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PREAMBLE

For centuries Bhutanese have preserved their natural resources and lived in harmony with nature. His Majesty the King Jigme Singye Wangchuck has always emphasized that development must not take place at the expense of our natural resources. It is because of this political will and our traditional reverence for nature that Bhutan is today blessed with a rich natural environment.

Aware of the problems that uncontrolled economic development can cause, and recognizing the importance of sustainable development for Bhutan with its fragile mountain ecosystems and extremely high level of biodiversity, the Royal Government has chosen the “middle path” of sustainable development. This is development that recognizes the need to raise the living standards of the present population without compromising the country’s cultural integrity, historical heritage or the quality of life for future generations.

In dedication to the visionary aspirations of our beloved Kings and in reverence to the moral, cultural, and ecological values of our forefathers;

And to ensure that socio-economic development in Bhutan is consistent with the “middle path” of sustainable development;

This Act is hereby adopted.

Chapter I General Provisions

Purpose

1. This Act establishes procedures for the assessment of potential effects of strategic plans, policies, programs and projects on the environment, and for the determination of policies and measures to reduce potential adverse effects and to promote environmental benefits.

Title, Extent and Commencement

2. This Act shall be called the Environmental Assessment Act, 2000.
3. It shall enter into force on the /// day of /// 2000.
4. It shall extend to the whole of the Kingdom of Bhutan.

Scope

5. This Act applies to strategic plans, policies, programs and projects which may have an impact on the environment.

Definitions

6. Under this Act:

- 6.1. **Act** means the Environmental Assessment Act, 2000.
- 6.2. **Agency** means a ministry, department, municipality established under the Bhutan Municipal Act, 1999 or any autonomous public body of the Royal Government of Bhutan.
- 6.3. **Applicant** means a person seeking a development consent or environmental clearance from a competent authority or the Secretariat.
- 6.4. **Competent Authority** means any agency of the Royal Government which has the power to issue a development consent for a project.
- 6.5. **Concerned people** means individuals, groups and communities whose interests may be affected by a project.
- 6.6. **Development consent** means the approval issued or renewed by a competent authority in the form of a license, lease, or permit for land use or construction.
- 6.7. **Emission** means the direct or indirect release of substances, vibrations, heat or noise from individual or diffuse sources in the project into the air, water or land.
- 6.8. **Emission control limit** means the mass, expressed in terms of certain specific parameters, concentration and/or level of an emission that a project or its activities may not exceed during one or more periods of time.
- 6.9. **Environment** means the complex web of interrelationships between the abiotic and biotic components which sustains life on earth, including the social, health and cultural aspects of human beings.
- 6.10. **Environmental assessment** means all procedures required under Bhutanese law to identify means to ensure that the activities of a project are managed in an environmentally sound and sustainable way.
- 6.11. **Environmental clearance** means the decision under Chapter III of this Act, issued in writing by the Secretariat or the competent authority, to let a project proceed, which includes terms to ensure that the project is managed in an environmentally sound and sustainable way.
- 6.12. **Environmental management plan** means a plan which specifies the environmental, health and safety terms for the design, construction, operation, and decommissioning of a project.
- 6.13. **Environmental terms** means the requirements and conditions which the project must comply with, as stated in the environmental clearance issued by the Secretariat or the competent authority, and any related requirements in the development consent.

- 6.14. **Existing project** means a project that received a development consent or began operation before the entry into force of this Act.
- 6.15. **Holder** means the recipient of an environmental clearance under Chapter III.
- 6.16. **Kingdom** means the Kingdom of Bhutan.
- 6.17. **Monitoring** means a program of systematic, objective and quantitative measurements, observations and reporting of projects that may have environmental impacts.
- 6.18. **Person** means any individual, legal entity, or agency.
- 6.19. **Plan** means a coordinated set of policies and programs, based on the political decisions of the Royal Government of Bhutan, intended to achieve specific objectives within a specified time period.
- 6.20. **Program** means a set of coordinated activities of the Royal Government of Bhutan to achieve specific objectives of a plan.
- 6.21. **Project** means an activity which may have significant effects on the environment.
- 6.22. **Royal Government** means the Royal Government of Bhutan.
- 6.23. **Screening** means the determination by the Secretariat or the competent authority of how the environmental assessment process under Chapter III of this Act shall be applied to a project.
- 6.24. **Secretariat** means the Secretariat of the National Environment Commission, or its successor as may be decided by the Royal Government.
- 6.25. **Strategic Environmental Assessment** means a systematic process for evaluating the environmental consequences of a proposed policy, plan or program of the Royal Government.

Chapter II

Environmental Clearance

Environmental concerns

7. The Royal Government shall ensure that environmental concerns are fully taken into account when formulating, renewing, modifying and implementing any policy, plan or program, as per regulations that may be adopted according to Article 32.2.

Environmental clearance

8. The issuance of an environmental clearance shall be prerequisite to the issuance of a development consent.
9. A project of the Royal Government that does not require a development consent may commence only after receiving an environmental clearance from the Secretariat.
10. The environmental clearance shall set out environmental terms for the project. When a development consent is required, the environmental clearance shall be attached to and be an integral part of it.

Chapter III

The Environmental Assessment Process

General procedure

11. Any person who seeks to carry out a project that requires a development consent shall include in the application to the competent authority a description of the potential environmental effects of the project.
12. The competent authority may accept the application when it determines that the information provided is sufficient for screening and environmental assessment of the project under this Act.
13. Except for listed projects under Article 33.1, the competent authority shall forward the application and related information regarding the project to the Secretariat for screening.
14. The Secretariat shall screen the project when it determines that the information provided in the application is sufficient to identify the potential environmental effects of the project.
15. If the Secretariat cannot, on the basis of the information provided by the applicant, identify the potential environmental effects of the project, or if the information provided is not sufficient to demonstrate that the project satisfies the terms in Article 18, the competent authority shall ask the applicant to prepare environmental assessment documents according to terms of reference approved by the Secretariat.
16. The applicant shall ensure that concerned people and organizations are informed and consulted before submission of the environmental assessment documents to the competent authority.
17. When it determines that the environmental assessment documents are complete, the competent authority shall forward them to the Secretariat.
18. The Secretariat may issue the environmental clearance when it is satisfied that:

- 18.1. The effects of the project on the environment are foreseeable and acceptable;
- 18.2. The applicant is capable of carrying out the terms of the environmental clearance;
- 18.3. The project, alone or in connection with other programs or activities, contributes to the sustainable development of the Kingdom and the conservation of its natural and cultural heritage;
- 18.4. Adequate attention has been paid to the interests of concerned people; and,
- 18.5. The project is consistent with the environmental commitments of the Kingdom.

