1.0 Introduction

The Planning Act of Ontario requires that "no negative impact" be demonstrated where development is proposed within or adjacent to the natural heritage system. Municipalities through their official plan set out how to satisfy the requirements of the Provincial Policy Statements and the Environmental Impact Statement (EIS) is normally completed for all development proposals where it has been identified that there may be an impact on a natural heritage feature, or area, or the function of the feature.

The purpose of an EIS is to determine the potential impacts, direct and indirect, of a proposed development on a natural area. The Natural Heritage Reference Manual (OMNR, 1999) suggests that it should contain sufficient information to demonstrate that there will be no negative impacts on the natural features and ecological functions for which the area is identified. This objective is not achievable since negative impacts cannot be demonstrated before they have occurred.

The function of the EIS is to describe and present potential impacts in such a way that planners and politicians can make properly informed decisions about which impacts of development are acceptable, and which should be avoided.

The proponent of development has a financial responsibility to fulfill the requirements established by the Province and the municipality for an Environmental Impact Study. The proponent may pay to have the EIS completed but the client is always the environment.

The EIS will contain recommendations that will maintain or enhance the features and functions of the natural heritage system. This includes management and mitigation for impacts that are unavoidable.

The completion of an EIS does not assure the approval of a development proposal. An EIS provides the mechanism for assessing impacts. Accepting, modifying, or rejecting development proposals in and adjacent to natural areas will take place after the EIS is completed and approved. In general, the natural areas of concern to the municipality are those designated as natural heritage features in the Official Plan. Other natural heritage features not specifically identified, including headwater areas, streams and drainage corridors and remnant vegetation, may be identified as also requiring an EIS.

2.0 EIS Review Process

Step 1 Initial Consultation

An initial meeting is held to determine the suitability of the development concept. The requirement for an EIS is established and confirmed with the applicant. The applicant will be given direction and guidance as to the anticipated form and content of the EIS based on preliminary identification of issues and concerns. Members of the Technical Review Team will be identified at this stage. The Technical Review Team will provide technical advice and may consist of the consulting team, planning authority, relevant agencies (e.g. CA, MNR, MOEE, MMAH, OMAF), and environmental advisory committee representatives.

Step 2 Site Visit

A site visit is conducted by the applicant −and members of the Technical Review Team. This will aid on-site interpretation and help to define pertinent natural heritage and natural hazard concerns.

Step 3 Terms of Reference Development

Based on issues identified during the pre-consultation and subsequent site visit, the Technical Review Team develops the Terms of Reference for the EIS, provides details for the accepted methods of data collection, analysis and evaluation of potential impacts, and specifies the qualifications of personnel required to carry out these evaluations. If at this stage the applicant agrees to adhere to recommended development setbacks from natural heritage/hazard areas, and other conditions of development a detailed EIS may not be required

A signed letter of understanding and the minutes of this consultation and issues identification will constitute an Issues Summary Report.

Step 4 Timeline and Phasing

EIS Report Phase I - Site Suitability

Environmental Impact Studies will be conducted in two phases. Phase I, the Site Suitability Report, identifies the suitability of the site for the proposed land use and/or development including an inventory of the natural features and functions present on the site. Phase I report must be reviewed and approved by the Technical Review Team before Phase II is initiated. Phase II identifies conditions for development and appropriate mitigation measures as required. Phase I EIS will address the following issues:

1) A description of the purpose of the proposed land use change and proposed development;
2) Location maps detailing both site specific and regional perspectives;
3) Natural heritage features and functions present on the site that could be affected by the application proposed development;
4) Specific location of boundaries or edges of identified features or functions and the location of proposed development or site alteration with respect to these delineated boundaries;
5) Existing interconnections or corridors with adjacent natural features;
6) Identification of hazards;
7) Overview of critical issues
8) Watershed targets and recommendations;
9) Methodology and techniques used to undertake the environmental inventory;
10) Qualifications of the study team members.

Data collection and mapping standards are outlined in Appendix XX.

