



The Future of Ipswich Planning Project

Part Two

THE VISION FOR OPEN SPACE: THE IPSWICH GREEN RING REPORT

Submitted to

The Town of Ipswich, Massachusetts

By

Community Design Partnership, Inc.
Boston, MA

July 2000

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INTRODUCTION: THE VISION FOR OPEN SPACE

In 1999, the Town of Ipswich began a growth management initiative for the 21st century which came to be called “The Future of Ipswich Planning Project.” This initiative includes multiple elements. Its overall purpose is to help the residents, business owners, and property-owners in Ipswich agree on a vision for the future of the town, a strategy to make the vision a reality, and action steps to implement the strategy. The planning process was structured to answer a series of questions about how Ipswich sees itself and its future:

- *The Vision.* What kind of place should Ipswich be in another twenty years?
- *Preservation.* What should the Town preserve and protect from development?
- *Growth.* How much new housing and business growth does the community want, what kind should it be, where should it be located, and how should its design relate to its context?

IPSWICH IN 2020

Ipswich in 2020 is a community that understands how to manage change by:

- Protecting the town’s natural beauty, water resources, and environmental health through enhancing its “green infrastructure”
- Preserving its historic structures and sites
- Sustaining its rural heritage by supporting local farming
- Providing a wide variety of economic and housing opportunities to support social and economic diversity in the community

In 2020, Ipswich remains a real country town, not simply a suburb or bedroom community.

- The historic downtown core is surrounded by an ecologically diverse network of open spaces containing wildlife corridors and trails for equestrian and human use.
- The Ipswich River flows throughout the summer and water quality has improved so much in the estuary that clam beds are once again open for harvest.
- Housing is concentrated in the downtown core, where a lively village commercial center still offers owner-operated retail establishments.
- Environmentally-friendly businesses in the core and in a redeveloped Mitchell Road industrial park provide jobs for a significant proportion of local residents.
- Outside the core, fields and woods are interspersed along the roads with nodes of housing.
- Local farms survive, thanks to strong market and policy support from the community.
- Transportation alternatives to cars benefit local residents as well as visitors to Ipswich.
- The town’s successful preservation of open space and management of transportation makes it attractive to visitors, who admire historic sites and patronize downtown businesses in addition to enjoying beaches and other natural areas.

This report focuses on the second question – *what should we preserve and protect and how should we do it?* – in relation to open space and environmental resources. The subsequent stage of the growth management initiative focuses on creating a framework to provide for change in the locations, amounts, and types of development compatible with sustaining the environmental and open space resources critical to the Town.

A Civic Visioning Forum was held on January 19, 2000, resulting in the vision statement shown here. A more detailed discussion of the visioning process is available in a separate part of the Future of Ipswich Planning Project Report. The Ipswich Vision Statement gives high priority to preserving and enhancing the environmental and open space resources that contribute to the Town’s identity. Major elements of the vision statement focus on protecting and sustaining a balance of environmental



resources, scenic open spaces, natural habitat, and rural resource-based economic activities. By concentrating first on what should be preserved and how preservation options should be evaluated, the Town chose to base its growth management policies on the fundamental capacity and character of the natural systems in Ipswich – the green infrastructure which is as important as the human social and physical infrastructure that support the community.

During 1998 and 1999, the Ipswich Open Space Committee updated the Town's Open Space and Recreation Plan for the next five years. Ipswich has a rich variety of open space resources, but Committee members and others were concerned that the development pressures which had become evident since the mid-1990s were threatening the open spaces so valued by the community. As part of the growth management initiative, the town contracted with a consultant team led by Community Design Partnership (CDP) to facilitate the visioning process, to develop an ecological open space network plan, to devise a system that would assist the Town in evaluating lands for purchase or other forms of protection of open space, and to inventory critical open space.

The initial approach to the open space elements of this project was to use landscape ecology principles to design the network and the land evaluation system, giving primacy to environmental values. At a Civic Forum in March 2000, preliminary versions of the open space network and the evaluation system were discussed with a group of 45 participants. The open space network design was well-received and there were a number of questions and suggestions about the preliminary evaluation system. The Open Space Committee and others requested that the land evaluation system and inventory of critical parcels encompass the wider range of open space values articulated by Ipswich residents in recent surveys and forums.

In addition to this broadening of the initial program of the project, Open Space Committee members and other citizens organized a successful effort in March and April 2000 to gain Town Meeting approval of \$10 million in bonding authority for the purchase of fee-simple or other interests in property for the purpose of open space preservation. Included as part of this authorization was a list of 85 "priority parcels" that had been identified by Committee members as potential candidates for open space preservation. These new elements were incorporated into the final version of the network and evaluation system which were presented at another Civic Forum to approximately 40 participants on June 21, 2000, along with evaluation examples of critical open space parcels.

Other recent Ipswich activities related to open space preservation include the "Town Character Project," a series of events led by visiting British planners in the fall of 1999 to document and analyze the landscape and

design character of different sections of town, a study by Tufts University graduate students on a possible scenic overlay district for selected roads in Ipswich, and a citizen effort to include selected Ipswich roads in a regional scenic byways program.

This ferment of activity attests to the strong desire of Ipswich residents to protect and enhance the open space resources that are an essential part of the Town's identity. This report is intended to contribute to a refinement of thinking and action on open space preservation in Ipswich and should be used within the wider context of the Future of Ipswich growth management initiative.

I. DESIGNING A NETWORK

IDENTIFYING THE COMMUNITY'S LANDSCAPE VALUES

What do people in Ipswich value about their landscape? What open space values do they wish to promote? In recent years, there have been a number of opportunities for Ipswich residents to reflect on the Town's landscape character and give opinions on open space preservation issues.

Several sources give insight into the open space values of the Ipswich community:

- "Criteria for Evaluating Proposed Open Space" – Planning Board guidance for developers, May 1997.
- Open Space Plan Survey – Open Space Committee, November 1998
- Town Character Project – Fall 1999 photographic surveys
- Ipswich of the Future Survey – Growth Management Committee, December 1999
- Future of Ipswich Visioning Forum – 19 January 2000

Planning Board Criteria

In a guidance document for developers who propose projects with open space elements, the Planning Board did not explicitly rank the criteria that they use in evaluating the open space proposed in new projects, but the types of open space the Board will look for in these projects are listed in the following order:

- Public water supply protection lands
- Marsh fringe – lands adjacent to the Area of Critical Environmental Concern
- Wetland fringe – lands bordering inland wetlands, rivers, streams, and floodplains, especially the Ipswich River
- Forest – especially if contiguous to other forest or providing wooded corridors
- Wildlife habitat of threatened or endangered species and vernal pools
- Unique features – archaeological sites; scenic vistas; groves of mature trees; rocky outcrops, bluffs or hilltops providing attractive scenery; lands along a designated scenic road
- Lands with existing trails or potential trail access or linkage, especially for the Bay Circuit program
- Active agricultural lands to be kept in production
- Lands with high potential for active recreation or parks





- Public access opportunities, especially for disabled, elderly, and young persons

The Planning Board criteria encompass both ecological and cultural values.

Open Space Plan Survey

A survey distributed by the Open Space Committee in late 1998 had 144 respondents who were asked to indicate which open space issues were “very important,” “somewhat important” and “not at all important.” The order ranking of open space types for which preservation was deemed “Very Important” was as follows:

1. Protect drinking water supply
2. Buffer zones for wetlands
3. Maintain wildlife habitat
4. Wooded areas
5. Scenic/natural features and Agricultural use (tie)
6. Passive recreation
7. Road vistas
8. Land around historic buildings
9. Active recreation

The values expressed in this survey are strikingly similar to the criteria articulated by the Planning Board.

Town Character Project

The photographs of valued places taken by eight teams of residents in different parts of town during the Town Character Project in the fall of 1999 were also analyzed for the open space values that they revealed.

- *Rural character* – Farms, orchards, pastures with animals, farm stands
- *Scenery* -- Open, wide views (pasture, marsh, ocean, etc); edge/diversity views (from woods to pasture, from upland edge to marsh); woodland views; country lanes
- *Historic character* – Cemeteries, historic houses and other buildings, stone walls
- *Recreation* – Hiking, horseback riding, cross-country skiing, skating, boating

Ipswich of the Future Survey

In December 1999, the Growth Management Committee distributed a survey to gauge community concern about a variety of preservation and development issues. Of the open space values (other values listed in the survey are not included here), those that were indicated as a first or second priority to be addressed, out of a possible five are:

1. Preserve open space and significant scenic vistas
2. Protect water supply and quality
3. Protect wildlife habitat
4. Protect historic properties and sites
5. Preserve agricultural uses

The top-rated choice is somewhat ambiguous since "open space" covers multiple values, including the others on this list.

