaluation.
4  PROPOSED FRAMEWORK FOR SCREENING, APPROVAL AND MANAGEMENT

4.1  Introduction

All sub-projects under the proposed Project will have to conform to current Azeri environmental laws, and at the same comply with international requirements and the regulations and the procedures of the WB’s safeguard policies, including Environmental Assessment (EA) policy outlined in Operational Policy 4.01, and (as applicable), Natural Habitats (OP 4.04), Cultural Property (OPN 11.03), and Involuntary Resettlement (OP 4.12).

To achieve this goal, tailor-made tools are outlined in the following section that support the project management process. A side benefit of this approach will be improved communications and trust between RTSD and MENR, and increased transparency and accountability in the decision making process for the environmental assessment of internationally financed road projects in Azerbaijan. A summary of the key steps to be completed by RTSD’s ESS to ensure the environmental assessment and management of sub-projects is outlined in the attached diagram. Detailed guidance is provided in the following text.

Table 4.1  Management of the EIA Process

<table>
<thead>
<tr>
<th>PROJECT PREPARATION</th>
<th>Activities</th>
<th>Tools to be used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Preliminary screening and preparation of project brief</td>
<td>Identify project Category A or B</td>
<td>See flow-chart in Appendix C</td>
</tr>
<tr>
<td></td>
<td>For Category A projects conduct a public consultation meeting prior to finalising draft TOR</td>
<td>Format of project brief suggested in Appendix D</td>
</tr>
<tr>
<td></td>
<td>Prepare project brief including draft TOR submit project brief to the MENR</td>
<td>See sample TOR Cat. A: Appendix E Cat. B: Appendix F</td>
</tr>
<tr>
<td>2. Finalize TOR</td>
<td>MENR comments on TOR; ESS prepares final TOR</td>
<td></td>
</tr>
</tbody>
</table>

EIA STUDY AND DISCLOSURE PHASE

3. EIA Study | Carry out EIA study to collect and prepare the required environmental information according to the agreed TOR |
4. Internal quality review | Review the document for its completeness | See checklist |
5. Submission of draft EIA report to WB | Submit draft EIA report and EMP to WB for review and clearance |
6. Submission of EIA report to MENR | Submit draft EIA report and EMP to MENR for review and clearance | MENR has 3 months to complete the review before providing its decision |
7. Disclosure | Disclose the draft EIA report and EMP within Azerbaijan |
|                     | Submit to WB for disclosure through its InfoShop |
8. Environmental Approval | MENR issues SEE |
9. WB Approval ('no objection') | Confirm to WB that all applicable environmental procedures have been followed and necessary supporting documentation submitted to obtain 'no objection' |

PROJECT IMPLEMENTATION PHASE

10. Compliance monitoring during construction | Ensure proper implementation of EMP during construction and operational phase. Supervision of works that will be carried out by the contractor will be done with support from consultants to ensure that the EMP is properly followed |
11. Reporting | Submit progress reports to MENR and WB |
4.2 EIA Management Steps

1. Preliminary Screening and Preparation of Project Brief

Before the TOR for consultancy services on future sub-projects are established, RTSD’s ESS will prepare a project brief which shall be the official application to support MENR’s internal consultations (including scoping). For this purpose, RTSD’s ESS will carry out ‘preliminary screening’ to identify the project Category as per WB OP 4.01 and produce a project brief in accordance with the provisions of the EIA Handbook. Appendix C shows the proposed process for the preliminary screening of sub-projects by RTSD’s ESS. Appendix D shows the suggested format for the project brief. The Regional Environmental Review (RER) will provide a useful source of information in preparing the project brief.

RTSD’s ESS will submit the draft project brief and a draft TOR to WB to seek confirmation on: (i) the selected environmental Category, and (ii) the assessment that is proposed. After receiving WB confirmation, ESS will submit the project brief and draft TOR to MENR which will have one month to examine the application and to consult with appropriate experts and members of the potentially affected public if required before informing RTSD of its requirements regarding the scope and depth of the environmental study as well as public consultation.

Sample TORs for Category A and Category B projects are included in Appendices C and D. The main differences for sub-projects classified as ‘Category A’ and ‘Category B’ relate (i) the requirements for public consultation on the draft TOR; and (ii) the requirements for an analysis of project alternatives.

<table>
<thead>
<tr>
<th>Public consultation</th>
<th>Category A projects</th>
<th>Category B projects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public consultation is held at least twice, i.e.</td>
<td>Public consultation is held at least once, i.e.</td>
</tr>
<tr>
<td></td>
<td>1. prior to the finalization of the draft TOR; this meeting is prepared and held by RTSD</td>
<td>1. when a draft EA Report has been prepared; this meeting is chaired by RTSD with support from their EIA consultant</td>
</tr>
<tr>
<td></td>
<td>2. once a draft EA Report has been prepared; this meeting is chaired by RTSD with support from their EIA consultant</td>
<td></td>
</tr>
</tbody>
</table>

| Analysis of alternatives | yes - in terms of alignment and design, including the ‘without project’ scenario | no alternatives need to be considered |

In their letter dated 20th September 2005 to RTSD commenting on the Draft EA&MF, MENR’s State Expertise Department provides the following guidance on their requirements for the EIAs to be provided for the sub-projects:

*In accordance with the Law about Environmental Protection of Azerbaijan Republic and requirements of the Regulations for the Environmental Impact Assessment Process in Azerbaijan, in order to assess complex environmental impact (social-ecological-economical) during the road construction works while implementing the projects, Environmental and Social Impacts Assessment Report should be completely prepared and submitted to the Ministry of Ecology and Natural Resources for approval.*

