



Komoka

Background Information, Issues and Options



Prepared by Ian Seddon Planning Services and Anthony Usher Planning Consultant

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Approval Statement

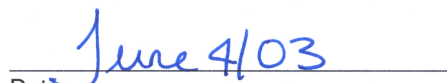
Dear Sir/Madam:

I am pleased to present the *Komoka Provincial Park Background Information, Issues and Options* report for public review and comment. This park planning report presents a summary of the features and values found within Komoka Provincial Park and how they contribute to the goal and objectives of Ontario's system of provincial parks. The report reviews planning issues, and presents some options that suggest how planning for the park will proceed.

The participation of the Komoka Advisory Committee in preparing this report is appreciated. The committee members reviewed the report and provided comments that added clarity to the text.

I encourage you to read this report and to complete the enclosed comment sheet. Your participation will help with the evaluation of issues and options, leading to the preparation of a preliminary management plan for Komoka Provincial Park.


Adair Ireland-Smith
Managing Director
Ontario Parks


Date

CONTENTS

Approval Statement	i
Résumé	vi
1 INTRODUCTION	1
1.1 Komoka Provincial Park	1
1.2 Why a Park Management Plan?	1
2 PLANNING AREA - THE KOMOKA REGION	2
2.1 Land Tenure	3
2.2 Land Use (Regional Context)	3
3 THE KOMOKA ENVIRONMENT	5
3.1 Climate	5
3.2 Geomorphology, Landforms, Soils	5
3.3 Thames River	6
3.4 Natural Heritage	6
3.4.1 Flora	6
3.4.2 Fauna	7
3.4.3 Fish	7
3.5 Cultural Heritage	7
3.6 Present Development	9
4 PARK USE AND MARKET	9
4.1 Park Use	9
4.2 Origins and Demands of Future Park Visitors	10
4.3 Other Available Outdoor Recreational Opportunities	12
4.4 Development Constraints	13
5 MANAGEMENT ISSUES	14
5.1 Policies and Boundaries	14
5.1.1 Classification	14
5.1.2 Park Boundaries	14
5.1.3 MNR Bush Lot	14
5.1.4 Former MNR Kilworth Office	15
5.1.5 Park Name	15
5.2 Park Use	15
5.2.1 Access	15
5.2.2 Present Park Use	15
5.2.3 Potential Park Use	15
5.2.4 Trails	16
5.2.5 Non-Conforming Uses	16
5.2.6 Entrance/User Fees	17
5.2.7 Park Management Facilities	17
5.2.8 Park Use and Natural Heritage Conflicts	17

5.3	Resource Management	17
5.3.1	Significant Plant and Animal Species	17
5.3.2	Heritage Appreciation Theme	17
5.3.3	Habitat Management	18
5.3.4	River Management	18
5.4	Neighbouring Influences	18
5.4.1	The Komoka Ponds	18
5.4.2	Local Municipal Uses	18
5.4.3	Municipal Growth and Planning	19
5.4.4	London's Proposed Ring Road	19
6	PARK CONCEPT OPTIONS	20
6.1	Komoka and Parks System Targets	20
6.2	Park Concept Options	20
6.2.1	Zoning	21
7	PUBLIC CONSULTATION PROCESS	30
7.1	Summary of Consultation	30
7.2	Next Steps	30
8	References	31

TABLES & FIGURES

Table 1, Park Management Planning Process	2
Table 2, Population Projections	3
Table 3, Primary Activities of Users Surveyed	10
Table 4, Population Around Komoka	11
Table 5, Nearby Camping Opportunities	11
Table 6, Park Options	23
Table 7, Park Classification Options – Pros and Cons	24
Figure 1, Regional Setting	fold-out following page 2
Figure 2, Study Area and Present Land Uses	fold-out following page 4
Figure 3, Natural Heritage Features – Earth Science	fold-out following page 6
Figure 4, The Big Picture – Cores and Connections in Carolinian Canada	fold-out following page 6
Figure 5, Natural Heritage Features – Life Science	fold-out following page 6
Figure 6, Cultural Heritage Features	fold-out following page 8
Figure 7-1, Option 1: Nature Reserve Park	26
Figure 7-2, Option 2: Nature Reserve Park	27
Figure 7-3, Option 3: Natural Environment Park	28
Figure 7-4, Option 4: Recreation Park	29

APPENDICES

Appendix 1 Ontario Parks' Response to the Komoka Provincial Park Advisory Committee Recommendations

Appendix 2 Life Science Check Sheet: An Updated Survey and Evaluation of the Life Science Resources of Komoka Provincial Park and Selected Adjacent Areas (J. Ambrose, G. Waldron, L. Rodger & D. Martin)

Appendix 3 Komoka Provincial Park Use Survey: Summary of Results (Lisa M. Campbell and Andrew Kesteloot, UWO)

Résumé

Le parc provincial Komoka se situe dans la vallée de la rivière Thames, sur la périphérie ouest de la Ville de London, comté de Middlesex, dans le Sud-Ouest de l'Ontario (figure 1). La zone d'étude du plan de gestion du parc contient des terres non aménagées de la vallée de la Thames, en bordure des routes de comté 14 (promenade Glendon), 16 (route Komoka) et 3 (promenade Gideon) (figure 2).

