

<b>Subject</b>	Environmental Action Plan
<b>Recommendations</b>	<p>“That Planning, Environment and Transportation (PET) Committee receive the Environmental Action Plan;” and</p> <p>“That the implementation actions be incorporated into annual work plans and budgets for future approval.”</p>
<b>Background</b>	<p>The City of Guelph has successfully built a reputation for being environmentally progressive. While the City continues to adopt and implement environmental policies and practices, including an updated “green” Official Plan in 2001, there are several key actions that could be taken to facilitate more effective and efficient implementation of these policies. In particular there is a need to address gaps in resources inventories and to examine new or revised regulations and procedures that will improve the implementation of the Official Plan.</p>

These improvements are a necessity because as the City faces urban growth pressures it is experiencing pressure to remove terrestrial natural heritage features of local importance (e.g. hedgerows, trees). These features have a key function within our natural heritage system, particularly in wetland and groundwater protection. There is also greater realization that locally important features are integral to providing clean air, water, shade (energy and money savings), biodiversity, aesthetic and spiritual benefits, and that environmental sustainability is directly connected to physical health and economy health. The basis for further advancing the protection and enhancement of locally important natural areas is provided in the City's Official Plan, the Green Plan and Council's adopted SmartGuelph Principles (*See Appendix 1*).

#### **Other Communities:**

A number of other communities are approaching protection and improvement of natural heritage systems with a “big picture” perspective by recognizing the importance of locally important features in addition to those mandated in the Provincial Policy Statement and are developing tools to protect these resources. For instance, the City of London is undertaking woodlot characterization studies to assess their significance; the City of Mississauga and Oxford County have updated and are implementing tree protection by-laws; and the Region Waterloo is creating other innovative tools such as more standardized Environmental Impact Study guidelines.

June 9, 2003

#### **Report #**

**Planning and  
Building Services**  
(03-56)

**Prepared by:**  
Shannon Smith,  
Environmental  
Planner

**Approved by:**

\_\_\_\_\_  
Craig Manley, RPP  
Manager of Policy  
Planning

\_\_\_\_\_  
J. A. Forbes  
Director of Planning  
and Building  
Services



June 9, 2003

## Report #

**Planning and  
Building Services**  
(03-56)

**Prepared by:**  
Shannon Smith,  
Environmental  
Planner

**Approved by:**

\_\_\_\_\_  
Craig Manley, RPP  
Manager of Policy  
Planning

\_\_\_\_\_  
J. A. Forbes  
Director of Planning  
and Building  
Services



### **Other Organizations:**

In recent years the Federation of Ontario Naturalists, the Ministry of Natural Resources and Carolinian Canada have also recognized the need to look at natural heritage protection to include important local features. The Grand River Conservation Authority has recently taken this approach in its new local wetlands policy and has identified woodland and terrestrial protection as a means to protecting the form and function of wetlands.

### **Purpose:**

The purpose of this report is to outline a number of potential environmental initiatives that build upon the City's efforts to date that will further the protection of locally important natural features and which will assist in the coordination of related environmental initiatives between City Departments. It is anticipated that these initiatives would be initiated over a 5 year time frame and that the work plan be reviewed annually. The proposed initiatives are outlined in **Schedule 1** and a summary of initiatives for years 1 to 5 is in **Schedule 2**. The scope of the work has been discussed with the following City Departments: Public Works, Engineering, Parks and Recreation, Planning and Building Services. The proposed initiatives have been identified as priorities by City Staff and the Green Plan Steering Committee and includes the collection of data (e.g. inventory selected natural heritage features); the updating/coordination of existing policies (e.g. tree by-law; tree planting); and the creation of new policies and regulations (i.e. compensatory planting).

During implementation each action will be subject to a "best practices" review and an input process designed to ensure that relevant departments and stakeholders have been heard, including the broader community. On an annual basis specific action items will be brought forward to the appropriate Standing Committee with a budget and work plan for approval.