When development consent is not required

19. Any agency that seeks to carry out a project that does not require a development consent shall submit an application to the Secretariat for an environmental clearance. The application shall include a description of the potential environmental effects of the project.
20. The Secretariat shall screen the project and may issue an environmental clearance when it determines that the information provided in the application is sufficient to identify the potential environmental effects of the project, and that the project satisfies the conditions in Article 18.
21. If the Secretariat cannot, on the basis of the information provided by the applicant, determine that the project satisfies the terms in Article 18, it shall ask the applicant to prepare environmental assessment documents according to terms of reference approved by the Secretariat.
22. Prior to submission of the environmental assessment documents, the agency shall ensure that concerned people and organizations are informed and consulted.

Validity, modification and renewal

23. The environmental clearance for a project shall be reviewed and may be revised and renewed at least every five years, unless a shorter period is stated in the environmental clearance.
24. The holder must notify the competent authority, or the Secretariat in the case of projects not requiring a development consent, of any changes planned in the operation of the project which may have effects on the environment. The terms of the environmental clearance may be modified accordingly.
25. Notwithstanding Articles 23 and 24, the Secretariat or the competent authority may review and modify the terms of the environmental clearance whenever the following circumstances may arise:

- 25.1. Unacceptable risks to the environment resulting from the project which were not known at the time the environmental clearance was issued,
- 25.2. The availability of improved and cleaner technology, or
- 25.3. To bring the project into compliance with changes to the laws of the Kingdom.

Chapter IV Information

- 26. The applicant shall provide any information in their possession or obtainable by them which the Secretariat or the competent authority determines is needed to carry out their duties under this Act.
- 27. Any agency holding information needed by applicants to fulfill their obligations under this Act shall make it available upon request within a reasonable time.
- 28. When a decision on the environmental clearance has been taken, the Secretariat or the competent authority shall make a public announcement of the decision and make the following information available to the public:
 - 28.1. A description of the project;
 - 28.2. The environmental terms;
 - 28.3. A description of measures to avoid or mitigate potential adverse impacts and enhance positive impacts of the project;
 - 28.4. The main reasons and considerations on which the decision is based, including the basis for the acceptance or rejection of views and arguments presented by other authorities and concerned people;
 - 28.5. A non-technical summary of the information under Sub-articles 28.1 to 28.4.
- 29. Documents related to environmental clearances shall be kept on file at the office of the Secretariat or the competent authority and made available to the public upon request, as per established practice.
- 30. The applicant or the holder may request that specified information be kept confidential if dissemination would cause substantial harm to their commercial and industrial interests.
- 31. An agency may refuse to provide information to the public if it determines that it is confidential under national law and accepted legal practice regarding commercial and industrial confidentiality, intellectual property, and the safeguarding of the public interest.

Chapter V

Functions and Powers

The National Environment Commission

32. The National Environment Commission shall:

- 32.1. Supervise the activities of the competent authorities and Secretariat, provide guidance and ensure the implementation of this Act;
- 32.2. Adopt regulations defining requirements for strategic environmental assessment of policies, plans and programs of the Royal Government;
- 32.3. Adopt regulations specifying the time frame within which existing projects shall achieve compliance with this Act;
- 32.4. Adopt regulations and guidelines on public information, consultation, mediation and appeals, and on incentives for persons who may inform authorities about emergency situations under Article 48;
- 32.5. Adopt regulations concerning decision-making and appeal procedures under this Act, where procedures do not exist under other laws;
- 32.6. Adopt regulations concerning administrative sanctions, fines, and the payment of compensation for environmental damage resulting from projects that have received an environmental clearance under this Act;
- 32.7. Bring complaints to the Department of Legal Affairs for the prosecution of violations of this Act.

33. The National Environment Commission may:

- 33.1. Adopt a list of projects for which the competent authority shall screen and issue the environmental clearance;
- 33.2. Adopt emission control limits for projects under this Act.
- 33.3. Review and revise the amounts of fines under Article 52.
- 33.4. Hear and decide disputes under this Act.

The Secretariat

34. The Secretariat shall:

- 34.1. Decide on issuance of environmental clearance to projects under Chapter III;

- 34.2. Monitor and control compliance with the terms of environmental clearances;
 - 34.3. Inform the competent authority of any violation of the terms of environmental clearance, or of any other potentially dangerous activities of a project under Article 40;
 - 34.4. Report annually to the National Environment Commission on the implementation and enforcement of this Act, and propose necessary amendments to it.
35. The Secretariat, in consultation with the concerned competent authorities, shall issue regulations and guidelines concerning:
- 35.1. Terms of reference for environmental assessments, environmental management plans, and other environmental assessment documents;
 - 35.2. Information to be included in the application for environmental clearance or development consent;
 - 35.3. Fee schedules to cover the costs of administering this Act;
 - 35.4. Monitoring and controlling compliance;
 - 35.5. Emergency response;
 - 35.6. Reporting on the implementation and enforcement of this Act;
 - 35.7. Any other matters necessary for the implementation and enforcement of this Act.
36. The Secretariat shall have the powers and duties of the competent authority under Articles 39 for the environmental clearance of projects under Articles 19 to 22.
37. When the applicant is a competent authority as defined under this Act, the Secretariat shall be the competent authority to issue environmental clearance and shall have the powers and duties defined under Article 36.
38. The Secretariat may appoint an Environmental Assessment Advisory Board to provide technical advice on the environmental assessment and the environmental terms for a project.

The Competent Authority

39. The competent authority shall:
- 39.1. Attach environmental terms to the development consent which may contain applicable codes of best practices;

- 39.2. Ensure that concerned people and agencies are adequately consulted before issuance of a development consent, as per regulations and guidelines that may be adopted under Article 32.4;
- 39.3. Monitor, control and enforce the terms of the environmental clearance attached to development consents, including ordering sanctions and compensation for environmental damage;
- 39.4. Report annually to the Secretariat on implementation, monitoring and enforcement of this Act.
- 39.5. In consultation with the Secretariat, adopt regulations on environmental, health and safety standards; codes of best practice; instructions; application forms; guidelines, and other documents and information materials concerning the implementation of this Act.