Visioning Forum

During the first Future of Ipswich Forum, held in January 2000 and which was devoted to a visioning process, the over 100 participants were asked to discuss what images or ideas came to mind when they thought of Ipswich and also what the term, "open space," meant to them in the Ipswich context. The results of the "words that mean Ipswich" exercise, when organized into categories, provide a strong sense of the importance of open space values to the Ipswich sense of identity. The relevant category words that participants used to describe the town are:

Historic

Participants valued the physical sense of connection to history in Ipswich. This value conveys both the desire to retain the physical evidence of the past, and implicitly, a recognition that the community changes over time.

Beautiful and Scenic

A desire to retain the beauty and variety of the Ipswich landscape was articulated in a number of ways. Participants talked about the water, marshes, woods, long and open vistas, and rural views.



Town and Country

Participants did not see Ipswich as a suburb or bedroom community and did not want to become one. Preservation of "rural" and "small town" character – however that might be defined – was important to participants. To many people, that means preservation of working



agriculture, not simply low-density residential districts, and a strong downtown “Main Street” retail area with locally-owned businesses.

Environmentally Sustainable

A number of environmental protection and sustainability themes emerged, from hopes for a flowing year-round Ipswich river, wildlife habitat protection, and environmentally-friendly businesses and industry to a renaissance of clamming.

Unique and Special

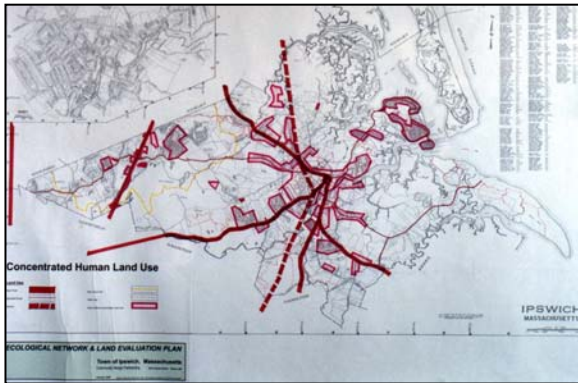
Participants had a strong feeling that Ipswich has a unique and valuable character resulting from a combination of its history, its water-infused landscape, its combination of small town and rural living, its tranquillity, and its friendly and community-minded population.

When asked what “open space” means to them in the Ipswich context, many participants tended to emphasize scenic qualities, talking about natural vistas and views from roads (especially gateway roads into Ipswich). Others brought up types of open space, such as farms, pasture, wetlands, and forests, and, to a lesser degree, recreational resources such as trails, golf courses, athletic fields. In addition to the general category of “wetlands,” the river and the beach were also mentioned. More abstract concepts of open space also came up: wildlife habitat and “wild” nature, cluster housing with open space, and houses on large lots. The significant size of many Ipswich open space resources was also mentioned.

ANALYZING THE IPSWICH LANDSCAPE

Although best known to outsiders for its salt marshes and beaches, residents know that the Town of Ipswich has a variegated landscape shaped both by nature and by human action. Over the town’s history, people have used the town’s natural resources to survive – fishing and clamming, gathering salt hay, farming, raising livestock, and harnessing the river’s energy for industry. Today, the landscape reflects this history. Secondary forest has grown up in abandoned fields crisscrossed by stone walls. A few farms and orchards remain in operation. The dam on the Ipswich river testifies to the town’s nineteenth and early twentieth-century identity as a mill town. While reflecting the history of Ipswich’s dependence on the land and water, the landscape today also shows the growing effects of human activities that are superimposed on the land but less dependent on it: suburban-style residential expansion, wider roads, commercial strip development.

Landscape Ecology Principles

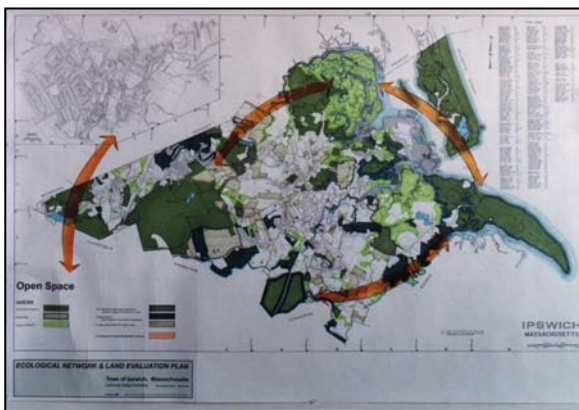


“Landscape” is an elastic word with multiple meanings. In the last generation it has become paired with “ecology” to name a new scientific endeavor: landscape ecology.¹ This is the study of organisms – including human beings – and their environment on a scale that is larger than a single site or parcel of land, but smaller than a region. In this context, a “landscape” generally encompasses the amount of land area that can be seen from an airplane and, from that vantage point, reveals itself to be a *mosaic* of repeating land uses or spatial elements and local

ecosystems. The landscape mosaic is made up of both natural systems and human land uses and is entirely composed of three types of elements:

- Patch – relatively homogeneous area
- Corridor – a strip of land that differs from the land on both sides
- Matrix – the background ecosystem or land use type in a landscape

Applying basic landscape ecology principles to a landscape analysis provides a framework for understanding existing landscape dynamics, the effects of current trends, and the potential to enhance the desired landscape character, particularly for the preservation of environmental resources. This analytical approach permits us to make generally valid assumptions about the ecological function and value of landscape types without having to perform detailed ecological and biological surveys of each piece of land.



In Ipswich, an analysis of the landscape mosaic shows concentrations of both human uses and natural systems in specific core areas or large patches; a variety of corridors at different scales that extend out from these core areas; and a number of fragments that are less well integrated into a linked network of patches and corridors. Figure One provides examples of how specific places in Ipswich can be understood as part of a landscape mosaic.

¹ A practical overview is in Wenche E. Dramstad et al., *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning* (Washington, DC, 1996) and a detailed scholarly treatment in Richard T. T. Forman, *Land Mosaics: The ecology of landscapes and regions* (New York, 1995).

Figure One: The Ipswich Landscape Mosaic		
Landscape Elements	Human Uses	Natural Systems
Core areas – large patches	<ul style="list-style-type: none"> ■ Town center 	<ul style="list-style-type: none"> ■ Willowdale State Forest ■ Appleton Farms ■ Castle Hill Reservation/ Crane’s Beach ■ Parker River/Essex Bay National Wildlife Refuge and Plum Island State Park ■ the Great Marsh
Other large patches	<ul style="list-style-type: none"> ■ Agricultural crop lands ■ Estate gardens 	<ul style="list-style-type: none"> ■ Portions of lands in rural uses such as pastures and old fields
Corridors	<ul style="list-style-type: none"> ■ Roads ■ Railroad ■ Hiking/skiing trails ■ Equestrian trails 	<ul style="list-style-type: none"> ■ Small perennial and intermittent streams and their banks ■ Ipswich River corridor – human and wildlife ■ Parts of Egypt River/Bull Brook corridor ■ Vegetated corridor linking the two parts of Willowdale State Forest across Route 1 ■ Ch. 61A land between Willowdale and reservoir land ■ Protected land in neighboring towns and Ipswich farmland between Turner Hill and eastern Argilla Road
Fragments (small patches)	<ul style="list-style-type: none"> ■ Subdivisions ■ Houses and driveways along major roads ■ Route 1 development ■ Portions of great estates slated for building ■ Downtown Ipswich River corridor ■ Mitchell Road industrial park ■ Gravel and composting operations 	<ul style="list-style-type: none"> ■ Isolated wetlands ■ Town common, parks ■ Smaller farms and woodlots ■ Playing fields ■ Cemeteries ■ Residential back yards

There are two competing background “matrix” qualities in Ipswich. The town’s natural landscape is fundamentally a beach/marsh and forest/wetland environment. The human landscape is in transition, with a mill village/rural environment partially overlaid with a suburban residential environment.

The natural landscape includes a number of extremely important, permanently protected large open space patches in the coastal zone (Plum Island, Castle Neck, the Great Marsh), to the south (Appleton Farms), and to the west (Willowdale State Forest). Certain elements of the landscape are particularly valuable for their contribution to landscape and habitat variety and

to connectivity.² Large patches or core habitat areas, like the Great Marsh and Willowdale State Forest, provide habitat for rare and endangered species, and should be maintained and buffered. Upland grasslands and their associated plants and wildlife (especially birds) are increasingly rare in eastern Massachusetts as old fields either revert to forest or are developed. The remaining pasture lands of Ipswich play an important role in preserving this ever-rarer landscape type.