*The Environmental and Social Impacts Assessment Report should cover the undermentioned essential requirements and be submitted in 3 copies for approval:*

- Existing ecological condition of the construction site;
• Description of infrastructure objects with potential impact on the environment through conduct of construction works;

• Volume of materials (sand, gravel, soil and etc.) required for the road construction, proposed sources and agreements with the appropriate bodies on this issue;

• Arrangements to be taken for advance compensation of the potential damages caused to the property of the population along the road alignment;

• Taking the local communities’ views into consideration and information on the conducted meetings;

• Assessment of the damage to be caused to the greenery along the road through road construction with the participation of the appropriate bodies of the Ministry of Ecology and Natural Resources;

• Special measures to be taken during the construction-mounting works of river crossings;

• Reserving the fertile top soil during the earth works to be used for future rehabilitation works (land reclamation);

• Appropriate waste management;

• Planting of strips of greenery (landscaping) along the highway using appropriate tree sorts;

• Final results of the engineering geological investigations conducted in the probable landslide zones;

• Mitigation measures for potential environmental impacts through the project implementation.

These comments should be taken into account in the preparation of the Draft TOR.

2 Finalization of TOR

As soon as possible after the decision of the MENR, the borrower (RTSD’s ESS) should finalise the TOR for the required environmental study.

3 EIA Study

RTSD will engage consultants to prepare the draft EIA and/or EMP in accordance with the agreed TOR. For Category A sub-projects, RTSD will retain independent EIA experts who are not affiliated with the Project to carry out this work. A sample EMP is provided for reference in Appendix G which specifically identifies the responsibilities of the Contractor.

It is important that consultants are provided with:

(i) a copy of the Regional Environmental Assessment;
5 PROPOSED FRAMEWORK FOR PUBLIC CONSULTATION AND DISCLOSURE

5.1 Procedures for Public Consultation

For projects falling into WB Category A and B projects, RTSD will consult the project affected groups and local NGOs about the project’s environmental aspects and take their views into account.

**Category A:** The public consultation will occur at least twice: a) during preparation of the project brief, before the terms of reference for the EIA are finalized; and b) after the EIA is prepared to seek feedback on the report.

**Category B:** The public consultation will occur when the EMP is in a draft phase and the findings of the draft EMP will be discussed. The views of the public will be incorporated in the final EMP.

At the second meeting for Category A projects and during the meeting for Category B projects, RTSD will be supported by its environmental consultants.

For meaningful consultations, RTSD will provide relevant information to the public in an appropriate form and language, and in timely manner. The minutes of public meetings will be recorded and included in the final EIAs or EMPs.

RTSD will consult with the public throughout project implementation, as necessary, to address EIA related issues that affect them.

5.2 Procedures for Disclosure

For both Category A and B projects, RTSD will ensure that the findings of the EIAs and EMPs are available in a public place. In addition, RTSD will make the EIAs and EMPs available at a place accessible to members of the public affected by the project and NGOs. These reports will be in Azeri.

For Category A and B projects, the RTSD will ensure that all EIAs and EMPs are submitted to WB in English for review and clearance. WB will make the entire EIA and summary version available to the public through its InfoShop. The EIA has to be made available in the InfoShop before WB can provide the ‘no objection’ to the financing.
6 REPORTING REQUIREMENTS

RTSD is required on the progress of any project for which EIA approval has been granted within 12 months of the date of that approval being given.

As part of regular reporting on the project, RTSD will submit to WB a brief statement on the status of the environmental compliance under the project through the Project Summary Report. The outline of the report to be submitted to WB is attached (Appendix H).
APPENDIX A - MENR ORGANISATION CHART

Current Institutional Structure of MENR, Main Service Units
APPENDIX B – RTSD ORGANISATION CHART AND ESS RESPONSIBILITIES
MAIN RESPONSIBILITIES OF THE ECOLOGY AND SAFETY SECTOR

General:

During implementation of the ecology works provided for by the regulations, the Ecology and Safety Sector mutually cooperates with the sections of the Department and subordinate entities and organizations.

Functions:

Follows and executes resolutions and alterations on the ‘Environmental Protection’ of Azerbaijan Republic, decisions and regulations approved by the Ministry of Ecology and Natural Resources of Azerbaijan Republic, orders issued by the Azerbaijan Ministry of Transport on the protection of environment and ecologic balance, decisions and instructions of the Road Transport Service Department.

Exercises control over upgrading of the greenery alongside the roads up to the international standards and introduces appropriate suggestions. Receives monthly works, prepares reports.

Specific Responsibilities:

2.1. To take part in the programs designed in accordance with international norms in the field of environmental protection and normalization of ecological balance in the road sector, one of the key areas in the development of economic strategy in the republic.

2.2. To run management and control over the quality and duly implementation of renovation and landscaping (planting of greenery) works on the roads by the road landscaping departments, rational use of financial and material resources, as well services provided in these areas.

2.3. To take active part in the solution of environmental impact, ecologic balance and other issues arising through the projects on construction, reconstruction, rehabilitation and repair of the republican highways and other objects in accordance with the existing legislation of Azerbaijan Republic, to exercise control over the protection of ecology and environment during execution phase as set out in the project documents.

2.4. To prepare an annual action plan on environmental protection and rational use of natural resources on the roads of Azerbaijan Republic, to ensure its timely execution by all organizations and other entities.

2.5. To prevent the pollution of the environment with toxic substances by the organizations and entities of the Department, to provide duly registration of ecological passports in the organizations, to provide observance of the norms during production.

2.6. To coordinate the developed long-term action plans on environmental protection and rational use of the nature with appropriate bodies and Ministry of Ecology and Natural Resources.