<b>Alternatives</b>	No action.
<b>Implications</b>	The City could fall behind other communities in terms of natural heritage conservation as a result of outdated policy and practices, and loss of natural resources.
<b>Funding</b>	Staff time plus the cost of individual actions as work plans and budgets are completed.
<b>Notice Requirements</b>	n/a

## SCHEDULE 1 Environmental Action Plan: Proposed Initiatives

Acronyms: OP = Official Plan  
 GRCA = Grand River Conservation Authority  
 SWM = Storm Water Management  
 EIS = Environmental Impact Study  
 EIR = Environmental Implementation Report

Component	Initiative	Timing
<p><b>1. Data Collection</b></p>	<p><b>1.1 Inventory of Selected Natural Heritage Features</b></p> <p><b>Lead:</b> Planning And Building Services Staff</p> <p><b>Rationale:</b> Many of our features have been inventoried already through the Environmental Impact Study process or by the Subwatershed Study process, so there may only be specific features for which we are lacking full data (e.g. open space and greenland designations). The inventory will form the basis for defining “significant” in the local context and for creating management and development guidelines; including buffer management guidelines and establishing a specific target for a citywide linked open space concept. Existing encroachment issues will be investigated. The inventory will also highlight areas that warrant restoration. Identification of restoration areas will complement the compensation policy suggested below. The identification of restoration areas are important to have because often environmental degradation due to past development is cited as a supportive argument to further develop the area rather than restore it.</p> <p>Connections with the current groundwater protection study will be incorporated.</p> <p>Supporting OP policies include: <i>Section 6.8.2 - That the City will give consideration to developing a comprehensive ecological definition of woodland significance in the Municipality by conducting an assessment of wooded areas within Guelph; Section 6.1 Objective-To recognize and identify existing natural features and their associated natural functions in the City that should be preserved or enhanced. Section 6.2 Objective-To utilize a</i></p>	<p><b>Year 1-2</b></p>

Component	Initiative	Timing
	<p><i>watershed/subwatershed planning systems approach for the identification, evaluation and protection of the natural environment.</i> The Green Plan Steering Committee's 2003 State of Sustainability Report suggests that Guelph can improve its Open Space and Natural Corridors performance by completing an ecological inventory on all land types defined as open space or greenlands (and to develop a strategy for routine data collection—see Suggested Actions 1.2, 2.1 and 3.8).</p> <p><b><u>Other Jurisdictions:</u></b>  London  Mississauga  Middlesex County  Oxford County</p>	
<p><b>2. Policy/Practice Update</b></p>	<p><b>2.1 Review Environmental Impact Study guidelines/data collection standards; and create Environmental Implementation Report Guidelines</b></p> <p><b><u>Lead:</u></b> Planning And Building Services Staff</p> <p><b><u>Rationale:</u></b> Environmental Impact Studies (EIS) are required for any development application that falls within the City's OP 'non-core greenlands' overlay. Often, An Environmental Implementation Report (EIR) is required for larger new developments. The EIR details how the recommendations in the EIS will be carried out (e.g. detailed grading plans, erosion and sediment control plans).</p> <p>OP Section 6.1 Objective - <i>To provide a clear and reasonable mechanism for assessing the impact of applications for land use change on natural features and functions.</i> Also, the Green Plan Land Use and Development Goal #1 is to make the environmental planning process more user friendly.</p> <p>The Planning And Building Services has received feedback from developers/consultants that the EIS guidelines are not specific enough; and that there should be EIR guidelines. Also,</p>	<p><b>Year 2-3</b></p>

Component	Initiative	Timing
	<p>Planners and others who review EIS and EIR documents note that there is marked variation in the level of detail and overall quality of these reports, necessitating clearer guidelines and standards.</p> <p><b><u>Other Jurisdictions:</u></b>  London  GRCA  Waterloo Region</p>	
	<p><b>2.2 Update Official Plan to include “net gain” in natural areas</b></p> <p><b><u>Lead:</u></b> Planning And Building Services Staff</p> <p><b><u>Rationale:</u></b> OP Section 6.8 Objectives are to promote retention, maintenance and enhancement of natural forest systems and tree cover.</p> <p>Although OP policy includes the concept of ‘enhancement’, we are continuing to lose natural systems and habitat, particularly in the Hanlon Watershed (Draft State of the Watershed Report, April 2003). We need to adjust this policy to reflect a “net gain” approach, to more effectively implement the OP and subwatershed plans. It would also provide policy support to other policies and legislation such as a Compensation Policy suggested below, and a Tree By-law. This will also indirectly support the Green Plan Steering Committee’s recommendation to create a specific target for establishing a citywide linked open space concept.</p> <p><b><u>Other Jurisdictions:</u></b>  Oxford County</p>	<p><b>Year 4 (Next OP Review)</b></p>