Streams, even intermittent streams, and vernal pools play a critical role in wildlife corridors. With the exception of larger mammals like fox and coyote, animals travel close to streams where they can find water and food. In the winter, they have been shown to make detours from stream banks to the sites of vernal pools, which are slightly warmer depressions where they can find moisture and invertebrate food. Roadkill in Ipswich is almost always found at culverts, where animals traveling along streams are forced to cross the road surface. Beavers also create habitats that are in limited supply in the Ipswich area, “subsidizing” wildlife, including threatened marsh birds.

Some of these areas are permanently protected from development; some are subject to varying degrees of temporary or limited protection; and some areas are not protected at all. Just because land is publicly owned does not mean it is permanently protected. Permanently protected land includes federal and state parks, forest, and wildlife refuges; land belonging to the Town Conservation Commission; water supply protection land belonging to the Town Water Department; land with a conservation restriction that runs with the deed in perpetuity and has been approved by the state Secretary for Environmental Affairs; and land belonging to land trusts and other conservation non-profit organizations that similarly has permanent deed restrictions. The ACEC (Area of Critical Environmental Concern) designated by the state that encompasses Ipswich’s salt marshes, is also permanently protected. However, although the Wetlands Protection Act and the Rivers Protection Act help protect wetlands and streams, this protection is not comprehensive for small areas of wetland, which can be disturbed up to 5,000 square feet if replicated, or for the 300-foot riparian protection zone that biologists would prefer to the 200 feet included in the Rivers Protection Act.

Ipswich has very substantial large-patch natural areas, streams, and wetlands, as well as significant lands in rural and private estate uses. This mosaic of land uses shows a very robust natural matrix for the landscape. On the other hand, the recent trends in human uses have problematic effects on

² Information on critical habitats in Ipswich from interview with Jim MacDougall, Land Manager, Essex County Greenbelt Association, 4 February 2000, and Letter from Wayne Castonguay, Regional Ecologist, The Trustees of Reservations, to the Ipswich Open Space Committee, 14 February 2000.

this natural matrix. The older mill village/rural landscape of Ipswich concentrated human activities in the town center, leaving the rest of the town dotted with very low-density rural uses along a relatively limited network of narrow roads. It took 50 years for the Town's population to double (1930-1980) and population growth remains slow, but the impact that this population is having on the Town's open spaces is greater than its size would indicate. Low-density suburban-style housing development, with the concomitant expansion of wider, paved roads and vehicle traffic, increases the fragmentation of the natural matrix and creates barriers and obstacles in natural linkages and networks.

Because of these trends, planning for open space protection must look at open space as a *system*, not simply a set of unrelated desirable parcels. Knowing what role specific parcels or protected elements within a group of parcels might play within the overall system, including relationships to neighboring towns and regional resources, is essential to making decisions about preservation options.

DESIGNING NETWORKS FOR GREEN INFRASTRUCTURE

Open space networks composed of protected landscape patches connected by multiple corridors are increasingly known by the term "green infrastructure." As Maryland Governor Parris Glendening said in 1999:

Just as we must carefully plan for and invest in our capital infrastructure – our roads, bridges and waterlines, we must also invest in our environmental or green infrastructure – our forests, woodlands, streams and rivers. Just as we must carefully plan for and invest in our human infrastructure – education, health services, care for the elderly and disabled – we must also invest in our green infrastructure.³

There are a number of criteria that could be used to design an open space network. Networks can and have been created for the following reasons:

- For scenery – Scenic roads systems are the most obvious type of scenic network. They emphasize views from public areas and seek the exception, variety, and distance in views.
- For rural character – Agricultural preservation zones support rural economic activities and mitigate conflicts between rural uses and suburban residential uses.

³ Quoted in Edward T. McMahon, "Green Infrastructure," *Planning Commissioners Journal*, 37 (Winter 2000), 4.



- For historic character – Historic districts and historic routes demonstrate the links among historic events, sites, and landscapes.
- For recreation – Greenways and trails for bicyclists, pedestrians, equestrians, skiers and others can link both urbanized and natural areas and can vary in intensity of development and use characteristics
- For environmental/ecological values – Ecological or environmental networks emphasize support for healthy natural systems, fragile natural resources, and habitat

Ipswich can have multiple network types. However, a “green infrastructure” network supporting the natural systems of a healthy ecosystem should be the foundation of all open space networks. Landscape ecology principles that emphasize protecting the integrity of large natural patches and ensuring “connectivity” – robust natural links between and among natural patches – provide a relatively simple way to enhance green infrastructure without the need for detailed biological surveys.

Moreover, an open space network based on landscape ecology values also can encompass and support the networks of other, sometimes unrelated, purposes. A green infrastructure network can maximize the individual and overall benefits of environmental functions and natural systems: scenic, recreational, and rural heritage values; preservation of historic character; and growth management goals. An organized system of cores and corridors, anchored by large patches of both human and nonhuman land uses and functions and with scattered smaller patches, is more resilient and valuable than a set of parcels protected in fragments.

For a landscape network that functions well ecologically, a significant presence of each of the following landscape types is needed. They cannot substitute for one another in ecological function:

- Large naturally vegetated cores (large patches)
- Wide vegetated corridors protecting water courses
- Connectivity for movement of species between core large patches and other vegetated patches
- Smaller patches and corridors providing heterogeneous natural land areas throughout developed areas

Figure Two shows how the fundamental elements of a green infrastructure network based on landscape ecology supports a variety of other open space values and goals.

Figure Two: Ipswich Green Infrastructure and Other Open Space Values				
Open Space Values	Core Areas (Large patches)	Corridors	Water/wetlands	Landscape Diversity
Scenic Values	<ul style="list-style-type: none"> ■ Great Marsh salt marshes ■ State Forest – woodlands ■ Estates – grasslands for pasture ■ Concentrated New England historic village 	<ul style="list-style-type: none"> ■ Natural gaps in roadside development ■ Trails for human use ■ Vegetated and cultivated roadsides 	<ul style="list-style-type: none"> ■ Buffers and edges give views over marsh and water ■ Views along and crossing rivers 	<ul style="list-style-type: none"> ■ Variety of open and closed views ■ Wide vistas ■ Edge views and intimate views ■ Views of and from hilltops
Cultural, Historic, and Recreational Values	<ul style="list-style-type: none"> ■ Historic village ■ Rural heritage ■ Hunting ■ Hiking, skiing, horseback riding ■ Nature study 	<ul style="list-style-type: none"> ■ Lower density human uses with gaps ■ Hiking, skiing and equestrian trails 	<ul style="list-style-type: none"> ■ Fishing ■ Boating ■ Swimming ■ Shellfish harvest 	<ul style="list-style-type: none"> ■ Variety of recreational environments
Rural Activities	<ul style="list-style-type: none"> ■ Estates and working farms 	<ul style="list-style-type: none"> ■ Windbreaks, hedgerows, and fencerows 	<ul style="list-style-type: none"> ■ Small streams, ponds, and wetlands ■ Irrigation and field drainage 	<ul style="list-style-type: none"> ■ Woodlots ■ Pastures ■ Orchards ■ Food crops ■ Ornamental crops
Growth Management	<ul style="list-style-type: none"> ■ Concentration of human uses 	<ul style="list-style-type: none"> ■ Lower density human uses with gaps 	<ul style="list-style-type: none"> ■ Improved water quality and quantity 	<ul style="list-style-type: none"> ■ Variety in building types, land use and living densities

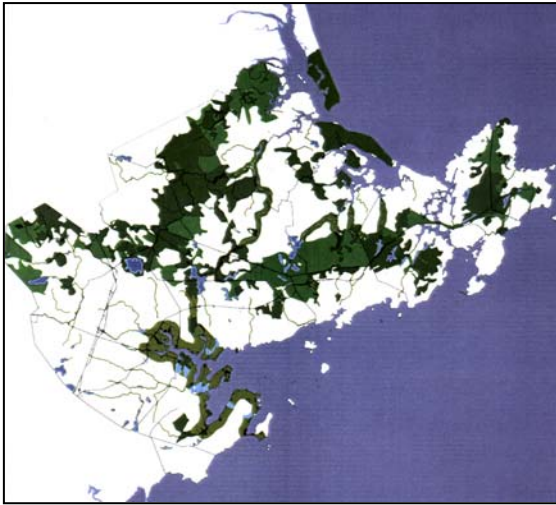
As indicated in Figure Two, using the approach of green infrastructure based on landscape ecology principles can provide a strong framework to provide for many desired characteristics, while also contributing to balanced management of growth and development.