2.7. To exercise control over the environmental protection and rational use of natural resources in the organizations and entities, the observance of appropriate orders and instructions, existing legislation on nature protection and appropriate orders of the Cabinet of Ministers through complex check-ups.

2.8. To participate in the discussions of “Draft plans of long-term yearly, economic and social development of the roads on the nature protection and rational use of natural resources” with the Ministry of Ecology and Natural Resources of Azerbaijan Republic and other organizations.
APPENDIX C – PROPOSED PROCESS FOR PRELIMINARY SCREENING OF SUB-PROJECTS

* Fig. X *

- Construction of new road of 4 lanes
- Realignment or widening of an existing road of two lanes or less so as to provide four lanes*
- Works extending outside the ROW

Category A Project
requiring full EIA as per WB OD 4.01 (including an EMP and public disclosure and consultation in accordance with WB OP 4.01 (Annex B))

Will the project pass through or indirectly affect one or more of the following:
1. commercial / residential area;
2. productive land;
3. cultural heritage site / land;
4. protected area (national park, etc.)
5. proposed or existing UNESCO World Heritage site;
6. proposed or existing RAMSAR site;
7. proposed or existing IBA;
8. wetland area / swamps;
9. watershed protection area;
10. water resources area;
11. natural hazard area;
12. steep slope areas (> 40%).

Category B Project
requiring Environmental Management and Monitoring Plan (EMP)

* European Union Directive 97/11/EC requires that EIA is undertaken for all projects involving 'construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road, or realigned and/or widened section of road would be 10 km or more in a continuous length. (Source: EU (2001): Guidance on EIA Screening)
APPENDIX D – SUGGESTED FORMAT FOR PROJECT BRIEF

- a) Introduction: background and justification of the proposed project (purpose of the proposed intervention; funding agency; estimated investment; estimated schedule for implementation);
- b) location of the project;
- c) dimension and type of proposed intervention (length of section under consideration; road widening or new construction; number of new bridges, etc.) thereby providing figures on planned design standard and other relevant parameters;
- d) alternatives that will be considered in the frame of the technical and environmental study (alignment; design);
- e) need to acquire land outside the existing ROW and to provide compensation to landowners;
- f) resettlement needs;
- g) broad estimation of quantities and type of required construction materials;
- h) existence or non-existence of protected / sensitive areas in the potential area of influence of the proposed intervention; potential implications arising from this; map at appropriate scale including all protected or sensitive areas;
- i) any other issues of environmental or social relevance that were identified for the specific project area in the frame of the RER;
- j) Project Category as per WB OP 4.01;
- k) proposed draft TOR for the EIA study;
- l) proposed procedure for public consultation and information;
- m) contact details of the project officer in charge in case of further queries.
APPENDIX E – TERMS OF REFERENCE FOR CATEGORY A PROJECT

Environmental Study

The consultant will prepare an Environmental Impact Assessment (EIA) Report that addresses the environmental impacts of the proposed project and the management of these impacts. An Environmental Management Plan will be included in the EA Report.

The EIA will address the needs of applicable laws and regulations of the Government of Azerbaijan and the following World Bank requirements:

• Operational Policy on Environmental Assessment (OP 4.01, January 1999)
• Operational Policy Note on Management of Cultural Property in Bank Financed Projects (OPN 11.03, August 1999)
• The Disclosure Handbook (December 2002)

For environmental assessment purposes the proposed project has been classified as a Category A project under the provisions of the OP 4.01. A full listing of the Bank’s safeguards policies can be accessed on: http://lnweb18.worldbank.org/ESSD/sdvext.nsf/52BvDocName/SafeguardPolicies

Specific tasks are outlined in more detail below.

(a) Environmental Assessment Report

The EIA Report should examine the project’s potential negative and positive environmental impacts, compare them with those of feasible alternatives, and recommend any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and to improve environmental performance. Public consultations should inform this process.

As a minimum the EIA Report should cover the following:

(i) Executive Summary and Conclusions

(ii) Policy, Legal and Administrative Framework - Discuss the policy, legal and administrative framework and requirements (e.g. Government of Azerbaijan, World Bank, relevant international environmental agreements, etc).

(iii) Project Description – describe the proposed project and include the following information as relevant: location; general layout; size, capacity, etc; pre-construction activities; construction activities; schedule, staffing and support; facilities and services; operations; required off-site investments; and life span. Note, this is not an exhaustive list.

(iv) Baseline Data – assemble, evaluate and present baseline data on the relevant environmental characteristics of the study area including the physical, biological, cultural property and socio-economic conditions. Any changes anticipated before the project commences should also be identified.

(v) Environmental Impacts – determine and quantify where possible the significant positive and negative impacts, direct and indirect impacts, and immediate and long term impacts associated with the project. Identify those that are unavoidable or irreversible. Identify mitigation measures and explore opportunities for environmental enhancement. Characterize the extent and quality of available data.

(vi) Analysis of Alternatives – Systematically compare feasible alternatives to the proposed project site, technology, design, construction techniques, phasing and operation. The ‘without project’ scenario should be assessed. The comparative analysis should address (and quantify where possible): the environmental impacts; the feasibility of impact mitigation; capital and recurrent costs; etc.
suitability of options under local conditions, related institutional, training and monitoring
requirements. State the basis for selecting the proposed design.

(vii) **Environmental Management Plan** - see (b) below

(viii) **Appendices** – (i) list of EIA Report preparers, (ii) references, (iii) record of interagency and
consultation meetings, (iv) supporting tables, (v) list of associated reports.

