

Natural Heritage Strategy: Phase 2A Presentation

Technical Committee Meeting #4

March 24th, 2005 – 9.30 to noon

Committee Room C

Meeting Minutes

Chair: Helen Powers – Environmental Planner (City of Guelph)

Present: Drew Cherry – Planner (Wellington County Stewardship Council), Astrid Clos – Planner (Guelph Development Association / Guelph and Area Homebuilder's Association), Andrew Lambden – Developer (Guelph Development Association / Guelph and Area Homebuilder's Association), Glynis Logue – Local Environmentalist (Green Plan Steering Committee/Guelph Environmental Leadership), Don Kudo – Manager of Infrastructure Planning (City of Guelph), Terry Schwan – Forester (Ontario Ministry of Natural Resources – OMNR), Helen White – Park Planner (City of Guelph), Val Wyatt – Local Naturalist/Consulting Ecologist (Guelph Field Naturalists), Tony Zammit – Ecologist (Grand River Conservation Authority – GRCA), Bob Thompson – Manager of Roadside Operations (City of Guelph) and Margot Ursic – Ecological Consultant (Dougan & Associates).

Regrets: None

Copy: Linda Chapman (Building and Zoning, City of Guelph), Mark Haennel – Planner / GIS (City of Guelph).

1. Project Status Update – Helen Powers, City of Guelph

Helen Powers: The Phase 1 report has been finalized by the consultants based on input received and will be posted to the City's website shortly. This meeting is primarily to provide the TC with a presentation of the preliminary deliverables and analysis results of Phase 2A of this study. Notably, the mapping and assessments presented today are based largely on secondary source data (eg. data from various environmental studies) and interpretation of the most current air photos available for the entire City, which are from 2000.

2. Presentation on LSNA Screening Criteria – Margot Ursic, Consultant

The text below has been pulled from the Power Point presentation made to the Technical Committee (March. 24, 2005). Notably, because of the preliminary nature of the analyses and the results, all tables showing area calculations and mapping having been removed for the purposes of public circulation. However, updated analyses that have incorporated the 2005 field assessments will be conducted as part of Phase 2B of this study, and will be available for public viewing and comment after review by the TC committee in the late fall of 2005.

Title: GUELPH NATURAL HERITAGE STRATEGY
Phase 2A: Terrestrial Inventory & Identification of Locally Significant Natural Areas
Presentation to the Technical Steering Committee - March 24, 2005

Project Phasing: Where We Are

Phase 1: COMPLETE

- ✓Preliminary Background Review
- ✓Definition & Working Criteria for LSNA's

- ✓Preliminary Community Consultations
- ✓Inventory Methodology & Monitoring Approach for LSNA Assessment
- ✓Landowner Contact Program & Package

Phase 2:

➤Phase 2A: NEAR COMPLETION

- Landowner Contact – *in progress*
- ✓Natural Areas Database Development
- ✓Natural Heritage Mapping
- ✓Preliminary Application of LSNA Criteria

➤Phase 2B: STARTING APRIL 2005

- Natural Areas Inventory (Terrestrial Features)
- Revision of LSNA Criteria, Database & Mapping Based on Field Results

Phase 3: NEXT YEAR

- Development of City-wide Monitoring & Management Systems
 - Recommendations for Environment Policies & Guidelines
 - Identify Funding for Long-term Monitoring & Additional Next Steps
- Presentation Overview

Natural Areas Database

- Linked to Natural Heritage Mapping & Analysis (in GIS)
- allows for comprehensive terrestrial natural heritage data to be pulled up for a single or multiple Natural Areas
- includes geodata related to each of the working LSNA criteria
- includes metadata (eg. the source of the information and scale at which it was observed)
- Format
 - Primary Data Entry Form – *Site Information*
 - Secondary Data Entry Form – *Criteria Details*
 - Secondary Data Entry Form – *ELC Polygon Details*
 - Secondary Data Entry Form – *Species Records*
- Content to Date
 - 6350 records of species observations from 55 different sources
 - 4908 vascular plant records
 - 1029 bird records (breeding and non)
 - 183 herpetile records
 - 223 mammal records
 - 3 invertebrate records
- Species Entered to Date: 918 species reported in the City
 - 717 vascular plants
 - 133 birds
 - 28 herpetofauna
 - 28 mammals
 - 2 invertebrates
- Primary data collected as part of Phase 2B field inventories will be added

Natural Heritage Mapping

Based on:

- ELC analysis of 2000 air photography
- verification of ecological community types from existing environmental studies
- some preliminary ground truthing (2004)

3 components:

- Natural Areas
- Linkages (Natural Linkages & Restoration Linkages)
- Potential Restoration Areas (High Priority, Moderate Priority, Low Priority)