Chapter VI

Monitoring and Control

Compliance

40. On becoming aware of non-compliance with the environmental terms or other activities related to a project that may be dangerous to the environment, the Secretariat shall notify the competent authority and may set a time limit for taking remedial measures.
41. When the competent authority fails to take action to remedy the situation within the time limit, the Secretariat may notify the Chairman of the National Environment Commission, assume the powers of the competent authority under this Act, and take any necessary action.
42. In case of non-compliance with the terms of an environmental clearance, the competent authority or the Secretariat shall, by registered letter, notify the holder and order the project to comply with the environmental terms. They may direct it to take necessary measures using personnel and facilities approved by the competent authority or the Secretariat by a set time limit.
43. When the holder fails to comply with the order within the time limit, the competent authority or the Secretariat may take necessary corrective, protective and preventive measures to restore and maintain compliance with the terms of the environmental clearance.

Right of access

44. Officers of the Secretariat or the competent authority may, without prior notification, enter the site of a project in order to ensure compliance with the terms of the environmental clearance or to control an emergency under Article 47, and may:

- 44.1. Make visual inspections and spot checks;
- 44.2. Interview employees, occupants or persons on the site;
- 44.3. Collect samples in presence of the holder, their agent or the occupant of the site;
- 44.4. Inspect and take copies of relevant data or documents;
- 44.5. Take necessary measures to control immediate risks to the environment.
- 45. The holder, the manager or occupant at the site of the project shall provide full cooperation to officers acting under Article 44.
- 46. When necessary to achieve compliance with this Act, the competent authority or the Secretariat may call upon the assistance of any agency or law enforcing body, who shall provide full cooperation to officers acting under Article 44.

Emergencies

- 47. When immediate action is needed to prevent or control serious risk to the environment from a project, the competent authority and the Secretariat shall, without prior notice to the holder, take necessary measures to prevent or control the risk, including immediate suspension or closure of the project or any activity of the project.
- 48. Any person who becomes aware of activities of a project that are likely to lead to serious risk to the environment shall immediately notify the competent authority, the Secretariat or the nearest local authority. The authority that receives such information or a court of law that may summon and hear such person for corroborative reasons, shall keep confidential the identity of the informing person.

Chapter VII

Offenses and Penalties

Offenses

- 49. The following actions shall constitute an offense under this Act:
 - 49.1. Establishing, commencing or carrying out a project without the required environmental clearance;
 - 49.2. Altering or interfering with devices installed as per the environmental terms;
 - 49.3. Giving false or misleading statements or information regarding an application for or compliance with the environmental clearance to any officer acting under this Act;

- 49.4. Failure to comply with an order issued under Article 42;
- 49.5. Failure to provide information according to Articles 26 or 27;
- 49.6. Wilfully delaying or preventing access to the project site in violation of Article 44;
- 49.7. Failure to extend cooperation to officers of the competent authority or the Secretariat according to Articles 45 and 46;
- 49.8. Obstruction of an officer or employee of the competent authority or the Secretariat in execution of their duties under this Act;
- 49.9. Failure to report according to Article 48;
- 49.10. Failure to comply with the terms of the environmental clearance;
- 49.11. Issuance of an environmental clearance in violation of the procedures and requirements of this Act;
- 49.12. Failure to comply with any other provision of this Act, regulations or rules under it.

Compensation and Sanctions

- 50. Whoever commits an offense under this Act may be subject to sanctions, held liable for payment of compensation for environmental damage resulting from their action, as well as subject to prosecution for any related criminal offense.
- 51. Sanctions under this Act include suspension or revocation of environmental clearance, in part or in whole, and payment of a fine.
- 52. A fine shall range from five thousand to one-hundred thousand Ngultrums, depending on the severity of the offense. When the offense is repeated in violation of an order issued under Article 42, an additional fine may be imposed ranging from ten thousand to fifty thousand Ngultrums for every day the offense continues after the expiration of the time limit.
- 53. The head of an agency that has been found to have committed an offense under Articles 49 and 59 shall be subject to administrative sanction as per the Royal Civil Service Commission Rules, 1990.
- 54. The head of an agency or the Managing Director or owner of a legal entity that has been found to have committed an offense under Articles 49 and 59 may be held jointly or severally liable for any damage which occurs as a result of the offense.
- 55. The determination of liability for offenses committed under this Act shall take the following factors into account:
 - 55.1. Magnitude of the offense;

- 55.2. Frequency of the offense;
- 55.3. Actual or potential impact on the environment;
- 55.4. The culpability of the offender;
- 55.5. The extent of the achieved or intended economic advantage from the offense.

Jurisdiction

- 56. The District Court or any specialized court or tribunal which may be established by the Royal Government having original jurisdiction shall hear the cases under this Act.
- 57. When the penalties for offenses committed under this Act are also covered by any other law, the penalties shall be determined as per this Act.

Publication of offenders

- 58. The competent authority or the Secretariat may publish the name, business office, offense and penalty imposed of any person who is found liable for an offense under this Act and who commits the same offense again. Publication may be in the newspaper, broadcast media or in any other manner that the Secretariat or competent authority deems fit.

Chapter VIII Performance of duties

Performance of Duties

- 59. The officers of the competent authorities and the Secretariat shall carry out their duties in good faith and for the purpose of implementing the requirements of this Act.

Chapter IX Appeals and Dispute Resolution

Interagency conciliation

- 60. Where more than one agency is affected by a proposed project, the head of the Secretariat may convene a meeting of concerned agencies to seek a common solution.

Dispute Resolution

61. In case of a dispute under this Act, the concerned parties shall first attempt to settle the matter amicably and in good faith through informal dialogue.
62. In the event of failure to settle the dispute amicably, any party may appeal to the National Environment Commission, which shall have discretion to hear or refuse the case.

Chapter X Miscellaneous Provisions

Publication

63. All regulations and guidelines adopted under this Act shall become effective three months after publication of an announcement in the national press or of the full text in the official gazette of the Royal Government.

Liability and Costs

64. The applicant/holder shall bear all costs associated with meeting the requirements under this Act.
65. The competent authority or the Secretariat, as the case may be, may recover the costs of measures taken under Articles 43, 44.5 or 47 from the holder.

Revision of this Act

66. When necessary and on the basis of the report of the Secretariat, the National Environment Commission shall submit a report and proposals for the amendments of this Act to the National Assembly.

Interpretation

67. In case of differences in interpretation of this Act in one or more of languages, the interpretation in Dzongkha text shall be final and binding.