(b) **Environmental Management Plan (EMP)**

The EMP will identify the mitigation, monitoring and institutional measures to be taken during design,
construction and operation to eliminate adverse environmental or social impacts, offset them, or reduce them
to acceptable levels.

As a minimum the following elements will be included in the EMP:

(i) **Mitigation Plan** – identify feasible and cost effective measures to reduce potentially significant
adverse environmental impacts to acceptable levels. Compensatory measures should also be
addressed and links should be provided to any other mitigation plans. Institutional arrangements for
the implementation of this plan should be well defined.

(ii) **Monitoring Plan** – identify and describe the monitoring measures that will be employed to track the
effectiveness of the Mitigation Plan. Describe the environmental parameters to be monitored, the
monitoring methods, sampling locations, frequency, costs, detection limits and thresholds that
would signal corrective actions. Outline the monitoring and reporting procedures. Institutional
arrangements for the implementation of this plan should be well defined.

(iii) **Capacity Development and Training** – assess the capacity, and outline measures to strengthen the
environmental management capability, of agencies (local level?) responsible for implementation of
the Mitigation and Monitoring Plans.

(iv) **Implementation Schedule and Cost Estimates** – for (i) to (iii) above, provide an implementation
schedule and a cost estimate (including the source of funds) and show the integration of these
elements with overall project implementation plans.

(c) **Coordination, Consultation and Disclosure**

RTSD will be responsible overall for the preparation of the EIA. The Consultant with assist RTSD in
coordinating the EIA with other Government Agencies. RTSD will consult with groups affected by the
proposed project, and with local NGOs, on the environmental aspects of the proposal. These groups will be
consulted at least twice:

(i) A first consultation meeting will be the responsibility of the RTSD and be held during the
preparation phase of the project before the draft Terms of Reference for the EIA are finalized.
Relevant and priority environmental issues will be identified at this meeting and included in the
draft TOR that will be submitted to the MENR for approval.

(ii) A second consultation will be the responsibility of the consultant and held once a draft EIA Report
has been prepared – a summary of the EIA conclusions will be made available prior to the meeting.
The draft EIA report should also be available in a public place accessible to affected groups and
local NGOs.

Relevant materials will be provided to affected groups in a timely manner prior to consultation and in a form
and language that is understandable and accessible to the groups being consulted. A record should be
maintained by the Consultant of the public consultation. These records should indicate: (a) any means other
than consultations (e.g. surveys) that have been used to seek the views of affected stakeholders, (b) the date
and location of consultation meetings, (c) a list of attendees, their affiliation and address/ telephone number,
and (d) summary minutes.
Resources: The following publications are useful resources for EIA:

- Environmental Assessment Sourcebook 1991 (and updates), The World Bank
- Regional Environmental Report ‘Azerbaijan Motorway Improvement and Development’ available the WB’s Infoshop.
APPENDIX F – TERMS OF REFERENCE FOR CATEGORY B PROJECT

Environmental Study

The consultant will prepare an Environmental Impact Assessment (EIA) Report that addresses the environmental impacts and management issues deriving from the ................... An Environmental Management Plan will be included in the EIA Report. The EIA will address the needs of applicable laws and regulations of the Government of Azerbaijan including (but not limited to) the following World Bank requirements:

- Operational Policy on Environmental Assessment (OP 4.01, January 1999)
- Operational Policy on Natural Habitats (OP 4.04, June 2001)
- Operational Policy Note on Management of Cultural Property in Bank Financed Projects (OPN 11.03, August 1999)
- The Disclosure Handbook (December 2002)

For environmental assessment purposes the proposed .................. project has been classified as a Category B project under the provisions of the OP 4.01. A full listing of the Bank’s safeguards policies can be accessed on: http://lnwebl8.worldbank.org/ESSD/sdext.nsf/52ByDocName/SafeguardPolicies

Specific tasks are outlined in more detail below.

(a) Environmental Impact Assessment Report

The EIA Report should examine the project’s potential negative and positive environmental impacts and recommend any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and to improve environmental performance. The EIA Report should cover the following:

(i) Executive Summary and Conclusions

(ii) Policy, Legal and Administrative Framework - Discuss the policy, legal and administrative framework and their requirements (e.g. Government of Azerbaijan, World Bank, relevant international environmental agreements, etc).

(iii) Project Description – describe the proposed project including its location, scope, and activities associated with its design, construction and operation. Identify any offsite investments.

(iv) Baseline Data – assemble, evaluate and present baseline data on the relevant environmental characteristics of the study area including the physical, biological, cultural property and socio-economic conditions. Any changes anticipated before the project commences should also be identified.

(v) Environmental Impacts – determine and quantify where possible the significant positive and negative impacts, direct and indirect impacts, and immediate and long term impacts associated with the project and the alternate design options. Identify those that are unavoidable or irreversible. Identify mitigation measures and explore opportunities for environmental enhancement. State the basis for selection of the proposed design. Characterize the extent and quality of available data.

(vi) Environmental Management Plan - see (b) below.

(vii) Appendices – (i) list of EIA Report preparers, (ii) references, (iii) record of interagency and consultation meetings, (iv) supporting tables, (v) list of associated reports.
(b) Environmental Management Plan (EMP)

The EMP will identify the mitigation, monitoring and institutional measures to be eliminated adverse environmental or social impacts, offset them, or reduce them to acceptable levels. The EMP should include:

(i) **Mitigation Plan** – identify feasible and cost effective measures to reduce potentially significant adverse environmental impacts to acceptable levels. Compensatory measures should also be addressed and links should be provided to any other mitigation plans. Institutional arrangements for the implementation of this plan should be well defined.