Dans le plan de gestion qu'il rédige pour chaque parc provincial, Parcs Ontario, organisme au sein du MRN responsable de la planification et de l'exploitation des parcs provinciaux, indique comment il entend l'aménager et l'exploiter. Le plan de gestion décrit comment un parc contribuera à la poursuite des objectifs du réseau des parcs provinciaux et fait état des politiques à l'appui de cette contribution.

L'acquisition des terres constituant le parc Komoka remonte à 1974 et se poursuit encore actuellement. On compte trois zones d'acquisition:

- les 198 hectares du parc provincial réglementé, au sud de la rivière Thames, incluant celle-ci;
- les 111 hectares (approximativement) comprenant une ancienne carrière de gravier au nord de la rivière Thames, sur la route de comté 16 (route Komoka);
- un boisé de 12 hectares (approximativement) sur la route de comté 14 (promenade Glendon).

La flore du parc et des réserves est typique de la zone biologique carolinienne. Sa diversité fait état de la variété topographique de la région. On a relevé trente et une communautés végétales d'après le système de classification des terres écologiques de la province. Dans l'ensemble, on compte 685 espèces de plantes à l'intérieur du parc et des terrains adjacents, dont 67 sont considérées importantes.

Au fil des ans, 229 espèces d'oiseaux ont été observées dans le territoire du parc. Dix-sept espèces sensibles au milieu ambiant (soit qui doivent pouvoir évoluer dans un habitat vaste et non modifié) se reproduisent à Komoka – soit des espèces des bois telles que la paruline couronnée, la grive fauve et le tangara écarlate et, des espèces des champs telles que le bruant des prés et le bruant sauterelle.

La rivière Thames abrite une des plus grandes variétés de poissons au Canada en raison de ses nombreux types d'habitats, de ses eaux riches en

nutriments et de son lien avec les Grands Lacs. La montaison du doré du printemps est une des plus importantes en Ontario.

Le présent rapport examine les formes actuelles d'utilisation des ressources et les caractéristiques du paysage. Parmi les activités courantes, l'équitation et l'exercice libre des chiens ne sont pas compatibles avec la conservation des zones naturelles sensibles. On fait état de vingt et une questions de planification, avec leurs options.

Quatre possibilités de classification sont offertes : deux réserves naturelles; un parc naturel; et un parc de loisirs; avec le pour et le contre de chaque classification.

Le processus de planification de Komoka définira raisonnablement le périmètre et la gamme d'activités permises, en tenant compte du fait que la région couverte par l'étude contient des zones d'intérêt naturel et scientifique, des habitats menacés, des espèces en voie de disparition et des lieux d'importance culturelle et patrimoniale.

La rédaction de *Background Information, Issues and Options* et sa publication marqueront le début de la deuxième étape du processus de planification. Ce rapport a été produit grâce à la participation d'un comité consultatif, d'un groupe de représentants de divers organismes et de groupes d'utilisateurs ayant un intérêt dans le parc

Dès que Parcs Ontario, le comité consultatif et l'équipe de consultation auront examiné vos remarques sur le rapport, on rédigera un plan préliminaire de gestion du parc. Ce plan proposera notamment les options et politiques retenues et des politiques plus détaillées sur l'aménagement et l'exploitation du parc.

Le plan préliminaire sera offert au public aux fins d'examen et de commentaires. Suivant les points de vue ainsi reçus, Parcs Ontario veillera à la rédaction du plan de gestion du parc provincial Komoka, son approbation et sa distribution.

1 INTRODUCTION

1.1 Komoka Provincial Park

Komoka Provincial Park is located within the Thames River valley, at the western edge of the City of London (see Figure 1). Most of the park area is geographically within the Township of Middlesex Centre. The park management plan study area (see Figure 2) includes all undeveloped lands bounded by Middlesex County Roads 14 (Glendon Drive), 16 (Komoka Road), and 3 (Gideon Drive). It includes:

- the regulated Komoka Provincial Park, located along the south bank of the Thames River; and,
- acquired lands on the north bank which include two separated parcels: a woodlot area and a former gravel extraction area.