**APPLICATION FOR
ENVIRONMENTAL CLEARANCE
GUIDELINE FOR
HIGHWAYS AND ROADS**

**National Environment Commission
Royal Government of Bhutan
August 2004**



དཔལ་ལྷན་འབྲུག་གཞུང་།
རྒྱལ་ཡོངས་མཐའ་འཁོར་གནས་སྤངས་ལྷན་ཚོགས་ཡིག་ཚང་།
ROYAL GOVERNMENT OF BHUTAN
NATIONAL ENVIRONMENT COMMISSION SECRETARIAT

FOREWORD

In 1999, the National Environment Commission with technical and financial assistance from the Asian Development Bank (ADB) published six sectoral environmental assessment guidelines for the mining, roads, industries, hydropower, transmission lines and forestry sectors. Several stakeholder consultation workshops and seminars were conducted before the guidelines were published. These guidelines were intended to guide different project proponents through the process of acquiring an environmental clearance for their projects. The Environmental Assessment 2000 (EA Act 2000) was passed by the National Assembly in 2000 and the Regulations under the Act were adopted two years later. Stakeholder feedback and our experiences in implementing the EA Act and the guidelines indicated that there was a need to revise the guidelines in order to make them more practical and relevant to the Bhutanese context and also to streamline them with the provisions of the EA Act 2000. It was also felt that there was a need for two more sectoral guidelines for urban development and tourism as rapid developments in these two sectors was becoming a concern for Bhutan. Therefore, in 2003 the NEC once again revisited these guidelines and revised and updated them to make them more practical and functional documents. Several Environmental Codes of Best Practices (ECOPs) have also been produced to support these environmental assessment guidelines.

The NEC is grateful to the ADB for being so forthcoming with technical and financial assistance to revise and update these guidelines. The revision and updating of these guidelines were accomplished through close consultation with all the various stakeholders. We would also like to express our gratitude and appreciation to all the line ministries and stakeholders for their active participation, support and inputs. We are confident that the revised guidelines will be more useful documents that facilitate and expedite the environmental clearance process as project proponents will now have a better understanding of what information must be provided in order to attain an environmental clearance.

In Bhutan, environmental conservation has been embraced as one of the four pillars of Gross National Happiness - the other three pillars being good governance, socio-economic development and cultural preservation. However, with the expansion of developmental activities in the country, it is becoming very difficult to strike a sustainable balance between environmental conservation and socio-economic development. The number of industries is on the rise every year

while the demand for rural access to market facilities in the form of farm roads and feeder roads is increasing with every Five Year Plan - in the 9th Five Year Plan alone there is a plan to develop 588kms of farm roads. Environmental issues such as waste disposal related to urbanization are also becoming serious concerns for Bhutan. Bhutan is lauded by the international community for its sound environmental policies and the political will to implement these policies. However, environmental problems are becoming more and more visible and instruments like the EA Act 2000 must be implemented effectively to support the government's sound environmental policies and to ensure that Bhutan remains clean and green.

The environmental assessment process endeavors to mitigate and prevent the undesirable impacts of developmental activities. It is in no way intended to hamper socio-economic development in Bhutan but to guide project proponents in making the right investments in land, manpower, technology and mitigation measures to ensure that their projects have the least possible impacts on the environment. With the revision and updating of the old guidelines and the publication of two new guidelines on Urban Development and Tourism and relevant ECOPs, the NEC is hopeful that the private sector, line ministries and competent authorities under the Regulations for Environmental Clearance of Projects find the guidelines more useful, practical, informative and easy to comply with. It is the sincere wish and hope of NEC that all the stakeholders, both public and private will make the best use of these guidelines, which in turn will help in protecting our fragile ecology. Sound implementation of these guidelines will go a long way in minimizing the negative impacts of developmental activities on Bhutan's environment.


18.8.2004

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1. GLOSSARY

Affected people: individuals, groups or communities, or other organisations, whose interests may be directly affected by the location, construction and operation of the project

Agency: a ministry, department, municipality established under the Bhutan Municipal Act, 1999 or any autonomous body of the Royal Government of Bhutan

Applicant: a person seeking an Environmental Clearance from a Competent Authority or from the National Environment Commission Secretariat

Competent Authority. Any agency of the Royal Government that has the power to issue an Environmental Clearance for a project

Cultural Heritage: tradition or culture that should be preserved for future generations

Development Consent: the approval that is issued or renewed by a Competent Authority in the form of a licence, lease or permit for land use or construction. The Development Consent can only be obtained after the Environmental Clearance has been issued

Distribution line: power lines with voltages below 66 kilovolts

Environmental Assessment: all procedures required under Bhutanese law to identify means to ensure that the activities of a project are managed in an environmentally sound and sustainable way

Environmental Clearance: the decision issued under Chapter III of the Environmental Act, 2000, that is issued in writing by the National Environment Commission or the Competent Authority, to let a project proceed. The Environmental

Clearance includes terms and conditions which the Applicant or Holder of the Environmental Clearance must abide by to ensure that the project is managed in an environmentally sound and sustainable way

Environmental Management Plan: a plan which addresses the ways of mitigating and monitoring the impacts that have been identified by the environmental assessment. The Environmental Management Plan may comprise part of the conditions of the Environmental Clearance that is issued either by the Competent Authority or by the National Environment Commission

Environmental Parameter: A component of the surrounding environment which may be altered by a project activity. This includes physical interventions or releases to air, water and soil which may in turn affect vegetation, wildlife, human and aquatic communities

Environmental Terms: the requirements and conditions that a project must comply with, as stated in the Environmental Clearance issued either by the NEC or the CA

Environmental Unit: a management unit that is established within a project structure that is responsible for implementing, monitoring and reporting on the environmental terms attached to the Environmental Clearance

Forest: any land or water body, whether or not under vegetative cover, in which no person has acquired a permanent and transferable right of use and occupancy, whether such land is inside or outside the forest boundary pillars, and includes land registered in a person's name as Tsamdo (grazing land) or Sokzhing (woodlot for collection of leaf litter)

Holder: the recipient of an Environmental Clearance under Chapter III of the EA Act, 2000

Formation width: the constructed width of the road which includes the pavement width and the shoulder width

Land acquisition: the acquisition of any land, constructions or other property in accordance with the procedures established under the Land Act, 1979 (or successor legislation)