II. THE VISION FOR OPEN SPACE

THE ECOLOGICAL OPEN SPACE NETWORK – THE IPSWICH GREEN RING

The Regional Context

Ipswich is part of a regional environmental and open space network of great importance, and it plays a role of global significance for biodiversity. A recent study prepared for the Metropolitan Area Planning Commission (MAPC), *Grow Smart North Shore*, proposed a Cape Ann and North Shore



Source: *Grow Smart North Shore*

Regional Reserve that would link existing protected areas with ecological, water, and sociocultural resources in a regional network. The proposal as it relates to Ipswich includes substantial green corridors linking the Rowley River area with Willowdale State Forest, and a corridor along the Ipswich River.⁴

The 25,000-acre Great Marsh, of which coastal Ipswich is a part, is the largest salt marsh in New England and a major stop for migrating birds on the Atlantic flyway between Central America and Canada. Crane's Beach is globally important for protection of biodiversity because of its Piping Plover nesting areas. The importance of this area has been recognized by the federal and state governments through creation of the

Parker River National Wildlife Refuge, Plum Island State Park, and designation of an ACEC (Area of Critical Environmental Concern) in the salt marsh. Nonprofit conservation organizations, The Trustees for Reservations (TTOR) and the Essex County Greenbelt Association (ECGA) also protect significant portions of the Great Marsh and barrier beaches, most notably TTOR's reservation at Crane's Beach.

The upland protected open space in Ipswich is also connected to open space in neighboring communities. Willowdale State Forest abuts Bradley Palmer State Park, creating a woodland area that reaches into Boxford, Rowley, Topsfield, and Hamilton. This kind of very large, connected forested area is quite unusual in Eastern Massachusetts. Likewise, lands protected by ECGA span Ipswich's borders with Essex and Hamilton.

Each neighboring community, with the exception of Boxford, also has its own open space plan and open space priorities. Rowley, Topsfield, Hamilton, and Essex all have overall open space goals that are very similar to

⁴ *Grow Smart North Shore* (Boston: Harvard Graduate School of Design/Metropolitan Area Planning Council, 1999), 18.

Ipswich's: protection of water supply and wetlands, visual and rural character, and wildlife habitat. These plans, completed in 1997 and 1998, demonstrate the same concern about encroaching development that can be found in Ipswich. However, the authors of most of the plans also mention considerable resistance to expenditure of town funds on open space protection. Only Rowley identified parcels on the Ipswich border as high priority open space protection areas. A group of large parcels currently in Chapter 61A status located on the Rowley River northwest of the Miles Sand and Gravel parcel (Vitale's Pit) in Ipswich are identified in the Rowley Open Space Plan for permanent protection. [show map portion] The Ipswich Open Space Committee participated last year in meetings with the committees from neighboring areas and environmental nonprofits. Given the proactive role that the Town is taking in open space preservation, it should continue this activity as a way to promote regional open space networks.

Ipswich Open Space Networks – the Green Ring and the Secondary Network

The concept behind the Ipswich Green Ring is to link existing large-patch protected areas with protected corridors of varying widths. This constitutes the Primary Ring, a greenbelt around the historic village center and close-in residential areas. A secondary, complementary, and supportive network focuses on stream corridors and scenic roads.

The Primary Green Ring has five existing core large patch areas of natural vegetation:

- Plum Island
- The Crane's Beach and Castle Hill Reservation
- Appleton Farms
- Willowdale State Forest
- The Great Marsh along the Rowley River, Plum Island Sound, and the Ipswich River estuary

These are the primary ecological reserves of Ipswich, but they also represent the diversity and high quality of landscape types that make up the rich open space resources of the Town. Beach, marsh, forest, pasture and fields, and estate lands – all laced with streams and rivers – are the defining landscape types in Ipswich.

The purpose of the Primary Green Ring is to create open space linkages and corridors between these core areas. The Green Ring builds on existing resources and multiplies their benefits by providing additional resilience for plants and animals under pressure from development or human activities. Unconnected fragments of open space become "islands" lacking sufficient size and resources to support species under stress, with the

"One of the most desirable characteristics of Ipswich's land use pattern consists of a large open green belt which surrounds the compact center of Town."

Ipswich Comprehensive Plan – Summary Report
– June 1964



potential for cascade effects through the food web and further impoverishment of the environment.

The Green Ring Corridors shown on the Ecological Network Map are intended to be conceptual. By design, the Green Ring symbol on the map do not follow specific parcel boundaries. Connecting corridors do not have to encompass entire parcels. If planned with knowledge of and sensitivity to the topography and landscape of a group of abutting parcels, effective open space corridors can be created through partial protection such as linked conservation restrictions over limited portions of specific properties. For general wildlife habitat purposes in a suburbanizing environment such as that of Ipswich, biologists suggest an optimum corridor width of approximately 300 feet at a minimum. On the Ecological Network map, that 300-foot area is represented by the width of the green line within the overall ring symbol. The actual corridors to be established would not be straight but would vary to take advantage of the best possible links and alignments.

Focusing preservation efforts on the Green Ring will have combined ecological and non-ecological benefits. The Green Ring area includes water supply protection lands, upland buffers to the salt marsh, pasture lands, scenic views across open country, rural lands, and forested uplands. The Green Ring encircles and helps define the principal areas of densest human settlement in Ipswich.

The Secondary Green Network is composed of the river and stream corridors of Ipswich and the designated scenic roads. As noted earlier, the rivers and streams are essential to habitat connectivity, while preservation of open space along scenic roads is a key element of the Town's sense of its identity and aesthetic character. The Rivers Protection Act provides some protection for river corridors, as do scenic road bylaws and overlay districts. More certain protection of riparian habitats and scenic roadsides is often preferable.

III. IMPLEMENTING THE VISION FOR OPEN SPACE

DEFINING AND APPLYING EVALUATION CRITERIA

Because of the environmental importance and the beauty of so many of Ipswich's unprotected open spaces, the Open Space Committee and Town residents have sometimes found it difficult to agree on priorities for open space preservation, particularly if expenditures of town funds were involved. People tend to know their own part of town best and advocate for their neighborhood open space. When lands are taken out of the state's special tax abatement programs for agricultural, forestry, or recreational lands (Chapters 61, 61A and 61B), municipalities have first right of refusal if the land is put up for sale, but time constraints and increasing prices often make it very difficult for the town to make the decision to exercise that right.

As part of this project, the Open Space Committee wished to develop a system to evaluate open space so that it could be ranked for potential preservation. The Spring 2000 authorization of \$10 million in bonding authority for purchase of open space interests was accompanied by a list of 85 properties in Ipswich deemed to have potential need for some kind of preservation by the group that prepared the warrant article for town meeting. After passage of the open space bond, development of this system was seen as a way to aid the Selectmen in making final decisions about preservation. A number of existing methods and systems were examined:

- Town of Hopkinton, "Land Evaluation Study" -- evaluation of land for exercise of right of first refusal for Chapter 61, 61A and 61B lands (1997)
- Town of Franklin, "Growing Greener: A Blueprint for Action" -- evaluation for development of a priority list for open space acquisition (1999)
- Executive Office of Environmental Affairs, Division of Conservation Services – Self Help Program project funding selection system (1999)
- Department of Environmental Management, "Land Acquisition Strategy, 1997-2001"
- Massachusetts Division of Fisheries and Wildlife, "Wildlife Habitat Protection Guidelines for Inland Resource Areas" (1998)
- EOE Land Management Planning Process and Guidelines, (1991)
- Pamela Brown and Charles J. Fausold, "A Methodology for Valuing Town Conservation Land," Lincoln Institute of Land Policy, (1998)

The initial charge of this project was to focus on the ecological elements of open space preservation. One of the complexities of the evaluation system design process was the fact that the system would be used for individual parcels, but the desired outcome of the evaluation decisions in

the aggregate was an ecologically effective open space network. At the same time, it was important to design the system in such a way that a certain level of objective information would emerge independent of who the particular evaluator(s) might be.

As a first step, the consultants chose to organize a series of *yes* or *no* questions which could be answered through consultation of maps or documents, and, if possible, through site visits. The questions were designed in such a way that all observers (after a short training sessions) would be expected to answer them in the same way, based on an examination of documents (including maps and aerial photographs) and observation of the site. The preponderance of questions on the scorecard can be answered factually from documentary sources, because it will not always be possible to have significant site access to private parcels. The question would therefore be of the type – “Does the site include vernal pools? a *yes* or *no* answer – rather than “Does the site have unique scenery?” a question which implies a definition of uniqueness in scenic value. The questions were organized into seven categories. The total possible score was set at 100. Scores were assigned to categories and individual questions to reflect the different weights given to each category. Positive (*yes*) answers to the individual questions were given numerical scores to reflect the relative weights of the categories within which the questions were located. This structure allows for changes in the relative weights given to the open space values reflected in the categories, so that the Town can change its open space priority objectives over time, if desired.