In 1964, Osmond Langtvet, then a geography professor at the University of Western Ontario, wrote that Komoka *“is much more interesting than may appear (on a map) because of the grandness of the relief within it and the geomorphological history of it. The river is deeply entrenched and forms therefore a beautiful valley with steeply sloping and heavily wooded valley sides interspersed with raw and exposed clifflike banks to 125 feet in height. To add to the interest of this wilderness river core, the land to the southeast of the river is higher than that to the north by as much as 60 feet offering contrasting impressions depending on which side of the river one is on. Looking south across the river one is looking into a forested wall. Looking north across the river, one has the long birdseye view of the land and the feeling of great height, a rather unique aspect in the flat lands of SW Ontario.”*

The unique topography, its natural attributes, and its proximity to London were what prompted Professor Langtvet to present his 1964 proposal for a park at Komoka to the Central Middlesex Planning Board. This committee of Middlesex County Council agreed with the proposal and sent the proposal to the Ontario Department of

Lands and Forests, now the Ministry of Natural Resources (MNR).

In 1973, the provincial government agreed to establish a provincial park in this area, noting it related well to the near-urban park concept that was evolving within the provincial parks system (other near-urban parks then being developed included Bronte Creek and Short Hills). A concern facing the province was the cost of acquiring the land base for some of these near-urban parks. Consequently, land acquisition for Komoka has been a slow process and over the years, the land acquisition boundary has been modified, reducing the area of acquisition interest.

1.2 Why a Park Management Plan?

Ontario Parks, the branch within MNR that plans and manages Ontario's provincial parks system, prepares management plans for individual provincial parks to indicate how it proposes to develop, manage and operate those parks. Park management plans show how individual parks will contribute to achieving the objectives of the provincial parks system, and set out policies that will maintain or enhance that contribution.

The planning process for Komoka will define reasonable boundaries and an appropriate range of uses, recognizing the management plan study area contains provincially significant Areas of Natural and Scientific Interest (ANSI)¹, habitats of threatened and endangered species and important cultural heritage sites. The management plan study area straddles the Thames River, recently designated a Canadian Heritage River. The river valley is the park's most significant landscape feature.

In 2001, funds were secured for management planning. The consulting team of Ian Seddon Planning Services and Anthony Usher Planning

¹ ANSI are areas of land and water containing natural landscapes or features which have been identified as having values related to protection, natural heritage appreciation, scientific study or education.

Consultant was retained to carry out the planning, in consultation with a local Advisory Committee brought together by Ontario Parks to discuss planning and policy options for the park.

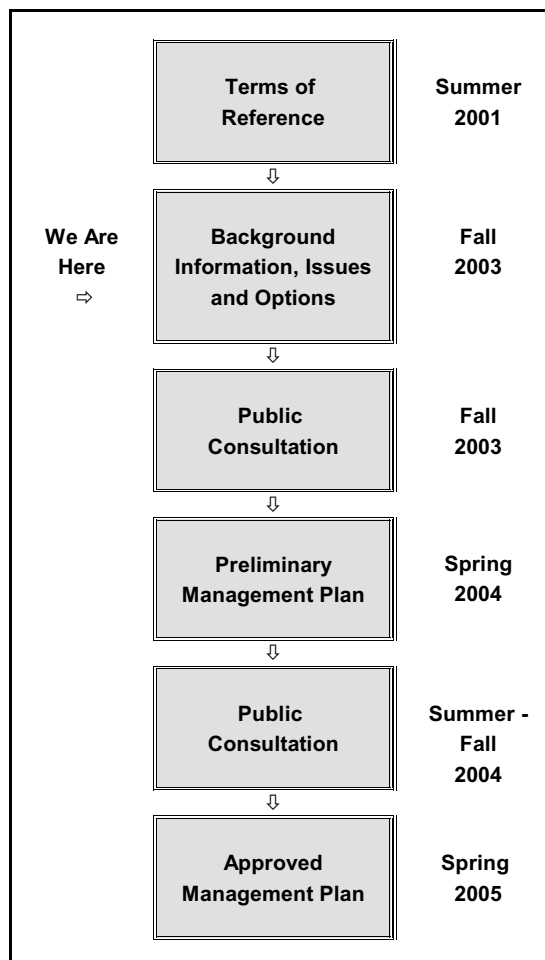
In July 2001, Ontario Parks advised the public that management planning was beginning. Ontario Parks mailed a letter to interested parties, and placed a notice in local and regional newspapers and onsite at the park. Copies of the project's terms of reference were made available for public review in public libraries in Komoka and Byron.

Preparation and release of this *Background Information, Issues and Options* report will initiate the second stage of the planning process (see Table 1). It has been prepared with the involvement of the Advisory Committee (see Appendix 1).

After Ontario Parks, together with the Advisory Committee and the consulting team, have reviewed your responses to this report, a preliminary park management plan will be prepared. This will be a proposed plan, including preferred policy alternatives and more detailed park development and management policies.

The preliminary plan will be distributed for public review and comment. Based on the input received, Ontario Parks will prepare, approve and distribute the park management plan for Komoka Provincial Park.