Component	Initiative	Timing
	<p><b>2.3 Establish Compensation Policy and Guidelines</b></p> <p><b>Lead:</b> Planning And Building Services Staff</p> <p><b>Rationale:</b> As per discussions in the background report, the City’s terrestrial features are vulnerable to development. We do not have formal policies for replacing them once they are removed. Our Official Plan promotes the concept of “maintenance and enhancement” of our natural features, but we are lacking clear guidelines as to replacement ratios and tree/habitat valuation.</p> <p>‘Compensation’ in this context is a type of mitigation that attempts to replace the form and function of a feature being removed. Compensation may entail replacement of a feature in a different area on the property from which it was removed, or it may be replaced on an entirely different property (e.g. the restoration areas identified in suggested Action 1.1). This Policy will have to address such issues as tree valuation as well as credit for removal of undesirable vegetation to determine appropriate replacement ratios/guidelines in new development.</p> <p>This action would complement Actions 1.1 and 2.2.</p> <p>OP Section 6.1 Objective - <i>To recognize and identify existing natural features and their associated natural functions in the City that should be preserved or enhanced.</i> Section 6.2 Objective – <i>To utilize a watershed/subwatershed planning systems approach for the identification, evaluation and protection of the natural environment.</i> Also, one of the Implementation Principles of the Green Plan is to restore and improve damaged or impaired environments.</p> <p><b>Other Jurisdictions:</b> To be determined through a best practices review.</p>	<p><b>Year 3</b></p>

Component	Initiative	Timing
	<p><b>2.4</b> Incorporate natural topography/vistas retention into new development</p> <p><b>Lead:</b> Planning And Building Services Staff</p> <p><b>Rationale:</b> OP section 6.1 Objective (d) - <i>To maintain and enhance natural river valleys, vistas and other aesthetic qualities of the environment. SmartGuelph Principle “Inviting and Identifiable”.</i> Hanlong Creek Watershed Plan recommends that “site planning guidelines should be established which seek to maintain the existing topography to the extent feasible (rather than level grading).</p> <p>Some municipalities have adopted a cut and fill or topsoil by-laws that regulate removal and placement of topsoil on private property. Since Guelph is lacking this, hilltops/drumlins are sometimes scraped away to fill up lower areas. A stronger policy is required to incorporate existing natural landforms into development. A topsoil by-law can also facilitate surface and groundwater protection as well as other natural features and a varied landscape can provide visually interesting development options.</p> <p><b>Other Jurisdictions:</b> To be determined through a best practices review.</p>	<p><b>Year 3</b></p>
	<p><b>2.5</b> Update the Parks Naturalization Policy</p> <p><b>Lead:</b> Community Services Staff</p> <p><b>Rationale:</b> Created in 1991, it may be appropriate at this time to evaluate the success of the Policy and perhaps expand naturalized areas in conjunction with the recommendations that evolve from the Action 1.1.</p> <p><b>Other Jurisdictions:</b> To be determined through a best practices review.</p>	<p><b>Year 3</b></p>

Component	Initiative	Timing
	<p><b>2.6 Review Storm Water Management (SWM) pond naturalization/development policy</b></p> <p><b>Lead:</b> Engineering Department Staff</p> <p><b>Rationale:</b> The City of Guelph Engineering Department has taken the lead in naturalizing SWM Ponds. There may be opportunity to further enhance these functional ponds to create new wildlife habitat. These areas would then contribute to our overall Natural Heritage System, supporting Action 1.1 and 2.2; as well as contributing to community recreation. Currently, Engineering Staff are making progress in involving the community through “Adopt-a-Pond” research where citizens could engage in stewardship activities.</p> <p><b>Other Jurisdictions:</b> Credit Valley Conservation Authority</p>	<p><b>Year 2</b></p>
	<p><b>2.7 Review current Street Tree Planting Policy to support a proactive street tree replacement policy</b></p> <p><b>Lead</b> Public Works, Community Services, and Planning and Building Services</p> <p><b>Rationale:</b> A Green Plan Implementation Principle is to promote decision making processes that are proactive rather than reactive (p. 6). OP Section 6.8.1 - <i>The city will encourage the protection of forest resources. In order to enhance the urban environment, the City will promote the retention of existing street tree cover and provide for new tree planting on an on-going basis.</i></p> <p>Many of our street (and park) trees are growing old and will need to be removed. Public Works has a limited strategy which entails planting 1 tree for every 1 removed. However a more proactive approach is required that would start with a street and park tree inventory.</p>	<p><b>Year 1</b></p>