The first versions of the Ipswich land evaluation system were designed with detailed questions that were keyed to the landscape ecology and hydrological aspects of parcels, the purpose being to gauge the extent to which the parcels contributed to preserving the integrity of cores and patches and to natural corridor linkages. The landscape ecology and protection of water quality and supply were given higher priority (and therefore assigned higher cumulative points) than other categories, including open space values relating to scenery, historic sites, and rural economic uses.

In their discussion of the preliminary evaluation instrument, the Open Space Committee decided more weight should be given to the non-ecological open space values. In addition, the Committee considered it important that the system include opportunities for evaluators to point out anything of special interest on the site as well as provide a summary or narrative discussion of the evaluation and recommendation.

The final evaluation package developed through this process includes both a quantitative “scorecard” and a qualitative evaluation. The two evaluation methods support and reinforce each other, permitting a stronger,



more compelling recommendation to be made. The evaluation system is designed to be used as a whole, and any temptation to use the scorecard to rank parcel priorities quantitatively without also preparing the qualitative evaluation and recommendation should be resisted.

THE IPSWICH OPEN SPACE EVALUATION PACKAGE

The parcel evaluation package is designed to be used by any observant person who is able to read and use the maps, photos and documentary sources and who has some basic knowledge of landscape types. Ipswich has many extremely knowledgeable residents and trained professionals who can bring their expertise to the evaluation process. However, there is great value in keeping the system relatively simple and understandable to the widest group possible. The evaluation process does not depend on the special knowledge of a few individuals and the results can be easily grasped by the layman.

To remove any inconsistencies that might be introduced by an evaluator, parcels should be evaluated by several persons and their evaluations then compared and combined. The evaluation process should begin by a brief training session for all potential evaluators in order to assure a basic level of knowledge of documentation and similarity in approach. Alternately, the training process could involve review and scoring by trainees of previously evaluated parcels, generating a consistent approach. The package itself includes a checklist, list of information sources, and glossary to assist evaluators.

1. Evaluator Information

Each evaluation sheet will identify the evaluator, provide the dates on which the document research and site visit(s) were done (because data and conditions can change), and indicate what level of detail was possible on the site visit. In some cases it may not be possible for the evaluator to visit the interior of the site. A useful evaluation is still possible, but it is important that the evaluation sheet indicate how fully the parcel was examined on the visit.

1. EVALUATOR INFORMATION	
Name/phone/email: _____	Date(s) of site visit: _____
Date(s) of map/document research: _____	
Site visit methods (check all that apply):	
▪ View from <input type="checkbox"/> road, <input type="checkbox"/> water, <input type="checkbox"/> abutting parcel, <input type="checkbox"/> hilltop, <input type="checkbox"/> other _____	
▪ Parcel interior visit: <input type="checkbox"/> none, <input type="checkbox"/> limited, <input type="checkbox"/> extensive (over half the parcel or major landscape areas)	
2. PARCEL EVALUATION	
A. Identifiers	
Map/Lot: _____	Land Use Code: _____
	Current Zoning (inc. overlays): _____
Address: _____	Acres: _____
Assessed Value (\$): _____	Tax status (e.g., Chapt. 61A): _____
Owner: _____	
Owner address: _____	
Any structures on the property and what kind? _____	
Any known owner interest in sale or preservation? _____	

2.A. Identifiers

The identifying data are mainly available from two sources: the assessor's list and maps, and the zoning bylaw and map. The map/lot identification is a unique combination of numbers for each parcel in Ipswich. The assessed value provides an indicator of the parcel's value, and the tax status category shows whether the parcel is subject to any special tax abatement – which can explain an apparently low assessment and which also identifies parcels on which the Town might have a first right of refusal if they are taken out of the special tax program and put up for sale.

The land use code is a coding system that the state Department of Revenue requires assessors to use. It is useful for open space evaluation purposes because it can alert the evaluator to parcels that may be more or less vulnerable. For example, code 132 is for “undevelopable land,” meaning a parcel that has no buildings on it and cannot become a legal residential or commercial lot for some reason, such as lack of road access or dry land. A copy of the land use codes is provided with the separate evaluation system package submitted with this report.

The question on structures can be answered in a general way from the assessor's list, which will indicate the presence of buildings in the land use code and in the assessment itself. However, examination of aerial photos and site visits, if possible, will provide more detailed and potentially more accurate information.

Finally, the question on the owner's interest in sale or preservation will only be answered through contact with the owner, which may or may not be desirable at the time of initial evaluation.

B. Threshold Criteria

Circle Yes (Y) or No (N) to the following questions:

1. *Contribution to preserving the quality or quantity of the water supply:* Is the parcel in, or drain to, a Zone II of a public well, or drain to a public surface water supply? Y N
2. *Contribution to protection of wetlands:* Does the parcel abut or drain to the ACEC or to inland wetlands, rivers, streams, or floodplains? Y N
3. *Contribution to wildlife habitat or corridors:* Does the parcel abut existing permanently protected land, contain NHESP-designated priority or estimated habitat or vernal pools, or provide a connecting link between permanently protected areas? Y N
4. *Contribution to scenic character:* Does the parcel front on a designated scenic road or byway, provide hilltop or water views, or long vistas? Y N
5. *Contribution to cultural character:* Does the parcel contain archaeological or historic sites known to the Ipswich Historic Commission or Society or the Massachusetts Historic Commission; or does it include resource-based land uses such as agriculture, pasturage, and forestry? Y N
6. *Contribution to recreational resources:* Does the parcel contain existing or potential recreational resources such as trails, neighborhood playground, athletic fields, hunting or fishing areas, or water access (swimming, boating)? Y N

2. B. Threshold Criteria

The Threshold Criteria were developed as an initial screening device for parcel evaluation. The purpose of this section of the evaluation system is to answer the question: Is this parcel worth examining? Each of the six questions, to be answered *Yes* or *No*, is linked to one of the six categories of open space values that are examined in the

other sections of the evaluation package. If the parcel receives a yes answer to at least one of the threshold questions, then the evaluation should proceed.

2.C. Parcel Scorecard

The scorecard contains questions in six categories of open space values and one category focusing on development status and regional connections, with a total possible score of 100. The six value categories are currently configured to have equal weight in the scoring system. The scorecard will result in a number which can be used in a preliminary ranking of parcels, but it *should not* be used to the exclusion of the other parts of the evaluation system to determine recommendations..

C. Parcel Scorecard			
Criteria: Each "yes" answer to the question earns the number of points indicated. A "no" answer receives 0 points.	Document Review Points	Site Visit Points	Subtotals and Totals
I: Contribution to preserving the quality or quantity of the water supply			
1. Is the parcel in or drain to the Zone II protection area of a public well, OR does the parcel drain to a public service water supply (reservoir)? (15 points)			
Subtotal			
II: Contribution to protection of wetlands			
2. Does the parcel abut the ACEC or salt marsh, abut or contain isolated wetlands, vernal pools, or intermittent streams? (5 pts.)			
3. Does the parcel contain or is it within 300' of a perennial stream or ponds? (5 pts.)			
4. Does the parcel contain land in a flood plain (Zones A-C on the FEMA map)? (5 pts.)			
Subtotal			

2.C. I. and II. Open Space Categories: Water and Wetlands

Preserving water quality and quantity is one of the most important things that the Town can do for its own survival and ecological health. Residents are aware that preserving the immediate drainage basin of the Town's reservoirs as open space is an essential element of a water supply program. This value was consistently at or near the top of the list in the surveys and

discussions of open space values. Wetlands protection is also a very high priority for Ipswich and the questions in Category II focus particularly on the wetlands and their upland buffers. Water bodies and wetlands of all kinds are key wildlife habitats in Ipswich, and this fact is also covered in this category.

III: Contribution to wildlife habitat or corridors			
5. Is the parcel adjacent to areas permanently protected from development (in neighboring towns as well as Ipswich)? (3 pts.)			
6. Does the parcel contain estimated or priority rare species habitat areas as shown in the NHESP atlas? (3 pts.)			
7. Does the parcel include upland meadows or grasslands? (3 pts.)			
8. Does the parcel include groves of mature trees or fallen logs greater than 12" in diameter? (3 pts.)			
9. Does the parcel provide a connecting link between protected resource areas or a stepping stone link for wildlife through more built-up areas? (3 pts.)			
SUBTOTAL			

2.C.III. Open Space Categories: Wildlife Habitat and Corridors

The questions in this category focus on certain key aspects of the landscape that are important for wildlife habitat, buffering and extending existing core landscape

areas, and creating an open space network. The two questions about specific landscape and vegetation types were chosen because large expanses of upland (dry) meadows and grasslands are relatively rare and declining in acreage in eastern Massachusetts, and to highlight mature forest. Many of the woodlands in Ipswich are composed of young secondary forest on formerly agricultural lands. Fallen logs of large diameter also shelter wildlife.