Monitoring: a program of systematic measurement or observation of environmental and social parameters. Monitoring requirements includes regular reporting and specifies action to be taken if non-compliance occurs. Monitoring requirements are specified in the Environmental Terms which is attached to the Environmental Clearance. Monitoring consists of *Baseline monitoring* which is carried out prior to commencement of a project. Baseline monitoring measures the existing environment and this is compared to later monitoring which establishes the effects caused by the project. *Compliance monitoring* refers to a system of regular measurements which compares releases from an activity to those that have been specified in the Environmental Terms. The permitted releases are established in environmental discharge standards, 2004

Municipal Corporation: a Corporation incorporated under the Bhutan Municipal Act, 1999, to implement the provisions of that Act for the benefit of the residents of a community classified as a Municipality by the Royal Government

Non-listed project: all projects that are not listed in Annex 2 of the Regulation for the Environmental Clearance of Projects, 2002 including its most recent update

Pavement width: the width of the formed pavement that is intended to carry traffic. The pavement may be either blacktopped or stone soling. A shoulder is located on either side of the pavement

Project: an activity which may have significant effects on the environment

Project area: The area that includes the immediate and the proximate area of a project that the project may have an environmental or social impact on

Protected Area: is an area which has been declared to be a national park, conservation area, wildlife sanctuary, wildlife reserve, nature reserve, strict nature reserve, research forest, critical watershed or other Protected Areas for the preservation of areas of natural beauty of national importance, protection of biological diversity, management of wildlife, conservation of soil and water and related purposes

Road: the entire surface of land designed for use by means of transportation, including road infrastructure and facilities. It includes all types of roads, whether paved or unpaved and mule tracks

Road Right of Way (RoW): the strip of land reserved for the road which also includes areas assigned for expansion of the road, central verge, pedestrian areas/sidewalks, roadside drains, and avenue plantations. It also includes space required for installation of public utilities and other relevant structures, facilities and equipment

Road shoulder: the two extreme strips of formation that remain on either side of the road pavement

Screening: the review process carried out by the National Environment Commission or by the Competent Authority of the Application with regard to whether the project may be (i) issued with an EC (ii) rejected or (iii) require further environmental assessment

Sustainability: development that recognises the need to raise the living standards of the present population without compromising the country's resource base, cultural integrity, historical heritage or the quality of life of future generations

Wildlife: includes all mammals, avians, reptiles, amphibians, fishes and invertebrates

3.5 Project Description

3.5.1 Project Location

Provide the name and location of the takeoff point for the road. If the place has no name, mention the name of the nearest place and identify the takeoff point as being e.g. *2.4 km west of xxxx*. Follow the same procedure for the termination point. Show the estimated length of the road either in meters or in kilometres.

Construct a Table similar to Table 1 specifying the road location by stating which *Dzongkhag*, *geog* and town the road is located in or passing through. The location must be specified in terms of road chainage. For example chainage 0+000 – 12+230, Wangdue Dzongkhag, Lobesa Geog. **12+230 should be read as 12 km and 230m.**

Table 1: Road location details by Dzongkhag and Geog

2. C Road Chainage		Dzongkhag	Geog	Town/Village
From	To			

Attach maps as below:

- I For a road longer than 5km, include a 1:50,000 scale topographic map that shows the proposed road alignment together with alternative options, the location of construction camps, quarry sites, excavated material dump sites and existing infrastructure. The map should also show rivers, existing roads, Protected Area boundaries, Dzongkhag HQ, important historical sites and other main towns - if these are located within the area of the road

2. Introduction

In 1999 the National Environment Commission (NEC) approved six sectoral environmental guidelines on (i) Forestry, (ii) Highways and Roads, (iii) Hydropower, (iv) New and Existing Industries, (v) Mines and Mineral Processing and (vi) Power Transmission Lines. In 2000, the National Assembly passed the Environmental Assessment Act and in 2002, the government approved the Regulation for the Environmental Clearance of Projects (the Regulation). Under the Regulation, both the National Environment Commission (NEC) and the designated Competent Authorities (CA), which are listed in Annex 2 of the Regulation, are authorized to issue Environmental Clearances for projects.

Applicants, CAs and the NEC found the six sectoral guidelines developed in 1999 cumbersome and difficult to comply with. This often led to delays in issuing environmental clearances and therefore the execution of projects. In order to ensure that these guidelines address the requirements of the *Environmental Assessment Act, 2000* and the *Regulation for the Environmental Clearance of Projects, 2002* while at the same time keeping them simple and easy to follow, the NEC, with financial and technical assistance from the Asian Development Bank (ADB), has revised the six guidelines and also developed two new sectoral guidelines: one for tourism and the other for urban development.

The NEC had the overall responsibility for coordinating the program, which was directed by Mr Karma C. Nyedrup of the Environmental Assessment Section. The assistance of numerous officers within the NEC and the following consultants; Karma_Jimba, Sonam Tobgay and Charles Adamson is gratefully acknowledged.

This guideline has been developed in close consultation with relevant agencies that are involved in road construction and maintenance with the intention of making it easier to use.

The guideline also integrates requirements needed by other agencies who are involved in approving the project.

Article 9 of the Environmental Act, 2000 states that if the activity is going to be implemented by a Competent Authority, then the Application for Environmental Clearance is to be forwarded to the NEC for approval.

3. INFORMATION REQUIRED FOR PREPARING AN APPLICATION FOR THE ENVIRONMENTAL CLEARANCE OF A PROJECT

The Application for Environmental Clearance (EC) of a project¹ is hereinafter referred to in this Guideline as the "Application.

- 1 Issuance of an Environmental Clearance is a prerequisite to the issuance of a Development Consent. (Ch II, article 8, Environmental Act, 2000)
- 2 The Competent Authority under the Ministry of Works and Human Settlement will issue the Environmental Clearance for projects that are defined in Annex 2 of the Regulation for the Environment Clearance of Projects, 2002²
- 3 The purpose of the Application is to assist the CA or the NEC review the project and to determine the level of environmental assessment required. It is therefore, important to provide concise and accurate information when completing the Application. When quantifying the environmental impacts, avoid using subjective statements such as *"the project will have minimal environmental impact"*

¹To establish a project without an Environmental Clearance, or to provide false, misleading or inaccurate information shall be an offence under Article 49 of the EA Act, 2000 and Section 36 and 37 of the Regulation for the Environmental Clearance of Projects, 2002.

²Each year the NEC requests the various Competent Authorities to review and add projects to Annex 2. Thus while the Regulation was issued in 2002, Annex 2 has and will continue to be revised. The latest issue of the Regulation needs to be referred to for the most recent update of Annex 2.