Component	Initiative	Timing
	<p>Young trees have to be planted in advance to give them a chance to become established before the old ones come down to maintain coverage to avoid the risk losing more trees than we replace. Public concern has been expressed about this. The Public Works Department responds to neighbourhoods that approach them for help, but they may need further support in this area.</p> <p>Also, in new areas, subdivision agreements may also warrant review to determine how new street trees are planted. Planning And Building Services has developed Alternative Development Standards in the past that can be applied to address these issues.</p> <p><b><u>Other Jurisdictions:</u></b>  London  Mississauga  Toronto</p>	
	<p><b>2.8 Review Living Fence Policy</b></p> <p><b><u>Lead:</u></b> Community Services Staff</p> <p><b><u>Rationale:</u></b> The policy was created in 1996 and warrants review based on Park Planner and development consultant feedback. Issues such as policy interpretation, effectiveness, cost and maintenance need to be addressed.</p> <p><b><u>Other Jurisdictions:</u></b>  To be determined through a best practices review.</p>	<p><b>Year 2</b></p>

Component	Initiative	Timing
	<p><b>2.9 Review Tree Bylaw</b></p> <p><b>Lead:</b> Planning And Building Services Staff and Engineering Department Staff</p> <p><b>Rationale:</b> OP Section 6.8.1 - <i>The City will enact by-laws to prohibit the removal or injury of trees.</i></p> <p>The City's tree by-law was created in 1986 and warrants updating to implement the protection of terrestrial features resulting from the analysis of the inventory work identified in Action 1.1.</p> <p><b>Other Jurisdictions:</b>  Toronto  London  Mississauga</p>	<p><b>Year 2</b></p>
	<p><b>2.10 Prepare Tree Protection Guidelines</b></p> <p><b>Lead:</b> Planning and Building and Engineering Services Staff</p> <p><b>Rationale:</b> The City often requires that a Tree Conservation Plan is submitted as condition of a Site Plan or as part of an Environmental Implementation Report, but are lacking guidelines as to what should be included in this Plan (e.g. type of terrestrial feature or minimum tree size to be protected, native versus exotic species, etc.); or standards as to how the trees/terrestrial features ought to be protected before/during/after construction.</p> <p><b>Other Jurisdictions:</b>  To be determined through a best practices review.</p>	<p><b>Year 1</b></p>

Component	Initiative	Timing
	<p><b>2.11</b> Review Standard Conditions of Development Approval</p> <p><b>Lead:</b> Planning And Building Services Staff</p> <p><b>Rationale:</b> Standard conditions of approval should reflect revised environmental policies and by-laws.</p> <p><b>Other Jurisdictions:</b> n/a</p>	On-going
	<p><b>2.12</b> Examine the need for snow storage/management guidelines</p> <p><b>Lead:</b> Public Works Department Staff</p> <p><b>Rationale:</b> Snow is removed from streets as the banks become too high. Road salt, oil, sand and other contaminants are mixed with the snow and some can be environmentally toxic. Care should be taken in the management of snow storage, particularly in sensitive environments that may be impacted after snow melt (e.g. riparian environments, wellheads). For example, the collective City-wide storage facility adjacent to the Speed River should be reviewed.</p> <p><b>Other Jurisdictions:</b> To be determined through a best practices review.</p>	Year 3
	<p><b>2.13</b> Promote Stewardship (with partners) including Residents' Handbook for Environmental Stewardship</p> <p><b>Lead:</b> Planning And Building Services, Public Works and Community Services Staff</p> <p><b>Rationale:</b> OP Mission Statement, <i>"Committed to environmental stewardship", i.e. the</i></p>	Year 2