Table 1, Park Management Planning Process



2 PLANNING AREA - THE KOMOKA REGION

The Komoka Provincial Park management plan study area straddles the boundary between the City of London and the Township of Middlesex Centre. The park area is 15 minutes west of London's city centre. Ontario's 'main street', Highway 401, is a 20 minute drive to the south (see Figure 1: Regional Context).

The possible area of the park has never been finally determined. In 1973, the proposed area included most of the lands encircled by Middlesex County Roads 14, 16, and 3. Since then, the realities of land development and aggregate extraction activities have reduced the

area that can realistically be considered for inclusion in the park.

The management plan study area includes all undeveloped lands encircled by County Roads 14, 16 and 3 (see Figure 2). Particularly important are those portions of the provincially significant Komoka Park Reserve and Adjacent Lands Life Science ANSI that are not within the regulated park. This ANSI identifies the forested corridor that remains along both sides of the Thames River, and which contains the habitats of some threatened and endangered species. This planning process will determine what lands could be realistically considered for inclusion in the park.

There are several other nearby provincially significant ANSIs beyond the limits of the study area. The MNR will work with local landowners and with London and Middlesex Centre to find other mechanisms for their protection.

2.1 Land Tenure

Land acquisition for a park at Komoka began in 1974 and has continued to the present day. There are now three areas of acquired lands:

- the 198 hectare regulated provincial park south of the Thames River;
- 111 hectares (approximately) containing a former gravel pit north of the Thames River and fronting on County Road 16 (Komoka Road);
- a 12 hectare (approximately) woodlot fronting on County Road 14 (Glendon Drive).

(See Figure 2: Study Area and Land Uses)

The Crown land bed of the Thames River, between County Roads 14 and 16, is part of the regulated park and is included within the park area given above.

The southern, regulated area, fronting on County Road 3 (Gideon Drive), abuts a number of private land holdings and a parcel owned by the Township of Middlesex Centre where a township road maintenance garage is located.

Several easements and other uses are within the study area. These include:

- the right-of-way of a high pressure natural gas transmission pipeline (Union Gas);
- two well fields (water), one operated by London, the other by Middlesex Centre, providing potable water supplies for London and the communities of Kilworth, Komoka and Delaware;
- an easement for the water main connecting the London wells to the distribution system at Gideon Drive;
- a Hydro One easement for a 27.5 kilovolt distribution line supplying electricity to the pump houses associated with the municipal well fields; and,
- a proposed easement, under negotiation with the Township of Middlesex Centre, for a trunk sanitary sewer.

2.2 Land Use (Regional Context)

Significant urban growth is approved and is forecast to the immediate east and north of the park management plan study area. Several natural heritage areas are interspersed within these growth areas.

	2001	2021
City of London	347,700	424,900
County of Middlesex	71,600	88,900
City & County	419,300	513,800
Township of Middlesex Centre	14,700	23,500

Projections suggest the overall population of the London-Middlesex area will increase by about 94,500, or 23%, over the next 20 years. Urban growth is extending westerly within London. Development plans for the River Bend area, which is within a kilometre east of the regulated park, have recently been approved. Population projections for this development, once completed, are as high as 18,000.

Opposite the easterly end of the regulated park, on the north side of the Thames River, is the outlet of Oxbow Creek (also known as Springers Creek). The creek valley and the surrounding wooded area, known as Springers Woodlot, is a Middlesex County environmentally sensitive area (Hilts & Cook, 1982) and is identified as a locally/regionally significant ANSI in the Township of Middlesex Centre Official Plan. Its significance merits review; Klinkenberg (1985) recommended that this area should be included within the Komoka Park Reserve and Adjacent Lands Life Science ANSI.

Also at the easterly end of the park is the historic Kilworth United Church, which prior to 1925, was the Wesleyan-Methodist church for the Kilworth area.

On the north bank of the Thames River, the Kilworth Heights subdivision area of Middlesex Centre is not yet fully developed, and plans are underway for a significant expansion of this residential area. The balance of this area is currently being farmed (cash crop operation). Much of Middlesex Centre's 20 year projected population growth of 8,800 will be in this Komoka-Kilworth area.

To the northwest of the study area, west of the Crown-owned forested parcel, are two large pond areas, which are flooded former aggregate operations. North of these ponds, on the north side of County Road 14 (Glendon Drive), is the village of Komoka. On the easterly edge of the village is a provincially significant ANSI containing a large remnant area of tall grass prairie habitat.

The Township of Middlesex Centre is planning improvements to water and sewage servicing of the areas around the park. North of the Thames, proposed is a trunk sanitary sewer connecting to a sewage treatment plant at the southwest edge of the provincially-owned former gravel pit. This proposal is under discussion between the township and the province. South of the Thames, upgrades to the township's water

supply system are being implemented, as negotiated between the township and Ontario Parks.