2.C. IV, V, and VI. Open Space Categories: Scenic, Cultural, and Recreational Values

The scenic value of specific parcels can easily be subject to individual preference and bias, so an effort was made to frame a set of questions that reflect well-known preferences for water views and panoramic views that people generally show in appreciating scenery, as well as Ipswich-specific aspects that were evident in the photo exercise from the Town character project.

Criteria: Each "yes" answer to the question earns the number of points indicated. A "no" answer receives 0 points.	Document Review Points	Site Visit Points	Subtotals and Totals
IV: Contribution to scenic character			
10. Is the parcel along a designated scenic road or byway? (5 pts.)			
11. Are there long vistas from or into the parcel? (2.5 pts.)			
12. Are there water views from or into the parcel? (2.5 pts.)			
13. Are there hilltop views from or into the parcel? (2.5 pts.)			
14. Does the parcel include unique features such as stone walls, rock outcroppings or other locally-rare geological features, unusual trees, or estate elements? (2.5 pts.)			
SUBTOTAL			
V: Contribution to cultural and rural character			
15. Are there archaeological or historic sites or landscapes known to the Ipswich Historic Commission or Society, or the Massachusetts Historic Commission on the parcel? (5 pts.)			
16. Are there active agricultural or orchard land uses on the parcel? (5 pts.)			
17. Are there active pasturage activities on the parcel? (5 pts.)			
SUBTOTAL			
VI: Contribution to recreational resources			
18. Are there existing or potential trails for hiking, horseback riding, or skiing on the parcel? (5 pts.)			
19. Does the parcel have potential to be used for active recreation, such as athletic fields, a neighborhood playground, swimming or boating? (5 pts.)			
20. Is the parcel an existing or potential hunting or fishing area? (5 pts.)			
SUBTOTAL			

The cultural character of open space sites includes both historic values and rural heritage values. The question on historic and archeological values leaves some room for interpretation. It is often difficult or impossible to get archeological information on specific sites, though certain kinds of landscapes with a known history of little disturbance are more likely than others to have archeological significance. Likewise, although listing on the state or national historic registers provides accepted documentation of historic significance, other sites may have historic meaning to some people and not to others. If the Historical Commission or Society can attribute historic value to the site, it is an indication that knowledgeable

persons in the community believe that the site should at least be considered for its historic value. Because this evaluation system is for open space preservation, historic values should be contributing factors to a preservation decision, not the primary factors. It may be appropriate for certain historic sites to receive protection by means other than open space protection mechanisms. Agricultural and pastoral activities on open space are important because of the community's desire to retain and continue Ipswich's rural traditions and identity.

Recreational resources include high-impact, low-impact, and habitat-based recreation. Although it might seem that almost any parcel would have potential for trails or active recreation, it is not the case that all parcels are

truly appropriate for these uses. In the case of trails, the parcel either has to be large enough to make an internal trail system viable in length and interest without compromising other values such as wildlife protection, or it should connect with other trail systems. The active recreational uses that are usually in shortest supply are athletic fields. In addition to the topographical character of the parcel, consideration should also be given to the fact that high impact uses of this type also require easy road access and substantial parking. On the other hand, the potential to provide neighborhood open space in the more densely-built town center or to provide public access for swimming or boating (which always seems to be insufficient) may make a smaller parcel worthy of acquisition or protection.

VII. Development potential and regional status			
21. Has the parcel been in the Chap. 61, 61A or 61B program? (3 pts.)			
22. Is the parcel at least 25% developable and have road access? (3 pts.)			
23. Would protection of the parcel contribute to the Ipswich Green Ring concept? (2 pts.)			
24. Would protection of the parcel contribute to regional open space networks? (2 pts.)			
SUBTOTAL			
TOTAL			

2.C.VII. Open Space Categories: Development Potential and Regional Status

The last set of questions focuses on the development potential and regional significance of the parcel being evaluated.

Participation in one of the tax abatement programs is an indication that the open space value of the parcel has already been acknowledged and but that there is the possibility that it could become available for development at some point in the future. A judgment on whether a parcel is approximately 25% developable can be made through examining several sources: the assessor's land use code, the build-out maps prepared for the Town by the Executive Office of Environmental Affairs, aerial photos, and other sources such as soil maps. The answer to this question is obviously not designed to provide a full, technical evaluation of development feasibility but to provide a sense of the likelihood that the parcel could be readily developed. The questions on the Green Ring concept and regional networks are designed to recognize those open space protection projects that will make a clear contribution to the networking of open space resources.

D. Parcel Evaluation Brief
The <i>Brief</i> contains:
<ul style="list-style-type: none"> ▪ <i>Visual aids:</i> 1) locus map locating the parcel within Ipswich and neighboring towns; 2) a parcel map, with annotations of special characteristics, if possible; and 3) photographs of relevant elements keyed to the scoring criteria. ▪ <i>Summary Notes:</i> evidence of the parcel's 1) environmental, 2) scenic, 3) cultural, and 4) recreational value. ▪ <i>Recommendation:</i> recommended action to be taken

D. The Parcel Evaluation Brief

The Parcel Evaluation Brief is the more qualitative section of the evaluation system, designed to provide more specific information on parcels. It is called a "brief" because it is essentially an advocacy document that interprets

the information gathered within an understanding of the local and regional context and makes a recommendation either for or against preservation. The

Summary Notes

Evidence of the parcel's 1) environmental, 2) scenic, 3) cultural, and 4) recreational value:

1. Overall parcel description

In a few sentences, describe the open space on this parcel. You may wish to leave this short description for completion after you finish writing the other parts of the narrative.

2. Environmental Summary

a. What are the most important environmental values represented by this parcel (e.g., water resource protection and wetlands buffering, wildlife habitat and corridors)?

b. Please provide any details you consider relevant to the environmental value of the parcel:

- evidence of wildlife observed on the site:
- unusual or unique plant life observed on the site:
- other:

3. Scenic Summary

a. What is the most important scenic value of this parcel (e.g., long views of meadow, water, hilltops; woodland views; rural character views)?

b. Please provide any details you consider relevant to the scenic value of the parcel such as unique or unusual features such as rare plants, geological features, specific vistas, stone walls, etc.

4. Cultural and Rural Character Summary

a. What is the most important value of this parcel from a cultural or rural heritage point of view (e.g., archeological sites, historic structures, working farm or other rural use)?

b. Please provide any details you consider relevant to the cultural or rural character value of the parcel.

5. Recreation Summary

a. What is the most important value of this parcel as an existing or potential recreation site (e.g., trails and nature appreciation, hunting and fishing, potential active recreation such as athletic fields)?

b. Please provide any details to show how the site has recreational value.

Brief contains maps and photographs, summary notes, and a recommendation. These can, as desired, be brought together at the end of the process into a narrative evaluation of the parcel.

Summary Notes – 1-5. Open Space Values

Open Space Committee members wanted to ensure that the evaluation system would provide a place for discussion of special features or qualities of a parcel. This section of the Brief builds from the objective information gathered in the Scorecard section and other insights that the evaluator gained through site visits or close examination of various documentary sources such as aerial photos. The questions ask the evaluator for a judgment on the most important environmental, scenic, cultural, rural, and recreational values of the parcel and seeks details that will demonstrate these values. Comparison of the answers to

these questions for several similar sites will demonstrate the strength of specific open space values on the individual sites.

6. Development Potential and Regional Status

a. Does this parcel have development potential?

b. Does the parcel have potential or interest as a combined open space preservation project and a small development project to pay for the open space preservation?

c. How would preservation of this parcel contribute to the Ipswich Green Ring concept?

d. How would preservation of this parcel contribute to a regional open space network by connecting with open space resources and efforts in neighboring towns and the North Shore as a whole?

Summary Notes – 6. Development and Planning Issues

The questions in this portion of the form are designed to elicit more details about the development potential of the parcel being evaluated and its position within a local and regional open space network. The developability of a parcel and its suitability for a limited-development preservation option relates to the urgency of preservation and the cost-effectiveness of preservation options. The questions on the Green

Ring and regional networks require detail on how the parcel will contribute to these concepts.

Recommendation

The Recommendation is an argument drawing on the evaluation of the parcel presented thus far, but can also include other information that might be relevant to a final decision. At a minimum, please answer the following questions:

Should all or part of this parcel be preserved for open space?