The Phase I report will be signed by the principal of the consulting team and will contain a statement naming the chief author, the author(s) of field staff reports and whether the report has been edited, by whom and for what purpose.

Step 5 Ongoing Consultation

Interim reporting to the Technical Review Team is recommended so that the consulting team and the Technical Review Team can maintain an ongoing dialogue throughout the process and the Terms of Reference can be adapted as warranted.

Step 6 Review of Phase I Report

The Site Suitability Report is submitted to the Technical Review Team for review. If all requirements of the Terms of Reference have been met, the Technical Review Team will review the data submitted and make a recommendation to the municipality on the suitability of the proposal from an environmental perspective. If the proposal is deemed suitable, the Technical Review Team will identify actions that are necessary to prevent or mitigate the effect(s) that might reasonably be expected. If the report is not acceptable it will be sent back to the consulting team for further work. The Phase I report must be approved before initiating Phase II.

Step 7 Phase II – Development Assessment

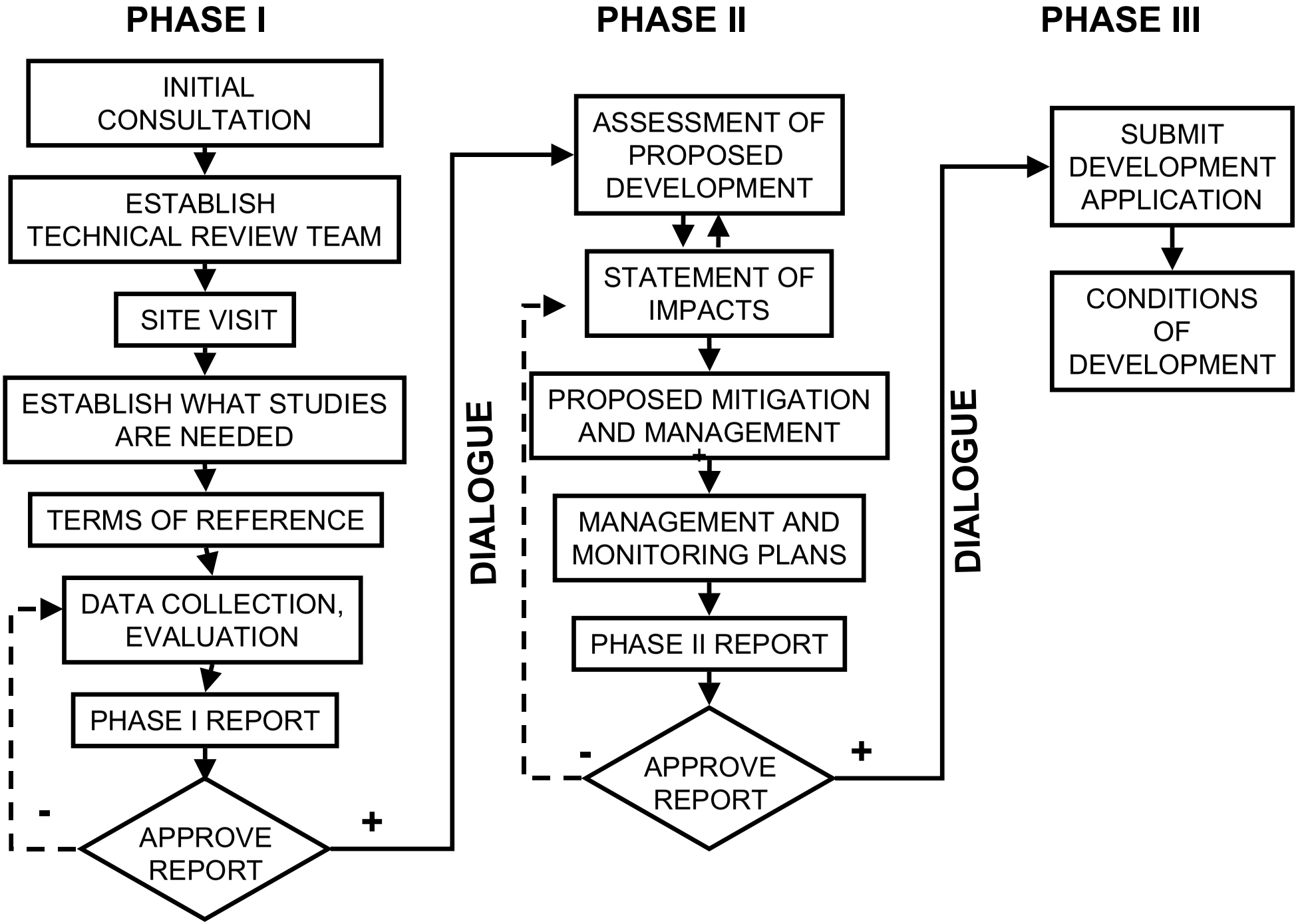
The Phase II report should consist of an assessment of the proposal detailing the following:

1) a concept plan for the development;
2) a statement of potential or expected impacts of the development proposal on the features, functions and processes;
3) description of the nature and duration of potential impacts to the site, adjacent lands, and potential cumulative effects;
4) opportunities for enhancing the conservation and management of the features or functions;
5) detailed site management plan;
6) details of required mitigation measures and maintenance;
7) plans for pre-construction, within construction and post-construction monitoring for development related impacts;
8) plans for post-construction monitoring to contribute to long-term cumulative impact assessment that the municipality will maintain.

Step 8 Development Application

The Technical Review Team will indicate when the EIS documents are satisfactory for content, clarity and completeness. At that time the municipality can accept and process the development application, taking into consideration the final recommendations of the Technical Review Team for the EIS.

PHASE 0
Establish Principle of Development



3.0 Data Collection

Refer to the Draft Guide for Data Collection Standards later in this document.

Refer to the Issues Identification Checklist later in this document.

3.1 Site Description and Landscape Context

The site description and the landscape context of the area should be a detailed as possible and include the following requirements:

a) A biophysical inventory and analysis of both terrestrial and aquatic communities, physical functions and processes that occur on and beyond the site that will be affected, or that might reasonably be expected to be affected, either directly or indirectly. This should include the following categories of information addressing quality and quantity of the resource:

b) A description and analysis of the inter-relationship of the biophysical information, to provide an overview of the existing ecosystem both within the subject site and as it relates to the larger local and regional ecosystem.

c) A description of the present environment features and components of the natural heritage system of the property (i.e. wetland, ESA, ANSI, woodland, vegetation patch, river, stream, or ravine corridor) and the proposed criteria to be applied for evaluation of their significance.

d) An evaluation of components of the natural heritage system and the characteristics of the site Identification of the key features and functions including:

Whether the feature or function is measurable in its occurrence;

Whether the feature or function contributed to the quality and integrity of the area;

Whether the feature or function contributes to the identification of the area as a natural heritage feature or area or;

Whether there is a reasonable expectation that the feature or function may be affected by the development.

Refer to the Draft Guideline for the Identification of Significant Woodlands later in this document.

e) A description of the methodology, timing, and techniques selected and used to undertake the environment inventory. A complete literature review including relevant reports prepared for/by other agencies and the contacting of local naturalists who may be familiar with the site should be part of the study.

f) Complete mapping of all resources including existing and proposed grades is required. The environmental constraints to development should be overlaid onto one map illustrating the subject site and adjacent lands so that the opportunities and constraints can be clearly identified. A current aerial photograph is ideal for this exercise. Mapping should also include an overlay of the proposed development concept onto the opportunities and constrains map. When there is a question whether there is adequate or suitable area for development, concept plans for the lots in question will be required showing building envelopes, relevant building setbacks, driveways, parking and location of utilities. Mapping shall be provided in paper copy and digital format compatible with the municipality's GIS facilities if required. .