(ii) **Monitoring Plan** – identify and describe the monitoring measures that will be employed to track the effectiveness of the Mitigation Plan. Describe the environmental parameters to be monitored, the monitoring methods, sampling locations, frequency, costs, detection limits and thresholds that would signal corrective actions. Outline the monitoring and reporting procedures. Institutional arrangements for the implementation of this plan should be well defined.

(iii) **Capacity Development and Training** – assess the capacity, and outline measures to strengthen the environmental management capability, of agencies responsible for implementation of the Mitigation and Monitoring Plans.

(iv) **Implementation Schedule and Cost Estimates** – for (i) to (iii) above, provide an implementation schedule and a cost estimate (including the source of funds) and show the integration of these elements with overall project implementation plans.

(c) Coordination, Consultation and Disclosure

RTSD will be responsible overall for the preparation of the EIA and will be supported by the Consultant in these activities. RTSD will consult with groups affected by the proposed project, and with local NGOs, on the environmental and social aspects of the proposal. These groups should be consulted once a draft EIA Report has been prepared and a summary of the EIA conclusions will be made available prior to the meeting. The draft EIA report should also be available in a public place accessible to affected groups and local NGOs.

Relevant materials will be provided to affected groups in a timely manner prior to consultation and in a form and language that is understandable and accessible to the groups being consulted.

A record should be maintained by the Consultant of the public consultation. These records should indicate: (a) any means other than consultations (e.g. surveys) that have been used to seek the views of affected stakeholders, (b) the date and location of consultation meetings, (c) a list of attendees, their affiliation and address/telephone number; and (d) summary minutes.

Resources: The following publications are useful resources for EIA:

- Environmental Assessment Sourcebook 1991 (and updates), The World Bank
- Regional Environmental Report ‘Azerbaijan Motorway Improvement and Development’ available the WB’s Infoshop.
## A. Mitigation Plan (1)

### Issue

<table>
<thead>
<tr>
<th>Phase</th>
<th>Issue</th>
<th>Mitigation Measure</th>
<th>Cost (in US $)</th>
<th>Institutional Responsibility</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed design</td>
<td>Shirvan National Park&lt;br&gt;Potential permanent impairment of local population of Persian Gazelle through road accidents; safety risk for road users through crossing individuals or herds of Persian Gazelle</td>
<td>Provision of 3 game underpasses (km 93.5; 97 and 100.2) incl. in- and outlet structures&lt;br&gt;Landscaping at the 3 animal underpasses&lt;br&gt;Construction of a protective fence alongside the Park boundaries beginning at Shirvan Main Collector up to km 102 on the eastern side of the road—total length: 11.5 km; height: 2.5 - 3 m.</td>
<td>Install Operate</td>
<td>Contractor RTSD Maintenance Unit&lt;br&gt;Contractor RTSD Maintenance Unit&lt;br&gt;Contractor</td>
<td>Design of underpasses and fence to be refined during detailed design with support of local experts and to be specified in bidding documents</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>181,600&lt;br&gt;30,000&lt;br&gt;170,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plantations</td>
<td>Plantation of shrubs as anti-dazzle measure within the median. Use local species of shrub requiring little water and maintenance, preferably Tamarix&lt;br&gt;Plantation of trees around bus stops</td>
<td></td>
<td>Install Operate</td>
<td>Contractor RTSD Maintenance Unit&lt;br&gt;Contractor RTSD Maintenance Unit</td>
<td>To be specified in bidding documents</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>37,500&lt;br&gt;7,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Traffic safety&lt;br&gt;Impairment of traffic during construction&lt;br&gt;Endangering of traffic outside working hours</td>
<td>The contractor will provide:&lt;br&gt;- Information to the public about the scope and schedule of construction activities and expected disruptions and access restrictions&lt;br&gt;- Measures to allow for permanent adequate traffic flow around construction areas;&lt;br&gt;- Adequate signalisation, traffic safety signs, barriers and flag persons for traffic control;&lt;br&gt;- Appropriate lighting and well designed safety signs</td>
<td>N.A.</td>
<td>Contractor Contractor</td>
<td>Method statement to be provided during mobilisation (to be specified in the bidding documents). Traffic plans to be approved by road police. Road police should also assist in law enforcement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>minimal</td>
<td>Contractor</td>
<td></td>
</tr>
<tr>
<td>General Work Safety</td>
<td>The Contractor will provide a statement on accident, fire and chemical spill containment / emergency procedures;</td>
<td>N.A.</td>
<td>minimal</td>
<td>Contractor Contractor</td>
<td></td>
</tr>
</tbody>
</table>