- 4 One of the main reasons for delays in making a decision to either issue environmental clearance or reject the Application is lack of adequate information in the Application. If the required information is not provided in detail, the CA or the NEC will have to seek further clarification from the Applicant which extends the review process
- 5 If the Application is subject to further environmental studies, the Applicant will need to submit Terms of Reference for the subsequent detailed investigations to the NEC for approval (*Article 15, Env Act, 2002*)
- 6 If any section is not relevant to your project, explain why this is the case and proceed to the next section
- 7 The numbering of sections for the Application should start from 1. Persons completing the Application are not obliged to maintain the same numbering sequence as used in the Guideline

3.1 Applicant's Details

Information that should be provided are:

- (i) Name of the project
- (ii) Name of the Applicant
- (iii) Present mailing address including telephone number, fax, and email (if any)
- (iv) Name of the environmental focal person³
- (v) Qualification/designation of the focal person
- (vi) Telephone number of environmental focal person
- (vii) If a consultant prepares the Application, give the name and contact details for the company that prepared the Application.

³Section 23 of the Regulation for the Environmental Clearance of Projects, 2002, may require the Applicant to delegate a focal person to ensure compliance with the terms of the Environmental Clearance. While Section 24 of the Regulation, requires that depending on the size of the project, the may need to establish an environmental unit responsible for ensuring compliance with the terms of the Environmental Clearance.

3.2 Project Objectives

List the main objective/s of project in bullet form.

3.3 Relevance to Overall Planning

Government funded development programs or activities are normally part of the Five Year Plan. State whether the proposed road construction is in line with the Five Year Plan or whether it is an ad hoc project. If it is an urban road, provide information that identifies the road with a particular Urban Development Plan.

3.4 Funding and Costs

Who is funding the project? (A donor, RGOB, a company, a private person, etc).

Show the estimated project cost. Out of the total estimated cost, how much of is allocated for environmental management. Separate the environmental costs into two components as follows:

- I Environmental costs related to construction. This may include both material costs and labour and supervision costs. For example, if the focal person is supervising both project construction and the environmental requirements, the salary of environmental focal person can be split based on an estimate of the percentage of time the person is supervising either activity. Separate the amounts spent on (a) environmental materials and (b) the amount spent on supervision of environmental activities. Include both amounts as separate entries in the environmental management budget
- I The budget for the project's mitigation measures. This is based on the type and size of the impacts that need to be mitigated. The environmental cost of the project mitigation measures is determined in section 4.11. Include this cost as a separate item in the environmental management budget

For roads less than 5km, a sketch map should be provided showing the above details

3.5.2 Category of Road

Specify the (i) road category and (ii) road length (km).

There are various categories of roads. From the following list of definitions (adapted from the Road Act, 2004) choose the category that best describes the type of road that the Applicant is proposing to construct.

National Highway: This is a designated road that connects important centres of the country. This is the highest standard road in the country and is currently being maintained by the Department of Roads (DOR) and the Indian DANTAK Border Roads Organization

Road: These connect one or two Dzongkhag headquarters with each other. District Roads are blacktopped and maintained by (DOR)

Feeder Road: These roads link the Dzongkhag headquarters to villages. The road is generally constructed up to the water bound macadam (WBM) layer and not blacktopped. This road is also maintained by DOR

Farm Road: These roads link agricultural production areas to national highways and other roads including feeder roads, primarily to enable the transportation of inputs to the farm and agricultural produce to the market. The road may or may not have stone soling. Farm roads are currently constructed and maintained by the Ministry of Agriculture. This is being decentralized to the Dzongkhags

Forest Road: These roads are located within a designated forest area. The road is generally not blacktopped but stone soling is laid. The Forestry Development Corporation constructs and maintains these roads

Urban Road: Are roads that are located within a municipal boundary and are under the control of the Municipal Corporation. In municipal areas, road construction and maintenance is normally done by the municipalities in close collaboration with the DOR

Access Road or private road: Are roads that are built and used in business or for their own purposes by individuals, organisations and business enterprises. The road may have a variety of finishes ranging from blacktopping to earth

Temporary Road: This road is generally closed and reclaimed once the activity is completed

Other: If the Applicant is proposing to construct a road, which does not fit any of these categories, include the road under the category "Others"

3.5.3 Road Specifications

Prepare a table similar to Table 2 with the required specifications.

Table 2: Road Specification/Quantities

Item	Unit	Specification/Quantity
Road RoW width	m	
Formation width	m	
Pavement width	m	
Pavement material		
Volume of excavated material	m ³	
Maximum road gradient	%	From chainage: To chainage:
Cross drains (pipes)	no	
Box culverts	no	
Bridges	no	
Total length of bridges	m	
V-shape side drain dimensions (horizontal x vertical)	cm	
Total length of V shape drains	m	
Box shape side drain dimensions (length x breadth x height)	cm	
Total length of box drains	m	

3.5.4 Excavated Materials

Briefly state how the excavated materials will be managed and how they will be safely disposed off so as to avoid landslides and loss of forests and agricultural land.

3.5.5 Explosives

If the project requires explosives, show the total quantity that will be required and state the blasting technique that will be adopted; e.g. silent blasting, single shot hole blasting, simultaneous blasting, etc.

3.6 Alternative/s

Describe the possible road alternatives as follows:

Project Alternatives: Explain why this project is chosen over other alternative/s, such as cableway, tunnelling etc. If this is not relevant to your project, mention NA

Alignment Alternatives: Explain why this alignment is chosen over other options. This should be further supported by a map or sketch marking the alternative alignment/s. If there are no alternative options, mention NA

3.7 Public Consultation

Provide details of public consultation⁴ held with affected people.

The Applicant must explain to the affected people the expected impacts of the development, where they will occur and how they will be mitigated. Provide a record of the meeting/s and attach a list of the names of the affected people together with the date of consultation/s, details of their Geog and village, issues raised by the people and the agreement/s arrived at between the Applicant and the people to resolve these issues. Provide signatures or other proof of consultation/s with the affected people. Describe issues that remain unresolved.

⁴As per the Article 16 of the EA Act 2000 and Section 31 of the Regulation for the Environmental Clearance of Projects 2002, Public Consultation is mandatory. Establish the Public Consultation by meeting the requirements shown in Section 31.

3.8 Project Site Physical Environmental Details

3.8.1 Topography and Geology

Prepare a table similar to Table 3 with the relevant details.