The landscape south and west of the park area is generally rural in character. The provincially significant Kilworth Shores Earth Science ANSI, containing exposed raised beaches of both the Maumee and Whittlesey phases of glacial lakes, is located south of Gideon Drive and east of Woodhull Road, within 200 metres of the park.

Agricultural land uses predominate south of County Road 3 (Gideon Drive), opposite the eastern portion of the regulated park. Within this area are a number of existing developments including a retirement home, two riding stables, and a golf driving range.

Further west on Gideon Drive are a golf course (opposite the western portion of the regulated park), and the Delaware Speedway.

The road network adjacent to the park area will be undergoing significant changes within the next 20 years. Construction is soon to begin on extending London's major east-west thoroughfare, Oxford Street, across the Thames River to Commissioners Road, which becomes County Road 14 (Glendon Drive) west of the city. This will create a direct connection to Highway 402 to the west, and will result in a future widening of County Road 14. London's Transportation Study, approved with amendments by City Council, proposes a four lane ring road expressway, extending north from Highways 401 and 402 to connect with Oxford Street and Commissioners Road immediately east of the park area.

Over the next 20 years, the largely rural character of the landscape east and south of the park will become progressively urban, and the residential growth north of the park will continue.

3 THE KOMOKA ENVIRONMENT

3.1 Climate

The London-Middlesex area is positioned midway between Lake Huron and Lake Erie. These lakes greatly affect the climate, contributing a moderating influence. The prevailing wind directions, southwesterly during the summer and northerly during the winter, interact with these lakes causing moderate humid conditions for much of the year. However, during the winters, significant lake-effect snow squalls from Lake Huron can occur. January daily maximum temperatures are about -2.8°C ; July, 26.4°C . Precipitation amounts are marginally greater in the warmer months. During the winter, provided the region is not influenced too often by mild spells, snow cover can reach 40 cm in depth.

3.2 Geomorphology, Landforms, Soils

The park area landscape is the result of ice age events. At Komoka, two moraines converge, resulting from the movement patterns of the Huron and Erie ice lobes. These moraines, Arva Moraine north of the Thames, and Ingersoll Moraine south of the Thames, formed where these glacial lobes stopped. Glacial shorelines are found on the west facing slopes of the moraines.

As the ice melted and retreated, meltwater flowing in the glacial Thames valley was backed up by the damming effect of the converged moraines to form glacial Lake London upstream from the park area. The water spilled through the moraines at Kilworth into the glacial lakes — first the Maumee series and then the Whittlesey series, both being phases of early lakes covering the combined Huron and Erie basins south and west of the melting ice sheets.

As the water in the Thames channel spilled westward over the converged moraines into the glacial lakes, a complex delta formation developed. Through the years, the Thames cut

downwards in between the two moraines and through the delta formations. This is why, today, the valley appears to deeply cut the landscape and is bordered by high bluffs at the easterly end of the park.

Former beaches (called raised beaches) of the early Maumee and Whittlesey series of glacial lakes are responsible for the gently undulating upland topography within the park. This area of the park has been identified as the provincially significant Komoka Provincial Park Earth Science ANSI. In addition, other raised beach features are identified within the Kilworth Shores Earth Science ANSI, just south of the park (see Figure 3: Natural Heritage Features – Earth Science).

Most of the delta formation was located north of the present Thames channel. It has been a major source of gravel for the London area for many years. The gravel pits are now nearly depleted.

The level area upstream from Komoka, around downtown London, represents the bed of the former glacial Lake London, and from there, the two moraines can be seen as continuous lines of hills extending northeasterly and southeasterly away from the city area.

Most of the soils in the park area are loams or fine sandy loams that have formed over clay, glaciofluvial-outwash deposits (i.e., the delta formation). Some of the upland soils, south of the Thames, are silt loams that have formed over glacial tills and sandy deposits (associated with the raised beaches). The provincially acquired land north of the Thames is a worked-out gravel pit that has been rehabilitated to aggregate legislation standards. Soils in this area are generally thin and not well developed.

The most significant landform is the Thames River valley. At Komoka, the valley is deep and, along the south side, bordered by steep banks within the easterly portion of the park. The valley widens from about a half kilometre in width at

Kilworth (where the moraines converge) to several kilometres wide beyond the park's west end.

Much of the glacial delta formation, north of the Thames River, has been altered by past aggregate extraction activity and subsequent residential development (Kilworth Heights). The best remaining representative examples of the glacial history and geomorphology of the landscape in this area are within the park, and to the south of the park in the Kilworth Shores Earth Science ANSI.

3.3 Thames River

The Thames River is the most significant landscape feature within Komoka Provincial Park. It was designated as a Canadian Heritage River in September 2000, in recognition of its long and rich cultural heritage and diverse recreational values.