---

13 RRI International (2005) Environmental Assessment & Preliminary Design for a 22 km section of the Alyat-Astara Road – Draft Environmental Assessment
### A. Mitigation Plan (2)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Issue</th>
<th>Mitigation Measure</th>
<th>Cost (in US $)</th>
<th>Institutional Responsibility</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Top soil preservation</td>
<td>Top soil shall be stripped (78,540 m³) and be reused in the median (33,000 m³) and at the embankment slopes (45,000 m³). Long-term stockpiles of topsoil will immediately be protected to prevent erosion or loss of fertility.</td>
<td>513,000</td>
<td>Contractor</td>
<td>Contractor to submit a separate plan describing the location and layout of his work camp and providing details on the management of waste, the storage and handling of fuel, diesel, oil and other toxic / harmful substances. The contractor shall obtain approval of this plan from ESS.</td>
</tr>
</tbody>
</table>
| Contractor’s yard | Potential pollution of soil and groundwater/ contamination of surface water | The contractor shall detail proposed measures to avoid or reduce adverse environmental impacts resulting from installation and operation of his work camp. As a minimum, the following measures will be taken:  
  - The contractor shall submit a description of fuel storage and its location, and of the filling station and car washing site to the local executive and sanitary authorities, including a statement on their location, further than 500 m from water sources and irrigation systems;  
  - Provision of secure, impermeable and bounded compounds to store chemicals and oil distant from any surface waters;  
  - Establishment of a waste management plan covering the following: regular waste collection and disposal from worksite / contractor’s yard and worker’s camp (may be temporarily integrated into the existing waste collection systems and disposal facilities of Alyat, Salyan or other location); separate collection of toxic and harmful waste as well as used tires to be handled in co-operation with an approved, authorized partner, according to the relevant regulatory provisions and disposed of at designated sites according to MENR requirements. | Contractor      | Contractor                  |                                                                                           |
### A. Mitigation Plan (3)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Issue</th>
<th>Mitigation Measure</th>
<th>Cost in US ($)</th>
<th>Institutional Responsibility</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cont. Construction</td>
<td>Equipment servicing and fuelling</td>
<td>• Fuelling and servicing of equipment and machinery will be confined to designated areas designed to contain spilled lubricants and fuel;</td>
<td>N.A.</td>
<td>Contractor</td>
<td>Contractor to provide a separate method statement and obtain approval from ESS during mobilisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Storage, handling and disposal of waste oil shall be managed and disposed of to approved sites according to MENR requirements;</td>
<td>N.A.</td>
<td>Contractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Washing of vehicles or any equipment in the Collector or temporary streams or ponds will be strictly forbidden. To this regard the contractor will inform his workforce accordingly.</td>
<td>N.A.</td>
<td>Contractor</td>
<td></td>
</tr>
<tr>
<td>Worker's safety and health Poor work site conditions may deteriorate worker’s health</td>
<td></td>
<td>• Apply to MoH’s Central Disinfection Centre and the District Disinfection Centre to obtain approval on the general living conditions and sanitary provisions in the worker’s camp;</td>
<td>N.A.</td>
<td>Contractor</td>
<td>The Contractor should appoint an environment, health and safety manager in the Construction Supervision Team (to be specified in the bidding documents)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide adequate health care facilities within the construction sites, including first aid equipment and facilities;</td>
<td>N.A.</td>
<td>Contractor</td>
<td>Personal working gear to be specified and made a separate, priced item in the bidding documents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide workers with safety instructions and appropriate personal protective gear such as protective clothing, safety boots, helmets, gloves, goggles, ear protection etc;</td>
<td>N.A.</td>
<td>Contractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Train all construction workers in basic sanitation and health care issues, general health and safety matters and on the specific hazards of their work;</td>
<td>N.A.</td>
<td>Contractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Assure good drainage at all sites within the construction camp to avoid stagnant water bodies which may become breeding sites for vectors of waterborne diseases;</td>
<td>N.A.</td>
<td>Contractor</td>
<td>Water supply is a problem in the project area. Therefore potable water supply for workforce should be made a separately priced item in the bidding documents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regular clearing of septic tanks from worker’s camp and other mobile toilets to prevent outbreak of diseases;</td>
<td>N.A.</td>
<td>Contractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide clean potable water for all workers in compliance with the relevant national standards on drinking water quality.</td>
<td>N.A.</td>
<td>Contractor</td>
<td></td>
</tr>
</tbody>
</table>
### A. Mitigation Plan (4)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Issue</th>
<th>Mitigation Measure</th>
<th>Cost (in US $)</th>
<th>Institutional Responsibility</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Cont. Construction   | Worker's safety and health  
Low Level awareness on HIV/AIDS and STD: Spread of HIV/AIDS and STD to the local community | All construction workers will be adequately informed about HIV/AIDS and STD and on how to avoid infection and transmission; Group consultation may be also done to create awareness among the community about these diseases. | 3,000          | Contractor                  | Contractor may subcontract or cooperate with the AIDS Centre in Baku to obtain practical advice and support.                                                                                                                                                       |
|                      | Material supply  
Asphalt Plant  
Dust, fumes, worker's health & safety, ecosystem disturbance;  
Sand & Gravel Borrow Pit  
Disturbance of river bed, water quality, ecosystem disturbance. | The Contractor shall obtain official approval or valid operating licence for the asphalt plant. He shall submit a layout plan of the site of the mixing plant and a method statement on handling of bitumen spills prior to the commencement of works.  
At the site the Contractor shall take appropriate provisions to assure that bitumen may not enter into dry or running stream beds or channels nor may it be disposed of in ditches or any waste disposal site. The bitumen storage and mixing area must be effectively protected against spill. Contaminated soil shall be handled according to MENR requirements or other acceptable standards. As a minimum, these areas must be contained as to allow immediate collection and clean up. Any petroleum products shall also be carefully managed to avoid spills and the contamination of the local groundwater table.  
The Contractor shall obtain official approval or valid operating licence and set up a plan of each borrow site he intends to use, indicating the location and planned rehabilitation upon completion of works. | N.A.          | Contractor                  | Contractor                                                                                                                                                                                                                                                 |