Component	Initiative	Timing
	<p><i>development of partnerships with community groups such as “Adopt-a-Pond”; and Section 6.2.6 ...the need for the entire community to practice environmental stewardship. A Green Plan Implementation Principle is “Stewardship” which includes assuming responsibility for the environment and managing the environment for the benefit of present and future generations. This is supportive of SmartGuelph Principle, Collaborative and Cooperative. It is particularly important as we are seeing more and more detrimental encroachment on natural areas that are abutted by homes. Stewardship efforts may also be directed to tree trimming as the City has approximately 50,000 trees whose maintenance is the responsibility of public Works.</i></p> <p><b><u>Other Jurisdictions:</u></b> To be determined through a best practices review.</p>	
	<p><b>2.14</b> Celebrate successes; newsletters; Webpage; Apply for awards; Journal submissions; build community awareness/support through communication initiative (on-going)</p> <p><b><u>Rationale:</u></b> The City of Guelph has many accomplishments environmentally that are not conveyed to the public and visa versa. Celebrating successes means encouragement to keep reaching for higher standards. OP Section 6.2.6 states that <i>the City will use a variety of information-sharing techniques to increase public awareness of natural heritage features and their functions and the need for the entire community to practice environmental stewardship.</i> Examples of other ways to raise awareness and involve the public include: promoting the Canadian Backyard Habitat Certification Program for people who have naturalized their yards; and teaching people how to get involved in the Planning process, particularly as it pertains to sites with natural features.</p> <p><b><u>Other Jurisdictions:</u></b> To be determined through a best practices review.</p>	<p><b>Year 1-5</b></p>

Component	Initiative	Timing
<p><b>3. New Policy/ Practice</b></p>	<p><b>3.1 Create a Genetic Retention Policy and Program</b></p> <p><b>Lead:</b> Planning And Building Services Staff</p> <p><b>Rationale:</b> A part of natural heritage protection that is often overlooked is retaining our genetic diversity particularly from those specimens that have adapted to local conditions. It is important not to lose this genetic information as we bring in material to replant areas in compensation for what may have been cleared for development. This may entail collecting seeds and/or seedlings and whips; as well as wildflowers and other plant material.</p> <p><b>Other Jurisdictions:</b> To be determined through a best practices review.</p>	<p><b>Year 5</b></p>
	<p><b>3.2 Create Boulevard Plantings Policy</b></p> <p><b>Lead:</b> Public Works Staff</p> <p><b>Rationale:</b> OP Mission Statement, “Committed to environmental stewardship”.</p> <p>The Public Works Department regularly deals with proactive individuals who plant City boulevards at their own time and expense. A policy and/or guidelines are required to ensure that the workers can continue to carry out their duties in conjunction with plantings without injury or destruction.</p> <p><b>Other Jurisdictions:</b> To be determined through a best practices review.</p>	<p><b>Year 1</b> <b>(in progress)</b></p>

Component	Initiative	Timing
	<p><b>3.3</b> Update Zoning By-law to reflect Official Plan Natural Heritage features.</p> <p><b>Lead:</b> Planning And Building Services Staff</p> <p><b>Rationale:</b> Often natural features and groundwater are compromised because it is not clear in the Zoning maps where the feature is or whether an Environmental Impact study is required.</p> <p><b>Other Jurisdictions:</b> n/a</p>	<p><b>Year 3-4</b></p>
	<p><b>3.4</b> Investigate alternative ground covers and drought resistant grasses as an option for home buyers in new subdivision rather than only sod.</p> <p><b>Lead:</b> Planning And Building Services Staff</p> <p><b>Rationale:</b> When a builder sells a house, the new owner has a choice as to whether or not they want sod (installed at the expense of the builder or developer). It would be smart to have other ground cover options made available to them in the same manner. Alternative ground covers include rock gardens, wood chips, native wildflowers, clover, drought resistant natural species, etc., that can provide habitat, reduce the need for water and chemical application. Council passed the following resolution, "THAT staff report back with a preliminary report within one month on the feasibility of mandating developers in new subdivisions to use types of drought resistant grass and on increasing the quantity and quality of topsoil used in final grading residential lots...".</p> <p><b>Other Jurisdictions:</b> To be determined through a best practices review.</p>	<p><b>Year 1</b></p>