The Thames flows through the agricultural heartland of southwestern Ontario. It is 273 km long and drains some 5,825 km² of land, making its watershed the second largest in southwestern Ontario (the Grand River watershed is the largest). The upper portion of the watershed, including the Komoka area, has been managed by the Upper Thames River Conservation Authority (UTRCA) since 1947.

According to UTRCA information, the water quality in the Komoka area is considered fairly poor. The Ministry of the Environment recommends restrictions on eating fish caught in the river (for example, a restriction of four meals per month of average sized Walleye).

Flooding is not normally a concern within the regulated park, but some flooding occurs along the north bank of the river during the spring runoff. The UTRCA has mapped the flood plain and maintains fill, construction and alteration to waterway regulations along the river.

3.4 Natural Heritage

Southwestern Ontario enjoys a milder, wetter climate than most of central Canada due to its location in the Great Lakes Basin. This has allowed the expansion of the Carolinian Life Zone (Southern Deciduous Forest Region) from the eastern United States into the region. This is one of the most biologically significant and diverse regions of Canada (see Figure 4: The Big Picture – Cores and Connections in Carolinian Canada).

At Komoka, a forested corridor remains along both sides of the Thames River. Here there is a variety of habitats including river flood plains, river valley terraces, valley slopes, deep conifer forests, prairie and open grassland communities, and tableland features. All of this corridor, roughly to the limits of existing tree cover, both north and south of the river, has been identified as the provincially significant Komoka Park Reserve and Adjacent Lands ANSI (see Figure 5: Natural Heritage Features – Life Science).

A reconnaissance life science inventory was first completed in 1985 by Klinkenberg. In 2001, the survey team of Ambrose, Waldron, Rodger and Martin undertook a survey of the natural heritage features and values in Komoka and adjacent areas. The Life Science Check Sheet from their report, *An Update Survey and Evaluation of the Life Science Resources of Komoka Provincial Parks and Selected Adjacent Areas* (Ambrose et al, 2002) is provided at Appendix 2.

3.4.1 Flora

The flora within the park and reserve areas is reasonably well understood. It is known to be representative of the Carolinian Life Zone, and is diverse given the topographic variety found within the area. Thirty-one distinct vegetation communities have been identified using the province's Ecological Land Classification (ELC) system (Lee et al, 1998). Overall, 685 plant species have been recorded within the park and its adjacent areas (Klinkenberg, 1985, and

Ambrose et al, 2002) – see Appendix 2. Of these, 67 species are considered significant. It is likely, as more inventory work is done, the numbers of rare species will be refined. The more significant ELC communities, especially those containing habitats of significant species, will lead to a careful re-evaluation of recreational development opportunities and trail locations within the park.

3.4.2 Fauna

Within the river valley, especially along the mud flats and flood plains, the habitats of the Eastern Spiny Softshell Turtle and the Queen Snake are found. Both of these species are designated as threatened in Ontario. The UTRCA has been conducting studies of both species from Komoka upstream to Fanshawe, and this work should provide more detail about the habitat requirements and sensitivity of these species to human activity.

Suitable habitat exists in the park for at least 13 species of mammals (Ambrose et al, 2002). American Badger, considered a rare species in Ontario, and introduced into southwestern Ontario in the 1920s, has been recorded within the sandy-soil, upland areas around the park. Deer are very common and there is evidence of excessive browsing in some areas of the park.

Over the years, 229 species of birds have been reported within the park area (Ambrose et al, 2002). Bald Eagles occasionally use the river valley from Komoka downstream toward Delaware as foraging territory. Peregrine Falcons have been seen in the area — a result possibly of the successful nesting program underway in London (both Bald Eagles and Peregrine Falcons are endangered species). Red-headed Woodpeckers, designated a vulnerable species in Ontario, have been seen in the park. Seventeen species of 'area-sensitive' birds (birds dependent upon large, undisturbed areas of suitable habitat) breed in Komoka – woodland species such as Ovenbird, Veery, Scarlet Tanager, and field species such as

Savannah Sparrow and Grasshopper Sparrow.

Not much is known about insect life, though now that the upland areas are gradually reverting from former agricultural fields to meadow-like habitats, the variety of butterflies appears to be increasing.

3.4.3 Fish

The Thames River supports one of the most diverse fish populations in Canada due to its many habitats, nutrient-rich waters, long growing season and connection to the Great Lakes. MNR lists 98 fish species in the Thames, of which 11 are considered to be at risk. In the river within the park, 39 species are known to be present (Ambrose et al, 2002). In the Thames, downstream of London, Walleye, Smallmouth Bass, Coho and Pink Salmon are the important sports fish. The spring Walleye spawning run in the Thames is one of the largest in Ontario. The numbers of salmon have been declining since stocking of these species in the Great Lakes has been reduced.