Natural Heritage Mapping: Rules

Natural Areas must be comprised of 1 or more ELC communities that are:

- within the same subwatershed
- not separated by built-up areas
- not separated by highways or arterial roads
- considered contiguous by virtue of touching OR being within 100 m of each other OR connected to each other along a Natural Linkage

Natural Linkages will incorporate ELC communities, hedgerows and/or storm water management areas, be included in Natural Areas, and be identified based on:

- existing opportunities within the current City boundaries
- existing opportunities in the landscape between the City and County Greenspace
- consideration for the Linked Open Space Corridors (Official Plan June 2002)

Hedgerows are only to be included in Natural Areas where they:

- are immediately adjacent to 1 or more ELC communities or
- create or support linkages between ELC communities.

Storm water management ponds are to be excluded from Natural Areas except where they support a linkage. Naturalized storm water management areas (eg. infiltration ditches) may be incorporated into Natural Areas and Natural Linkages.

Active agricultural lands and plantations under intensive management (eg. Christmas tree farms) are excluded from Natural Areas. However, they may be identified as Restoration Linkages and/or Potential Restoration Areas.

Restoration Linkages will be identified based on:

- need for a linkage between Natural Areas, or between a Natural Area and the surrounding County greenspace
- need for enhancement (i.e., widening) of a linkage)
- consideration for the Linked Open Space Corridors (Official Plan June 2002).

Restoration Linkages will include cultural features not irreversibly transformed by residential, commercial or industrial development (e.g., manicured parklands, active agricultural fields, intensively managed plantations) that provide some opportunities for movement of flora and/or fauna.

Potential Restoration Areas (PRA's) will be identified primarily for the purposes of improving the cohesiveness of Natural Areas, but will not be included in them. These areas may include:

- lands being actively managed for human uses (eg. agricultural fields, plantations) surrounded by Natural Areas or providing a potential linkage between Natural Areas
- sites where some naturalization is already occurring
- other sites, primarily on City-owned lands, that have been significantly altered by some human disturbance or land-use (e.g., former gravel pit, dumping of fill) but where natural plant communities could become re-established

Notably, these areas will be identified on a preliminary basis without regard for land ownership, but will be refined in consultation with affected landowners.

Preliminary Natural Heritage Analysis:

•53 Natural Areas

- covering a total of 1971 ha (22.4% of the City)
- range in size from 310.2 ha (the Hanlon Creek NA) to 0.2 ha (Unnamed Natural Area #1)
- average size is 36.5 ha
- however, the median size is much lower [11.6 ha] indicating that there are a lot of smaller, isolated Natural Areas and few large ones

- Preliminary Linkages
 - still need to be refined into Natural & Restoration

- 79 Potential Restoration Areas
 - covering 342 ha (3.89% of the City)
 - to be assessed as part of field work & reviewed in context of completed and imminent Draft Plan approvals

2004 Field Assessments: Amphibian Surveys

- focus on south end of City
- 9 visits made April 3 – 29
- 84 locations surveyed; amphibians recorded at 54 locations
- 9 species:
 - None Nationally or Provincially Significant
 - Pickerel Frog “Uncommon” in Central Region
 - Red-spotted Newt, Jefferson Salamander hybrids and the Pickerel Frog Significant in Wellington County

Application of the Working LSNA Criteria: Methods & Gaps

Criterion 1. Provincially & Nationally Designated Natural Heritage Features

- Data from GIS layers provided by the City & GRCA for:
 - Provincially Significant Wetlands [PSW]*
 - Floodplains*
 - Provincially Significant Areas of Natural & Scientific Interest [ANSI]*
- Not designated in the City:
 - Habitat for Threatened & Endangered Species*
 - Provincially Significant Woodlands*
 - Provincially Significant Valleylands*
 - Provincially Significant Wildlife Habitat*

Criterion 2. Hydrological Significance

- Data for this criterion was derived from GIS layers provided by City (ie. Rivers, Lakes & Ponds) and GRCA (ie. LSW, Discharge/ Recharge).
 - Locally Significant Wetlands [LSW]*
 - Kettle lakes/ponds*
 - Groundwater recharge / discharge areas*
- GAPS:
 - *Permanent and intermittent streams*; data being digitized by City
 - *Fish Habitat*: still need mapping

Criterion 3. Landform Conservation Value

- kames, kettles, drumlins or moraines*
- all wetlands and associated springs or poorly drained soils*
- steep slopes (in excess of 15% and at least 2 m high)*
- data derived from GIS layers by the GRCA identifying Hummocky Topography and slopes in excess of 15% associated with the fluvial areas (Hazard Lands)
- GAP: have not captured steep slopes not associated with rivers or wetlands