### A. Mitigation Plan (5)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Issue</th>
<th>Mitigation Measure</th>
<th>Cost</th>
<th>Institutional Responsibility</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cont. Construction</td>
<td>Material transport</td>
<td>- Cover truck load</td>
<td>minimal</td>
<td>truck operator</td>
<td>to be specified in bidding-documents – technical specifications for realization of works as above</td>
</tr>
<tr>
<td></td>
<td>Asphalt (Dust, fumes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stone (Dust)</td>
<td>- Wet or cover truck load</td>
<td>minimal</td>
<td>truck operator</td>
<td>As above</td>
</tr>
<tr>
<td></td>
<td>Sand &amp; Gravel (Dust)</td>
<td>- Wet or cover truck load</td>
<td>minimal</td>
<td>truck operator</td>
<td>To be specified and made a separate priced item in bidding-documents (the ultimate necessity of these measures depends on the borrow sites that will be selected and whether or not residential areas will be located alongside the haul routes), as above</td>
</tr>
<tr>
<td></td>
<td>Nuisance for the population in the neighborhood of borrow sites through dust and noise</td>
<td>Establish a dust control program: in the vicinity of settlements or where the local population might be affected through material transport the contractor will be required to regularly water haul routes. This will also apply to temporary access routes to aggregate sites. For these areas the contractor will prepare a spraying schedule which is the basis of the dust control program. Trucks shall be covered to minimize dust and material spillage.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the vicinity of settlements material transport will be restricted to between 0700 to 2100 hours within a 500 m distance of the adjoining settlements;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The contractor will take all necessary measures to prevent earthworks and stone works related to road construction from impeding the flow of rivers / streams and canals or existing irrigation and drainage systems;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Disposal of wastes, materials, as well as filling and parking of vehicles is restricted within 100 m of water drainage zones;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Washing of vehicles or any equipment in the Collector or any other temporary ponds will be strictly forbidden. The contractor shall instruct his workforce accordingly.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impediment of surface water quality</td>
<td></td>
<td>minimal</td>
<td>Contractor</td>
<td>Contractor to submit a method statement on the organization and execution of bridge construction works (Shirvan Main Collector)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N.A.</td>
<td>Contractor</td>
<td></td>
</tr>
</tbody>
</table>

Scott Wilson Central Asia  
D110123RER/EAMF  
November 2005
### A. Mitigation Plan (6)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Issue</th>
<th>Mitigation Measure</th>
<th>Cost</th>
<th>Institutional Responsibility</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Air pollution from improper maintenance of equipment</td>
<td>Maintain construction equipment to good standard; improper functioning machinery that causes excessive pollution will be banned from the construction sites.</td>
<td>minimal</td>
<td>Contractor</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td>Archaeological chance finds</td>
<td>In the event of the unexpected discovery of archaeological objects the Contractor should immediately notify local and archaeological authorities and follow their directions. Construction works would be stopped and the appropriate local executive authority would be immediately informed. Works will resume only after appropriate measures have been taken as requested by the appropriate authority, and confirmation has been received from them that works may continue.</td>
<td>minimal</td>
<td>Contractor</td>
<td>Requirements concerning measures in case of chance finds shall also be included in the bidding documents for civil works</td>
</tr>
</tbody>
</table>

**List of method statements / plans to be required from the Contractor for approval through RTSD's ESS (more details see EIA Report):**

1. A method statement on how conditions of safety on site and for traffic control and safety throughout all stages of construction shall be maintained; A statement on accident, fire and chemical spill containment / emergency procedures;
2. A proposal on the siting and organisation of the contractor's yard / work camp;
3. A waste management plan for the operation of the contractor's yard and worker's camp The plan should also include appropriate arrangements for the local storage and transport of this waste (as appropriate).
4. A layout plan of the site of the mixing plant and a method statement on the technology for bitumen storage and transport to the mixing plant and for the handling of bitumen spills;
5. A layout plan of the borrow pits for gravel and sand extraction and a method statement on the proposed work technology (crushing technology, measures for the minimization of waste) and material transport;
6. A layout plan of the borrow pit for fill material extraction, transportation method / route, rehabilitation of the borrow pit and methods proposed for the minimization of adverse environmental impact;
7. A method statement for the organization and execution of bridge construction works (Shirvan Main Collector);
8. Implementation of other technological processes according to standard requirements for the minimization of wastes and discharges;
9. A method statement on the management of dust and noise from material transport including indications on the proposed haul routes and the distance of these haul routes to the nearest houses / settlements;
10. A method statement on the proposed methodology for bridge construction over the Shirvan Main Collector and the proposed measures for the avoidance of surface water pollution.
### B. Monitoring Plan (1)

<table>
<thead>
<tr>
<th>Phase</th>
<th>What parameter is to be monitored?</th>
<th>Where is the parameter to be monitored?</th>
<th>How is the parameter to be monitored?</th>
<th>When is the parameter to be monitored? Frequency</th>
<th>Cost</th>
<th>Institutional responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTRUCTION PHASE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic safety</td>
<td>Existence of traffic management plan; traffic patterns</td>
<td>At and near job site</td>
<td>Inspection; comparison with Contractor's method statement</td>
<td>Before works start and once a week at peak and non-peak periods; during construction period once per week in the evening / in the dark</td>
<td>N.A.</td>
<td>minimal</td>
</tr>
<tr>
<td>Safety during construction</td>
<td>Safety outside working hours (night)</td>
<td>Visibility and appropriateness</td>
<td>At and near job site</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top soil preservation</td>
<td>Stockpiling and means of protection</td>
<td>Job site</td>
<td>Inspections; observation</td>
<td>Upon preparation of the construction site, after stockpiling and after completion of works on shoulders</td>
<td>N.A.</td>
<td>minimal</td>
</tr>
<tr>
<td>Contractor's yard</td>
<td>Contractor's yard</td>
<td>Inspections; observations</td>
<td>Unannounced inspections during construction</td>
<td></td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Equipment servicing and fuelling</td>
<td>Contractor's yard</td>
<td>Inspections; observations</td>
<td>Unannounced inspections during construction</td>
<td></td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
</tbody>
</table>
## B. Monitoring Plan (2)