All of the parcel
 Some part of the parcel
 Which part: _____
 Indicate this area in a general sense on the parcel map.

If this parcel should be preserved, what kind of preservation action do you recommend?

Fee simple acquisition
 Conservation easement/restriction on the entire site
 Conservation easement on a portion of the site
 Purchase of development rights on all or part of the site
 Acquisition of the site with development of some portion (limited development)
 Other: _____

If preservation is recommended, what kind of action should the Town take?

Purchase of entire parcel by the Town
 Purchase of some of the parcel by the Town
 Purchase and partial development
 Work with landowner to promote donation of a conservation easement or to acquire a conservation easement or development rights
 Pursue preservation action by nonprofits

Further considerations to support this recommendation:

In addition to the reasons that emerge from the parcel evaluation system, you may wish to include other reasons for taking action such as --

- Contribution to growth management objectives
- Infrastructure capacity
- Consistency with planning documents

The Recommendation

The final portion of the Parcel Evaluation Brief is the Recommendation. The evaluator is first asked to indicate if all or part of the parcel should be preserved, based on the objective and interpretive evaluation of the parcel – without indicating how and by whom. If the answer is yes, the next step is to recommend the type of preservation action. In many cases, the preservation goals might be appropriately met by partial preservation actions such as conservation restrictions or limited development that will leave some or all of the property in private hands. Town action is addressed in the next question, in which the evaluator is asked to recommend what kind of action the Town should take to promote preservation of the parcel, if preservation is warranted. The

evaluator is encouraged to write a few paragraphs explaining the value of the parcel and the reasons for the recommendation. At this point the evaluator may include reasons that are not explicitly part of the parcel evaluation system, such as contribution to growth management objectives, the infrastructure capacity of the Town, and so on.

CRITICAL OPEN SPACE

The land evaluation system will assist Ipswich in making decisions about preservation of open space resources that are critical to its identity and environmental health. The open space bond authorization includes a list of 85 parcels that encompass a wide range of types of open space in all parts of town. As part of this project, the consultant team evaluated 20 parcels, most of which are on that list, to test the land evaluation system and to identify critical parcels. The parcels were chosen to represent the variety of landscape

types and open space values important to the Ipswich community which are articulated in the threshold criteria used in the land evaluation system:

- Contribution to water supply and water quality
- Wetlands protection and buffering
- Wildlife habitat and corridors
- Scenic character
- Cultural character
- Recreational potential

Parcels were also chosen to demonstrate different landscape types and functions, a variety of risk factors, long and short term considerations, possible preservation outcomes, and regional connections.

As shown in the “Critical Parcels – Preservation Options” Map, a set of parcels were identified that are compatible with the Green Ring concept. With few exceptions, these parcels demonstrate more than one open space value. In addition, some additional parcels in these areas were evaluated as well as several parcels on outer Linebrook Road. (The evaluations for individual parcels were submitted separately from this report.) Starting with the northeastern section of Ipswich, the critical parcels areas are as follows:

Jeffrey’s Neck Road Area

The Wendell property, currently for sale, was identified as a critical parcel. The Neck between the Ipswich River and the Eagle Hill River is a sensitive area. The estuaries and salt marsh are part of the ACEC and Great Marsh. The Wendell property, along with the Notre Dame property, which is now under the Great Estates Bylaw, contains much of the remaining undeveloped upland buffer land to the salt marshes. In addition, it contains historic structures and estate lands and fields managed for grains.

Paradise Road Area

The future use of the Miles Sand and Gravel site should include an open space preservation element. Although the center of the site has been highly disturbed, the perimeter of the site is extremely sensitive, buffering the Great Marsh and across the Egypt River from an area currently in Chapter 61A status but targeted by the Town of Rowley for permanent preservation. Long-term redevelopment options for this large sand and gravel site could include a clustered residential development on the disturbed area surrounded by permanently protected open space.

Inner Linebrook Road

Concentrated in this area are some of the few remaining working farms in Ipswich, several of which have significant road frontage and/or drain directly to the town reservoirs. The parcels, such as the Kosneski Farm, which are highly developable and provide scenic road frontage should be preserved, if possible, for agricultural uses to retain rural traditions in Ipswich. Acquisition with a leaseback for agricultural uses or acquisition of development rights would be an appropriate option.

Preservation of the farm lands that drain to the reservoirs would not only be beneficial for water supply and water quality reasons, it would also protect the Green Ring by linking Willowdale State Forest with the reservoir lands, the Egypt River corridor, and the Great Marsh.

Area Between Linebrook, Pineswamp, and Topsfield Roads

This area contains substantial areas of potentially developable land and should be approached with a combination of open space preservation, limited development, and regulatory strategies. Linebrook Road has small lot residential development east of the Kosneski Farm lands on both sides of the road. Behind these roadside house lots are large wooded parcels. Pineswamp Road retains a number of large, wooded roadside parcels, some also with meadows and pastures along the road, though there are signs of encroaching residential development. Between Pineswamp Road and Topsfield Road, interior parcels, some with conservation restrictions, separate two areas of subdivision development. Topsfield Road east of Turner Hill has a number of small residential lots.

This section of town is an example of where a combination of strategies, pursued as a whole, would provide the best and most cost-effective way to reach open space goals for the area. Acquisition of one or two parcels, strategically sited conservation restrictions along stream corridors and on hilltops, scenic overlay regulations, limited cluster development, and consideration of zoning changes that would permit denser development closer to the town center while significantly enlarging required lot sizes closer to the state forest, all taken together as a multifaceted strategy for this area of Ipswich, would preserve the most important ecological and scenic characteristics while permitting some development and redevelopment.

Willowdale State Forest Area

The critical parcel in this area is the Gravelly Brook Road inholding in the State Forest that is being proposed for residential development.

The importance of preserving this parcel is its contribution to the integrity of the state forest and to the wider regional open space and wildlife habitat system represented by Bradley Palmer State Park immediately south of the state forest. The ideal solution for this parcel would be its absorption into Willowdale through purchase by the state.

Argilla Road Farms

The large expanse of approximately 1000 acres of pasture lands between County, Northgate, and Argilla Roads constitutes a significant area of developable land, a relatively rare habitat type (large area of upland grasslands), and characteristic meadow and estate vistas. Streams flowing through these parcels connect with protected wetlands and the Great Marsh on the other side of Argilla Road. Some of the properties have Chapter 61A tax status, but none has a conservation restriction. No changes in use or ownership are expected in the short term. However, the Town should work with the landowners to develop a combined strategy of protection options, including conservation restrictions and scenic overlays. Purchase should be an option if strategic parcels become available.

PRESERVATION OPTIONS AND IMPLEMENTATION TOOLS

There are a number of ways that a community can preserve open space ranging from fee-simple acquisition to regulatory control of development. Each preservation option has advantages and disadvantages. Once a piece of open space has been identified as worthy of preservation, in whole or in part, the purpose of that preservation should be explicitly stated and the most appropriate and cost-effective preservation option should be chosen to fulfill the purpose. For example, if the land is to be preserved for its wildlife habitat value and limited public access is necessary to preserve that habitat, the preservation option chosen should incorporate those limitations. By the same token, if the most important open space value for a parcel is its agricultural use, preservation methods should be pursued which can retain that agricultural character. Finally, the importance of developing a multifaceted strategy for an area comprised of multiple parcels cannot be overemphasized. The goal is not the preservation of a particular parcel but attaining an outcome that contributes to the Town's environmental health and community character. Using a menu of preservation methods and working with landowners in a particular area is the best strategy to attain the open space goals. Preservation methods and options are summarized in Figure Three.