The Komoka stretch of the Thames has developed a reputation as a premier fishing area because of its accessibility complemented by the natural setting. It draws anglers from all over southern Ontario, particularly because of the significant Walleye spring spawning run. Anglers tend to cluster near the Kilworth Bridge and downstream for about a kilometre along the river banks within the park area, and upstream from the Komoka Bridge. The trails along the river banks have evolved from the paths of anglers seeking favoured fishing spots.

3.5 Cultural Heritage

"Komoka", or "Kamoka", is an historic Munsee (First Nation) name meaning "resting place for slain heroes". Somewhere near today's village of Komoka, Winona, a beautiful daughter of a Munsee chief, watched as two of her suitors fought one another, motivated by their love for her. According to several historical sources,

both men died and, overcome with grief, Winona killed herself with a dagger. The place (precise location unknown) where they were buried together was named Kamoka (Phelps, 1989).

The name of the park has long been associated with the village of Komoka, since it was the most prominent community nearby.

Three archaeological sites, all of them disturbed, have been identified within the study area by a preliminary survey. It is likely that more sites could be found if the area were fully researched (Wolfe and Lennox, 1974). Some Woodland pottery and several spear points have been found at one site on the north side of the Thames. At another site, on the south side of the river, artifacts retrieved suggest occupation by at least five different cultures during a span of 7,000 years. Coins, tokens and medals from the War of 1812 were also found at this site.

The Wishing Well site, located on the north bank of the Thames, is of interest (see Figure 6: Cultural Heritage features). Here, until recently, a natural artesian spring cascaded over a 15 metre bluff into the Thames River (Lobo, 1990). The water from these springs was used by the Wishing Well company, whose brand name "Wishing Well" was once well known in southern Ontario. The hard water from this and other springs and seepages once formed tufa deposits, which are calcareous, limestone-like formations (Hilts & Cook, 1982). A tufa-forming moss community developed in this area. These mosses (called didymodontoliths) absorbed calcium carbonate from the hard water seepages and deposited it in porous mounds. A limestone coating, similar to scale in a tea kettle, was seen on the cliff face and on twigs of nearby bushes — most anything within the reach of the spray from the cascade (Klinkenberg, 1985). Also, a variety of archaeological artifacts has been found at this site — most reported to be from the Late Archaic period. William Lyon Mackenzie visited the site in 1825, and took "a stone covered branch as a souvenir" (Lobo, 1990).

Since 1985, the water flow has lessened. Recent aggregate operations and residential development adjacent to the north bank of the Thames may have been the cause. The Wishing Well cascade that left a lime coating on nearby vegetation from its spray was nowhere evident in 2001 (Ambrose et al, 2002).

Ebenezer Allan started the first settlement in this area of Ontario, in 1789 at Delaware. The settlement of Kilworth began in 1798, the Woodhulls and the Springers being the earliest settlers. These families are remembered by Woodhull Road at the park's eastern end, and Springers Creek (the alternative name of Oxbow Creek, which enters the Thames opposite from the park and just upstream from the Kilworth Bridge). The area began to settle quite quickly as many Americans moved into the area attracted by free grants of land. Settlement of Byron began by 1801. Though London was designated as a future district capital by Governor Simcoe in 1793, it did not begin to be settled until 1826.

The earliest east-west, overland travel route from Dundas (west end of Lake Ontario) to Amherstburg and Detroit was by the trail which variously has been named, between Delaware and Byron, Longwoods and Commissioners Road — now County Road 3 (Gideon Drive). It was along this road that the British forces moved to garrison Delaware from Oxford Centre (now Ingersoll) during the War of 1812. American raiding parties, such as the one that raided Kilworth, also used the road to forage for supplies. The raiders occupied the Kilworth Distillery, and while there, the owner's son secretly left to raise the alarm. This may have been the party that was later ambushed somewhere between Kilworth and Byron — London legends suggest Tunks Hill in Byron (now Reservoir Hill) as the ambush location.

By 1851, some 200 people lived at Kilworth. The village included a grist and flour mill (on Springers Creek), a sawmill, the Wesleyan Methodist Chapel (now Kilworth United Church),

a ladies select school, and a public school. A regular session of Division Court was held in the village.

Of note is the former post office at Kilworth. In the mid-1970's, this building was relocated and renovated by MNR for use as a field office. It was closed in 1997. An adjacent barn, once used as a cold storage warehouse, had to be torn down in the early 1990s for safety reasons. A 1998 inventory of heritage resources, prepared by London's Advisory Committee on Heritage, identifies that the 'post office' building was built around 1880, and assigns it "priority 1", meaning it is one of London's important heritage structures, worthy of protection, because of its architectural style (a side-hall plan cottage) and historical value (first post office at Kilworth).