<table>
<thead>
<tr>
<th>Phase</th>
<th>What parameter is to be monitored?</th>
<th>Where is the parameter to be monitored?</th>
<th>How is the parameter to be monitored?</th>
<th>When is the parameter to be monitored?</th>
<th>Frequency</th>
<th>Cost</th>
<th>Institutional responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker’s safety and health</td>
<td>Possession of MoH’s official approval for worker’s camp; Availability of appropriate personal protective equipment; organization of traffic on the construction site</td>
<td>Job site and worker’s camp</td>
<td>Inspection; interviews; comparisons with the Contractor’s method statement</td>
<td>Unannounced inspections during construction and upon complaint</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A. Supervision Contractor</td>
</tr>
<tr>
<td>Worker’s education on AIDS and STD</td>
<td>Has relevant education been provided?</td>
<td>Worker’s camp</td>
<td>Interviews</td>
<td>After beginning of works and at appropriate intervals throughout construction</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A. Supervision Contractor</td>
</tr>
<tr>
<td>Material supply</td>
<td>possession of official approval or valid operation license</td>
<td>Asphalt plant</td>
<td>Inspection</td>
<td>Before work begins</td>
<td>N.A.</td>
<td>N.A.</td>
<td>plant operator</td>
</tr>
<tr>
<td>Asphalt plant</td>
<td>石料采石场 possession of official approval or valid operation license</td>
<td>Stone quarry</td>
<td>Inspection</td>
<td>Before work begins</td>
<td>N.A.</td>
<td>N.A.</td>
<td>quarry operator</td>
</tr>
<tr>
<td>Sand and gravel borrow pit</td>
<td>possession of official approval or valid operation license</td>
<td>Sand and gravel borrow pit</td>
<td>Inspection</td>
<td>Before work begins</td>
<td>N.A.</td>
<td>N.A.</td>
<td>borrow pit operator</td>
</tr>
</tbody>
</table>
## B. Monitoring Plan (3)

<table>
<thead>
<tr>
<th>Phase</th>
<th>What parameter is to be monitored?</th>
<th>Where is the parameter to be monitored?</th>
<th>How is the parameter to be monitored?</th>
<th>When is the parameter to be monitored?</th>
<th>Frequency</th>
<th>Cost</th>
<th>Institutional responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material transport asphalt</td>
<td>Are the truck loads covered or wetted?; Compliance with the Contractor's method statement (restricted working hours, haul routes) dust suppression methods where required</td>
<td>Job site / haul routes</td>
<td>Supervision</td>
<td>unannounced inspections during work</td>
<td></td>
<td>N.A.</td>
<td>minimal</td>
</tr>
<tr>
<td>Stone</td>
<td></td>
<td>Job site / haul routes</td>
<td>Supervision</td>
<td>unannounced inspections during work</td>
<td></td>
<td>N.A.</td>
<td>minimal</td>
</tr>
<tr>
<td>Sand and gravel</td>
<td></td>
<td>Job site / haul routes</td>
<td>Supervision</td>
<td>unannounced inspections during work</td>
<td></td>
<td>N.A.</td>
<td>minimal</td>
</tr>
<tr>
<td>Surface water protection</td>
<td>Contractor's compliance with his approved method statement</td>
<td>Bridge construction site at Shirvan Main Collector</td>
<td>Inspection</td>
<td>unannounced inspections during bridge works</td>
<td>N.A.</td>
<td>minimal</td>
<td>N.A. Supervision contractor</td>
</tr>
<tr>
<td>Air pollution from improper maintenance of equipment</td>
<td>exhaust fumes, dust</td>
<td>at site</td>
<td>visual inspection</td>
<td>unannounced inspections during works</td>
<td>N.A.</td>
<td>minimal</td>
<td>N.A. Supervision contractor</td>
</tr>
<tr>
<td></td>
<td>exhaust fumes,</td>
<td>at site</td>
<td>visual inspection</td>
<td>unannounced inspections during works</td>
<td>N.A.</td>
<td>minimal</td>
<td>N.A. Supervision contractor</td>
</tr>
</tbody>
</table>

**OPERATIONAL PHASE**

The Environmental Monitoring Plan prepared and implemented during the construction phase should be expanded based on that experience. The monitoring plan for the operational phase should also include monitoring post-construction during the first year of operation so that action may be taken if any detrimental effects occur.
APPENDIX H - REPORTING FORMAT BY RTSD TO WB

Every six months, RTSD will submit regular progress reports at 6 month intervals to WB. The progress report will include an environmental section with the following suggested format:

(a) **Executive Summary**: Brief description of progress made and the next steps (no more than 2 pages);

(b) **Status**: For each sub-project, the following will be included

- status of the environmental screening process – sub-project classification as per the environmental categories;
- status on submission of EIAs to the Bank for Category A projects – expected timing of the submission since the EIA has to be in Bank’s InfoShop for the Bank to provide the ‘no objection’ on the sub-project;
- status on the preparation of the EIAs and EMPs, including the public consultations and the authorization to start construction from related local and environmental authorities;
- status on the public disclosure of the EIAs and EMPs, as per the environmental framework;
- status of environmental permits required by each sub-project during construction phase;
- details of any reported incidents of non-compliance with applicable environmental permits including any fines imposed;
- details of any public complaints, coverage in the media or interaction with environmental groups.

(c) **Next Steps**: This will include

- upcoming key actions to be undertaken by RTSD, MENR and WB;
- suggestions to streamline the process, under the applicable policies; and
- Technical Assistance proposed by RTSD to WB.