3.2 Evaluation of the Effects on the Environment

The following items are required for the evaluation of the effects of the proposal on the environment.

a) Describe the sensitivity of the features and functions to the development proposal.

b) Describe the environmental effects of the development proposal that might reasonably be expected to impact on the natural areas. This may include, but are not limited to the following:

Direct on-site effects;

Effects on surface drainage systems such as ponding, erosion, changes in volume of surface runoff;

Effects on groundwater such as reduced surface water recharge to groundwater, drainage to wetlands, impedance of groundwater movement;

A description of the municipal requirements, standards, etc., which will effect the development, such as: provision of useable privacy area for residential development, rear lot grading requirements and the proposed type of dwellings to be constructed (i.e. ground floor area) to fit in with the neighbourhood;

A preliminary grading plan indicating both existing and proposed grades for services and building envelopes, including useable privacy areas, etc.;

Effects on adjacent areas, including transported effects such as sedimentation;

Effects on the key characteristics of the natural area including loss of habitat, change in habitat and edge effects;

Potential for further demand on resources;

Cumulative effects;

Irreversible and reversible effects;

Immediate and long-term effects;

Effects of occupancy (i.e. increased disturbance and indirect impact from increased access, pets, lighting, etc.).

c) Provide an explanation of the methods used to determine the effects

d) Summarize the effects in table format.

3.3 Description of Mitigating Measures

The description of mitigation measures must include identification and detailed explanation of alternative options and measures that would mitigate any predicted environmental impacts. This should include modifications to development proposals to avoid effects on key features or functions, and/or methods to restore features or functions that might be impacted. Of these, avoidance is preferred. Where avoidance is not possible, alternative options must include measures to minimize impacts and include subsequent monitoring of effects to ensure successful implementation. This section should include the following:

a) Indicate and explain as many feasible mitigating measures as possible that are relevant to the potential impacts of the proposed development.

b) Provide an analysis of buffers and setbacks that are relevant to protect the type of natural area being affected.

c) Describe in detail the mitigating measures proposed to eliminate or reduce the effects.

d) Describe any proposed compensation for those effects which cannot be mitigated and/or rehabilitation/restoration plans for areas disturbed.

3.4 Monitoring Plan

The purpose of monitoring is to measure effects over time. Monitoring will enable planning agencies, through development agreements, to require subsequent changes to site conditions if the environmental effects are found to exceed predicted effects or targets, or if there are identifiable negative effects. Monitoring the environmental effects of developments also provides well-documented, local examples of best management practices for particular types of development and particular types of features or functions.

Where mitigation is achieved through avoidance of negative impacts, a simplified monitoring plan to ascertain the success of the project is all that is required. In these situations, the predicted net effects after mitigation may be negligible, and only the assumptions need to be tested. However, where mitigation is achieved by methods or measures to minimize but not to eliminate environmental effects, the predicted net effects after mitigation will be described and a monitoring plan designed to measure those effects will be implemented.

The technical manual produced from the Ministry of Natural Resources (MNR) states that monitoring may be required where:

The large scale of a development or the sensitivity of the key functions are such that effects may be difficult to predict and/or are relatively untested or unproven in the field;

The mitigation technology proposed is not proven in Ontario;

There are some long-term operations associated with a development that could facilitate some future or ongoing refinement to the mitigation strategy.

Depending on specific circumstances, monitoring may be needed to be undertaken in preconstruction, construction/operation and post construction periods. Details of the monitoring program will be specific to the development proposal and will be determined through the review of the development application and the EIS.

4.0 Recommendations

Recommendations should outline how the proposal can maintain or enhance ecological functions of natural area and include the following issues:

Should the proposal proceed as planned;

Should the proposal be revised to reduce/eliminate effects and if so, how (proposed revisions should be illustrated conceptually on the resource mapping base);

Mitigation measures required;

Development conditions, including monitoring.

5.1 Background Information

The EIS should include sections or appendices of the following:

Literature cited;

All background data including copies of comments by field staff or supporting reports;

List of people contacted during the study or referenced in the report;

Curriculum vitae of study team members.

Statement regarding the chief author of the report and whether the report has been edited, by whom and for what purpose, including normal editing of field staff reports by the chief ecological consultant.

5.2 Executive Summary

Include a summary at the front of the report that contains a description of the proposed development, the effects of the environment and all recommendations.