Figure Three: Open Space Preservation Methods

Method	Options	Advantages	Disadvantages
Transfer of Title with permanent ownership	<ul style="list-style-type: none"> ■ Donation; outright, at time of death, with reserved life estate ■ Sale at market price, or below market price 	<ul style="list-style-type: none"> ■ Provides full and permanent control over all property rights in land 	<ul style="list-style-type: none"> ■ Long-term maintenance costs can be expensive ■ Purchase at market price is expensive precisely when development pressures are strongest and preservation seems most urgent ■ Below market sale or donation also tends to be least likely when land prices are high
Transfer of title with sale or leaseback	<ul style="list-style-type: none"> ■ Imposition of negative easements and restrictions before resale ■ Limited development ■ Leaseback and life estates for owners 	<ul style="list-style-type: none"> ■ During its period of ownership, the Town prepares development limitations or deed restrictions for the land before reselling it to a private party, thus ensuring preservation while eventually recouping at least some of the acquisition price ■ The Town develops a program for partial protection, prepares an acceptable development plan, and then solicits a developer willing to follow this plan in a development project ■ Leaseback projects are especially useful for preservation of rural economic uses. The Town can buy the land and lease it back to the seller for continued agricultural uses. ■ Another option is to provide a life estate so that the seller can continue to live on the land until his or her death, at which point the Town finds another lessee or takes over management of the land 	<ul style="list-style-type: none"> ■ Requires the up-front investment in the land plus the willingness and ability to fund the planning process needed for a successful limited development project ■ For agricultural use projects, the economics of farming in this region may limit the number of users likely to respond.
Private ownership with protection	<ul style="list-style-type: none"> ■ Conservation restrictions and easements ■ Purchase of development rights ■ Life estates 	<ul style="list-style-type: none"> ■ Conservation restrictions approved by the state Secretary of Environmental Affairs provide permanent protection of the land areas covered while preserving other property rights for the landowner ■ Conservation restrictions do not require public access and therefore can be used to protect areas where limited access is desirable ■ The purchase of development rights precludes certain kinds of development on the land while permitting other uses to continue ■ If a property owner is unwilling to compromise the heirs' right to dispose of the property, the Town can buy time through purchase of a life estate that terminates with the death of the owner. 	<ul style="list-style-type: none"> ■ If conservation restrictions and development rights must be purchased (rather than acquired through donation), they can be expensive at high market times

In addition to these preservation methods, the Town should also consider other ways to attain its open space preservation goals. The Town has already begun working on scenic overlay district concepts for selected roadside areas. During the next stage of the growth management initiative, the community will have an opportunity to discuss proposals for directing growth to the town center and other selected areas of existing development. Rezoning to permit more density in the center and much less density in outlying areas may be an option – perhaps through an “urban growth boundary” (or “town growth boundary”), which Ipswich is large enough to accommodate.

Coordination of Ipswich’s open space protection program with nonprofit land preservation organizations like the Trustees of Reservations and Essex County Greenbelt and with programs led by the Essex County National Heritage Area and the Massachusetts Coastal Zone Management Program is already quite close and should continue. In addition, it would be worthwhile for the Open Space Committee to send copies of its open space plan to its counterparts in neighboring towns. Closer coordination with all these entities will provide Ipswich with opportunities to leverage the resources from the bond authorization for maximum benefit and cost-effectiveness.

Open space management issues deserve a special word. Management is a central concern in cases where preservation of rural land uses is a primary goal of preservation and it is also important for preserving biological integrity and diversity.

If “rural” means something more than low-density housing to the Ipswich community, the town will have to consider how much of an active role it wishes to take in promoting the rural economy in Ipswich. The landscapes created by agriculture and pastures will not persist over time if those or similar activities are not continued on a specific parcel of land. Untended farms and meadows in Ipswich will rapidly revert to thicket and then forest. The economics of traditional agriculture and livestock-raising in Ipswich are not favorable. At the same time, the preservation of the rural character of the Town and rural open space uses is a widely supported open space value in surveys and public meetings. Although purchase and leaseback arrangements, which the Town already has with Marini Farms, are the best way to perpetuate rural land uses, it may be difficult in the future to find farm operators without other incentives or viable agricultural strategies.

Community Supported Agriculture (CSA) programs, in which subscribers commit to a specific level of purchases over a growing season, are one method of providing incentives and support for the continuation of agricultural uses in Ipswich. A previous experiment with CSA on the Notre Dame property reportedly foundered because of insufficient subscriptions to the program and the departure of a talented farm manager. Meadows and

pastures may have a more favorable prognosis in Ipswich because of the strong equestrian community in the southern part of the Town. However, acquisition of meadow lands by the Town for scenic or other values would bring up the same management issues as acquisition of agricultural lands without a farmer to till them.

Another management issue is the control of invasive monocultures, typically of exotic plants, in conservation lands. This is a well-known problem in wetlands, where giant reeds (phragmites) and purple loosestrife crowd out native vegetation and impoverish the habitat value of the land as a result. Invasive exotics can also damage biodiversity in woods and other upland environments. Some plants that “escape” from gardens into woodlands, such as buckthorn and oriental bittersweet, are extremely invasive, crowding out native vegetation and the insects, wildlife, and other organisms that depend on those native plants. A management program for town-owned open space should monitor to control and reduce invasive plant colonies.

Finally, in creating wildlife habitat networks such as the Green Ring, the Town should institute methods to mitigate the barrier effect of roads on wildlife corridors. Installation of wildlife-friendly culverts during road reconstruction is a particularly effective way to help wildlife avoid the dangers of rapidly-traveling traffic on outlying roads.

IMPLEMENTATION ACTIVITIES

The implementation of a number of elements and recommendations in this report is already underway. The passage of the \$10 million bond authorization coupled with the potential transfer of ownership of several significant properties has galvanized activity to develop policies and methods for implementation of the evaluation system. The open space bond authorization should be viewed as an opportunity to add flexibility, agility, and leverage to the Town’s open space preservation efforts – not simply an opportunity to spend \$10 million on fee-simple acquisition of a few properties. It is particularly important that policies on promoting conservation restrictions and limited development options be developed early, so that appropriate preservation will be seen as a partnership of private and public interests. It is preferable not to create the expectation among landowners that they will be paid not to develop their lands.

Because the open space preservation values and criteria that are critical to Ipswich are part of systems greater than any single parcel, there is an inevitable problem in focusing the evaluation on individual parcels. Although open space interests must be acquired parcel by parcel, the Town should emphasize the overall systems and goals and the strategies for reaching those goals appropriate to particular areas of the Town. For



example, in many cases, the use of conservation restrictions along a stream corridor in the interior of a series of abutting parcels or on a hilltop may be the ideal open space option. Focusing only one parcel at a time would not result in the optimum open space preservation result.

For this reason, the CDP team recommends that the Town organize a preliminary evaluation of all the parcels that are on the open space bond list. Much of this evaluation can be done through examination of maps, aerial photos, and other documentary sources, without the need for extensive site visits. General recommendations on preservation strategies for varied open space goals and locations are provided in the “Critical Open Space” section of this report. However, the results of the preliminary evaluation of all parcels on the list will become the basis for a more detailed and refined open space preservation strategy for different types of open space and different areas of Ipswich than was possible in this limited study.

In addition to these efforts, the Town should organize a program of information and activities to open discussions with private owners about preservation options that do not require a permanent commitment of large amounts of public funds.

Figure Four: Implementation Recommendations		
Responsible Entity	Action	Target Date
Open Space Bond Steering Committee	Take action to implement the bond authorization, including: - Recruit individuals/teams to evaluate remainder of parcels on the open space list to make general protection recommendations - Sponsor a training session for the evaluators on the evaluation system - Perform a preliminary evaluation of all parcels on the list to gain an overall sense of what kinds of protection strategies are most appropriate for which areas	Summer – Fall 2000
Open Space Bond Steering Committee and Dept. of Planning & Development (DPD)	- Develop a policy on limited development strategies to preserve open space and leverage town open space bond funds	Fall 2000
Open Space Bond Steering Committee and Open Space Committee with approval of Board of Selectmen	- Designate two to three people to contact landowners to discuss open space protection options on an ongoing basis	Summer–Winter 2000/2001 and ongoing
Conservation Commission	- Obtain list of state-recognized permanent conservation restrictions from EOEAs and seek permanent restrictions for any time-limited deed restrictions - Ascertain which of town-owned open space parcels are protected in perpetuity as part of the management plans being developed for town-owned lands	Fall 2000 Winter 2001
Open Space Committee	- Gather and prepare materials on methods that private landowners can use to preserve land and make the information available by mailings, personal or group meetings, and other outreach methods	Fall 2000 and ongoing

Figure Four: Implementation Recommendations		
Responsible Entity	Action	Target Date
	<ul style="list-style-type: none"> - Gather information and work with town departments to develop wildlife-friendly infrastructure - Work with town departments to develop policies on invasive plant management - Gather and disseminate materials on wildlife-friendly backyard management - Sponsor events combining education about the Green Ring, open space networks and ecological connectivity in Ipswich with outdoor activities such as nature walks to encourage more direct knowledge of Ipswich open space resources - Review Land Evaluation System every five years during open space plan update process 	Spring–Fall 2001 and ongoing
Growth Management Steering Committee	- Consider zoning bylaws and other regulatory mechanisms to protect open space	Winter- Spring 2001
Board of Selectmen, DPD, with assistance of Open Space Bond Steering Committee, and succeeding implementation entities and Open Space Committee	Aggressively pursue land protection opportunities: in critical areas, Green Ring areas, and where evaluation results in high priority ranking	Summer 2000 and ongoing

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