Table 3: Topography and observations along the road

Chainage (km+m)	Distance (m)	Side Slope in percentage (% or degrees)	Observations on geology and possible problems arising from Required	Method of Slope the terrain stabilization Abov road Below road
From To				

In the column **observations** describe the area's geology and possible problems arising from the terrain, such as susceptibility to landslides.

3.8.2 Water Course Crossings

Prepare a Table similar to Table 4 and provide details on each perennial river or stream crossing. Also specify if there are any downstream water users along the watercourse that may be affected by work on the road or in the stream channel. If yes, explain what the water is used for.

Table 4: Details of watercourses that will require crossing along the proposed road

Chainage at which road crosses water course	Name of water course	Type of crossing	If bridge. Length of bridge (m)	Downstream water users– details		
				Name community or Individual	House holds (no)	Type of use

3.9 Project Site Ecological Description

3.9.1 Land Use/Vegetation

Prepare a Table similar to Table 5 to specify the type of land use the proposed road will pass through. Estimate the area needed to construct the road⁵ for each type of land use. The types of land use include; *Chushing, Kamshing, Tseri, Tsamdo, Sokshing*, Broadleaf forest, Coniferous forest, Scrubland, Wetland and others. In case of “others”, specify the type of land use. Should Mixed Forest (Broadleaf + Coniferous) occur allocate this to the Broadleaf category unless it is dominated by Coniferous Forest in which case allocate it to Coniferous Forest. Scrubland also includes disturbed areas of Broadleaf and Coniferous forest that have been recently logged and are now regenerating.

“Affected households” are those who own or occupy the area and are dependent on it for their livelihood. They may or may not be the actual landowner. The tenure can be private, community, monk body and government.

⁵This would be the road formation width plus the width of slope batters.

Table 5: Land use and forest clearance required for road construction

Chainage from take off		Land use	Area (m ²)	Tenure	Affected House holds (no)
To	From				

Prepare a Table similar to Table 6 and use it to specify the area of land (m²) and type of land use required for each of the project facilities, which includes; labour camps, construction machinery parking and service areas, workshops etc.

Table 6: Areas Required for Project Facilities

Facility	Land use	Area (m ²)	Tenure/ownership	Remarks (See Guideline)
Labour camp				
Construction				
camp				
Others				

3.9.2 Protected Areas

Protected Areas include Wildlife Sanctuaries, National Parks, Nature Reserves, Conservation Areas and Biological Corridors.⁶ Information on Protected Areas can be obtained from the Nature Conservation Division, Ministry of Agriculture.

Provide information on the length of road that falls within the Protected area.

⁶Protected Areas are regulated by the Bhutan Forest and Nature Conservation Act, 1995.

A full environmental impact assessment is required for roads that pass through any part of a Protected Area⁷.

Using one or more of the methods shown below, the Applicant needs to collect information on the occurrence of flora and fauna (animals, birds and vegetation) which have special significance to Bhutan and to this area⁸. State whether the flora or fauna is rarely or commonly observed.

For roads which do not enter forestland, this may not be relevant.

- i. From the nearest Forest Office obtain a list of vegetation, animals and birds that exists in the project area and attach to this document
- ii. Conduct village interviews on the occurrence of vegetation, animals and birds in the project area and document the findings. Compare the findings to the list provided by the Forest Office. This finding must be attached to this document
- iii. During site visits, note the occurrence of vegetation types, animals and birds that occur along the road corridor. Provide a list of flora and fauna recorded along the road during these visits. Attach these findings to this document

Specify which of the methods was used to obtain the information.

⁷Section 62 of the Forest and Nature Conservation Rules, 2003 states that "...any construction, including motor roads, buildings, fences or any physical structures" is prohibited inside a Protected Area, except with a written permit or authorization, that would be issued by the Nature Conservation Division, Department of Forest.

⁸See Schedule 1 of the Forest and Nature Conservation Act, 1995, which lists Totally Protected Species.

3.10 Project Social Environment

3.10.1 Population

Using a Table similar to Table 7 show the number of households benefiting from the road project. When assessing the benefiting households, the applicant must count those households that are within two kilometres of either side of the proposed road. This applies to roads constructed by the Department of Roads and to farm roads. The source of the information must be cited. For example; own data collected through site assessment or data supplied by the *Gup*, etc.

Table 7: Project Beneficiaries. Households with possible access <2 km either side of the road

Dzongkhag	Geog	Households (no)
Total		

Source of information:

3.10.2 Loss of Houses, Services, Infrastructure and Cultural Heritage Sites

This section assesses, whether the siting of the road will create any adverse impacts (loss or disturbance) to any existing houses, infrastructure and cultural or heritage sites⁹. Provide details of the losses (either temporary disturbance or permanent loss) for facilities such as: (i) Services (ii) Houses (iii) Infrastructure (iv) Cultural or heritage site, etc.

⁹ Under the Rural Land Compensation Rates, 1996, sections KA-6(8) municipal areas and KA-6(9) rural areas, sets out procedures for the acquisition of land, rates of compensation for land and determining the valuation of houses, while Appendices C, D and E set out compensation rates for agricultural crops and fruit trees.

Services include: telephone, electricity, TV cabling, water supply and sewerage connections etc.

Houses can include shops and other buildings.

Infrastructure losses could include; roads, bridges, tracks, etc.

Cultural or heritage sites could include; *chortens*, *lhakhangs*, monuments, sacred sites (*ney*) etc. Where these sites may be disturbed by the proximity of the project, show the distance in metres from the cultural or heritage site to the project.

Mark these sites on the same map requested in Section 4.5.1.

Provide details of the losses using the format shown in Table 8.

Table 8: Loss or disturbance of existing services and infrastructure

Type of Loss	(no)	Description of disturbance
Services (list)		
Houses		
Infrastructure		
Cultural Sites		Distance in m from disturbance
Heritage Sites		Distance in m from disturbance

3.10.3 Aesthetics

Assess the possible adverse visual impacts that may arise from the construction of the road such as whether the road may be highly visible from a settlement or scenic viewpoint. Another possible visual impact may be scarring from sliding debris.

3.11 Project Impacts and Mitigation Measures

From the information provided in the preceding sections, identify the impacts that will occur from these activities and list these in tabular format similar to that shown below. Impacts can occur from: (i) the *Location* of the project (ii) the *Design* of the project (iii) from *Construction* related activities and (iv) from *Operation* of the project. For each negative impact provide mitigation measures and the approximate cost required to implement the mitigation measure.