Component	Initiative	Timing
	<p><b>3.5 Environmental Monitoring Program</b> (based on results from inventory and recommendations in past EIS documents / other Subwatershed studies)</p> <p><b>Lead:</b> Planning And Building Services Staff</p> <p><b>Rationale:</b> A Green Plan Implementation Principle is 'Prevention', which includes developing systematic monitoring programs to identify potential environmental problems. Emphasis should be put on measuring habitat change rather than wildlife occurrence according to the Green Plan Steering Committee's, 2003 State of Sustainability Report.</p> <p>The Environmental Advisory Committee repeatedly highlights this as a gap in the planning and development process, as do environmental consultants in their EISs.</p> <p>This also supports the Groundwater Protection Strategy in the OP. SWM pond monitoring may also be included.</p> <p><b>Other Jurisdictions:</b> Credit Valley Conservation Authority City of Waterloo</p>	<p><b>Year 3-4</b></p>

Component	Initiative	Timing
	<p data-bbox="443 215 1656 285"><b>3.6</b> Create and maintain GIS layers for monitoring natural areas/trees/wetlands, etc.</p> <p data-bbox="443 326 1656 492"><b>Rationale:</b> GIS is Geographic Information System which is a mapping tool used in Planning (and numerous other fields). To maintain a “layer” of mapping that includes details of our natural heritage system will assist in tracking inventories of number and quality of trees, SWM ponds, etc.; as well as provide us with customer services information and information to constantly update our OP and other mapping; and assist in monitoring.</p> <p data-bbox="443 529 1094 589"><b>Other Jurisdictions:</b> To be determined through a best practices review.</p>	<p data-bbox="1686 402 1776 431"><b>Year 4</b></p>

## SCHEDULE 2 Initiatives for Years 1 to 5

Activity	Timing				
	Year 1	Year 2	Year 3	Year 4	Year 5
2.7 Review current Street Tree Planting Policy	■				
2.10 Prepare Tree Protection Guidelines	■				
3.2 Create Boulevard Plantings Policy	■				
3.4 Offer alternative ground covers	■				
1.1 Inventory of Selected Natural Heritage Features	■	■			
2.6 Review Storm Water Management (SWM) pond		■			
2.8 Review Living Fence Policy		■			
2.9 Review Tree Bylaw		■			
2.1 Review Environmental Impact Study guidelines		■	■		
2.13 Promote Stewardship (with partners)		■	■		
2.12 Examine the need for snow storage/management			■		
2.4 Incorporate natural topography/vistas			■		
2.3 Establish Compensation Policy and Guidelines			■		
3.3 Update Zoning By-law			■	■	
3.5 Environmental Monitoring Program			■	■	
2.2 Update Official Plan to include "net gain"				■	
3.6 Create and maintain GIS layers				■	
3.1 Create a Genetic Retention Policy and Program					■

# APPENDIX 1

## 1. Selected Official Plan Excerpts:

- Section 2.1 City's Mission Statement (part of):  
*...Committed to environmental stewardship and to operate on the principle of environmental sustainability.*
- Section 2.2 Plan Operating Principles:  
*Environmental Sustainability:*  
*Recognition that the quality of life is directly related to the integrity of the natural systems (air, water, soil, wildlife, plants) and that there is a responsibility on the part of the community to maintain and improve the integrity of natural systems so as to not compromise the ability of future generations to meet their needs.*
- Section 2.3 Major Goals:
  - 10. *Promote energy conservation and climate change protection through land use planning, the development approvals process and through other municipal initiatives.*
  - 11. *Respect and encourage the protection and enhancement of the natural environment, other distinctive features of the landscape and the associate ecological functions to support a healthy and diverse ecosystem both within and beyond the City limits;*
  - 12. *Promote development that supports a sustainable community that is sensitive to the natural environment and creates additional awareness of our natural heritage system.*
- Section 6, particularly Section 6.1 f) *To establish a comprehensive systems approach to the protection and enhancement of natural heritage features.*

## 2. The City of Guelph Green Plan:

The Green Plan adopted by Council in 1994 promotes integration of environmental considerations in all decisions, prevention, stewardship, conservation, enhancement, rehabilitation and reclamation, and full cost accounting as per their Implementation Principles for Environmental Sustainability. Several of the State of Sustainability Report recommendations are supported by this Strategy.

## 3. SmartGuelph Principles:

Finally, this Natural Heritage Strategy is an important step in implementing the SmartGuelph Principles. The Principles "Pastoral and Protective", "Clean and Conscious", Collaborative and Cooperative" and "Pastoral and Protective" are all clearly promoted by this Strategy.