Criterion 4. Habitat Diversity

- top quartile of Natural Areas containing the most distinct ELC Communities*
- ELC and Natural Area data developed for this project used for this criterion
- formula developed to determine the number of ELC Community Series per Natural Area
- Natural Areas within the 25th percentile were considered to meet this criterion

Criterion 5. Habitat Size [Habitat for Area Sensitive Species]

- Contiguous woodland/ forest with 'interior' habitat being 100m from edge
- Contiguous thicket with 'interior' habitat being 100m from edge
- Contiguous meadow with 'interior' habitat being 100m from edge
- GAP: Woodlands between 0.5 and 1.0 ha have not yet been incorporated into this criterion. It may make sense to develop a separate criterion for this since the analysis and outcomes will be distinct.

Criterion 6. Uncommon or Representative Habitats

- Locally uncommon terrestrial ELC communities
- Locally representative terrestrial ELC communities
- ELC data developed for this project used
- ELC Community Series falling into the top 5% in terms of areal coverage in the City considered uncommon.
- Deciduous Swamp, Coniferous Forest, Savanna & Meadow Marsh
- GAP: *Locally representative terrestrial ELC communities* identification method not yet developed
- pending finer ELC assessment

Criterion 7. Presence of Significant Species

- Species considered vulnerable, threatened or endangered at the Provincial or National level
- Species classified as rare at the regional level by the Flora of Wellington County
- Species included in the Significant Wildlife Species of Wellington County list
- no current (ie. pre-1990) records of Nationally or Provincially significant plant or wildlife species in the City
- Natural Areas database screened for records of regionally rare plants & regionally significant wildlife species
- GAP: Significant Plant List for Wellington County – under development

Criterion 8. Supportive Ecological Functions

- Natural lands that:
 - provide linkage functions between ELC Communities within a given Natural Area
 - provide linkage between separated Natural Areas within the City or between Natural Areas and greenspace in the County
 - to protect and/ or enhance the habitat quality of nationally or provincially designated natural heritage features
 - are relatively small and close enough to larger natural areas or to each other (i.e., within 100 m) to provide alternate habitat for some species
- Greenlands in the County of Wellington OP reviewed visually
- 50 m perimeters placed around all Natural Areas to determine which ones are within 100 m of each other. The smaller of the 2 areas was considered to have met this criterion.
- GAP: Natural Linkages need to be mapped more consistently
- Application of the Working

LSNA Criteria: Preliminary Analysis

- Of the 53 Natural Areas:
 - Criterion 1 was met by 33 Natural Areas [*Nationally & Provincially Designated*]
 - Criterion 2 was met by 48 Natural Areas [*Hydrological Significance*]
 - Criterion 3 was met by 20 Natural Areas [*Landform Conservation Value*]
 - Criterion 4 was met by 16 Natural Areas [*Habitat Diversity*]
 - Criterion 5 was met by 33 Natural Areas [*Habitat Size*]
 - Criterion 6 was met by 27 Natural Areas [*Uncommon or Representative Habitats*]
 - Criterion 7 was met by 15 Natural Area [*Significant Species*]
 - Criterion 8 was met by 24 Natural Areas [*Supportive Ecological Functions*]

NB. Maps developed showing all Natural Areas meeting at least 1 criterion, at least 2 criteria, at least 3 criteria, etc. all the way through to 8 for viewing and discussion purposes.

3. Landowner Contact Process

Helen Powers: Landowner contact letters and information packages have been put together by the City (based on materials provided by Dougan & Associates / Ecological Outlook). These packages are to be posted on the City's website and will be mailed out to all landowners where fieldwork is anticipated.

4. Regionally Significant Flora & Wildlife Lists

Margot Ursic: A Significant Wildlife Species List for Wellington County has been developed by Karl Konze (Wildlife Ecologist) of Dougan & Associates as part of Phase 2A, has been subject to extensive peer review, and is now awaiting final acceptance by the County of Wellington. A Significant Plant List for Wellington County does not exist, however Dougan & Associates has offered to organize a committee for developing such a list. Botanists and naturalists with local knowledge have been contacted and so far 5 individuals have agreed to be part of the committee. It is hoped that a Draft list will be completed and ready for peer review for the fall of 2005.

5. Next Steps in the Project

Undertaking the field assessments and the subsequent data synthesis and analysis. We will aim to have a comprehensive Draft Phase 2 Report prepared for the Technical Committee to review by mid-fall 2005.

6. Other Business

None.

Minutes prepared by M. Ursic of Dougan & Associates April 5, 2005.

Reviewed and revised by H. Powers of the City of Guelph April 21, 2005.