The applicant may use the following table.

Type of Negative Impact	Possible Mitigation Measure/s	Estimated Mitigation Cost (Nu)

The Applicant will be responsible for ensuring that the Environmental Terms that are attached to the Environmental Clearance are carried out. These become the responsibility of the Holder of the Environmental Clearance. Where a Contractor is employed the Holder will be held responsible for ensuring the Contractor abides by the Environmental Terms. The Environmental Terms are to be attached to the Contract Document so that the Contractor has a clear understanding of the environmental requirements that are to be adhered to during construction. At the time of tendering, the Contractor will be required to prepare a Contractor's Site Environmental Management Plan (CSEMP) that shows how the Contractor will implement the Environmental Terms that are included as part of the Tender Specifications. The CSEMP is to be included as part of the Contract Documents and is to be evaluated as part of the overall tender. The NEC can assist with information in this area.

The Applicant will also have to provide the following plans if these are relevant. These are to be attached to the Application.

- i. The Land Compensation and Resettlement Plan
- ii. Worker Health and Safety Plan

3.12 Monitoring Program

Monitoring responsibilities including other provisions that the Applicant/Holder and Contractor will need to address at the time of submitting a tender for the work will be included as part of the Environmental Terms¹⁰ which will be attached to the Environmental Clearance.

Regular monitoring will be the responsibility of the Holder of the Environmental Clearance and will be detailed within the Environmental Clearance.

Either the CA or the NEC may conduct unannounced monitoring and checks.

3.13 Checklist for No Objection Certificate

In order to obtain an Environmental Clearance for the project, an NOC must be obtained from all relevant parties. Attach these documents to the Application. Below is a checklist of agencies from whom NOCs may be required.

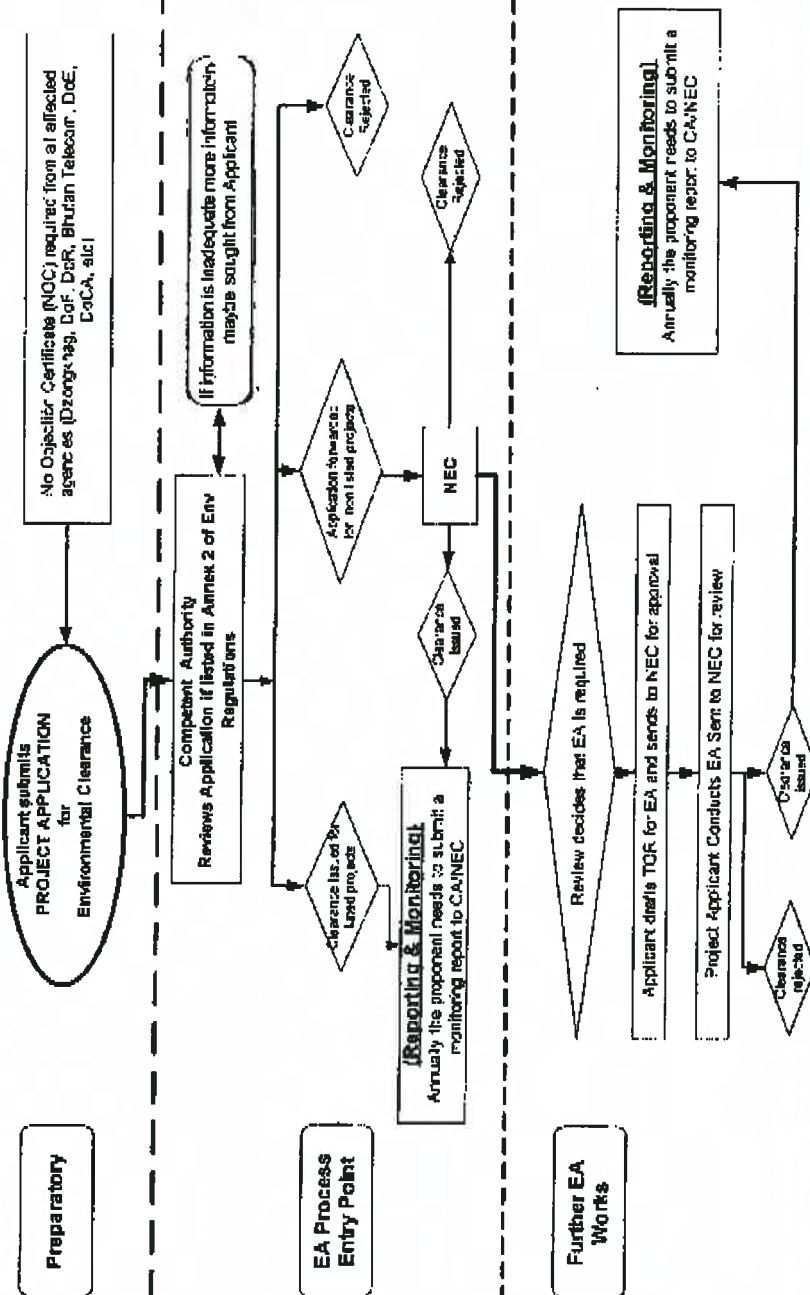
¹⁰Article 39 of the Environmental Act, 2000, establishes the need to attach environmental terms to the Environmental Clearance.

Agency/concerned people to issue NOC	Why/when
Dzongkhag/City Corporation	Dzongkhag Administrative approval
DoF	Should the project damage or acquire <i>Tsamdo</i>
DoF	Should the project damage or acquire <i>Sokshing</i>
Department of Culture	Should the project be located within 50m of a cultural or religious site
Nature Conservation Division	within boundary of a Protected Area
Municipal Authority	within 50m of a public park
Private owner	within 50m of a human dwelling
Private property owners	Should the project need to acquire private property
Department of Health	within 50m of hospital
Department of Education	within 50m of school
Department of Energy	Should the project require the relocation of power transmission line
Bhutan Telecom Authority	Should the project require relocation of telephone lines
Department of Roads	Should the project require access from highways and feeder roads

4 ENVIRONMENTAL ASSESSMENT PROCEDURES

A flowchart is attached showing how the Application for Environmental Clearance will be processed.

ENVIRONMENTAL ASSESSMENT PROCEDURE FOR ROAD AND HIGHWAY PROJECTS



Note: For environmental assessment timeline refer Annex 1 of the EA Regulation 2002