3.6 Present Development

Since land acquisition began at Komoka Provincial Park, unorganized use of the area has been occurring. As already noted, informal trails were created by anglers seeking favoured sport fishing locations along the river banks. Once the majority of the regulated park had been acquired, interim management of the park area resulted in the development of a parking area on Gideon Drive, and improvements and additions to the trails with the assistance of the Thames Valley Trail Association. There are about eight kilometres of trails in the regulated park. Ontario Parks has sought to accommodate a variety of users (hikers, horseback riders, cross-country skiers, anglers) and has installed limited signage to guide use of the park area.

The former Kilworth office, closed in 1997, has been identified as being surplus to MNR needs. Komoka Provincial Park is administered from Port Burwell Provincial Park.

In exchange for the new location for the Delaware Township maintenance garage, now the Middlesex Centre Roads Department garage, the Township's former garage building was transferred to MNR. Both of these garage

buildings are accessed from Gideon Drive. The former garage building is currently used for Ontario Parks and other MNR purposes. It is anticipated it will be retained to support future park management.

Other than the two developed parking areas, one at the site of the former Kilworth MNR field office, and the other on Gideon Drive, there are no formally developed entrance facilities, and no facilities for the collection of entrance fees at Komoka. Signs at these two parking areas provide basic information about the park area (trail locations and park use regulations).

4 PARK USE AND MARKET

4.1 Park Use

Komoka Provincial Park currently provides free day-use outdoor recreational opportunities including sport fishing, hiking, bird watching, and nature photography.

Additional current uses, that are problematic in terms of Ontario Parks' operating standards, include hikers letting dogs run freely (dogs must be on leashes in provincial parks), unorganized horseback riding, and mountain bike riding. Use of dirt bikes and off-road vehicles is a problem within the acquired lands north of the Thames River.

Informal agreements with nearby riding stables have attempted to limit horse riding to certain trails that seem less susceptible to trail rutting, a common result from this activity. Without available enforcement, horseback riding is occurring on all trails within the park area.

Mountain bike riding is difficult to control or enforce, unless bike barriers are installed at trail entrances supported by a regular, almost daily presence of parks staff (such as park wardens). A safety issue exists between the speed of mountain-bike cyclists and hikers walking along the trails, especially since long sight-lines are not

common on the narrow, winding trails within the park.

Maintenance of fencing coupled with enforcement will be needed to control off-road vehicles and dirt bikes on lands north of the Thames River.

Visitor use statistics have not been collected since there are no controlled entrances to the park. Annual visitor use has been estimated by Ontario Parks staff:

- about 30,000 casual visitors (hikers, cross-country skiers and others using the system of trails);
- up to 1,000 anglers during the spring Walleye spawning run — especially when the weather conditions and the Walleye run coincide with a weekend; and,
- about 50 canoe trips through the park from the Kilworth Bridge downstream to Delaware.

A park user survey conducted during the summer of 2001, and contacts with users, suggest that the majority of park visitors, with the exception of anglers, are from the immediate London area (see Appendix 3, *Komoka Provincial Park Use Survey: Summary of Results*). This is not surprising since Ontario Parks does not market Komoka. It is not considered an operating park, and the park is not included in promotional information made available at other provincial parks or by tourism information centres.

The few visitors that are from areas beyond London tend to be outdoor enthusiasts and members of natural heritage organizations (for example, Thames Valley Trail Association, Federation of Ontario Naturalists, Canadian Nature Federation) that have been made aware of Komoka through those organizations.

Walking / hiking / jogging	54.1 %
Dog walking	34.4 %
Cycling / mountain biking	6.1 %
Bird watching	2.1 %
Nature photography / painting	1.2 %
Fishing	0.7 %
Horseback riding	0.7 %
Other recreation (Skiing)	0.5 %
No response	0.2 %
Source: Campbell & Kesteloot, 2002. See Appendix 3.	

Angling on the Thames is a tradition that long predates the park, and therefore, some anglers come from as far away as Toronto, Hamilton and Windsor, though most are from London and Middlesex County.

4.2 Origins and Demands of Future Park Visitors

It is expected that the population of the London - Middlesex area will increase by 23% over the next 20 years. As all available outdoor recreational opportunities within natural settings are now required, additional opportunities will be needed as the population increases.

Statistics Canada reports an existing population of 450,000 within the London-centred census metropolitan area, which includes the London, St. Thomas and Port Stanley areas. Within 20 years, it is expected to increase to 554,000.

More than three-fifths of Ontario's 11 million people live within 2½ hours of Komoka, including the residents of Windsor, Chatham, Owen Sound, Kitchener, Waterloo, Cambridge, Stratford, Guelph, Hamilton, St. Catharines, Niagara and the western Greater Toronto Area.

Generally, potential visitors will travel about one hour to access day use opportunities. For overnight camping, travel times of 2½ hours are not unreasonable.

Travel time	2001	2021
within ½ hour London-Middlesex	419,000	514,000
within 1 hour London census metropolitan area	450,000	554,000
within 2½ hours Windsor to Greater Toronto Area	6,983,000	8,589,000

Source: Ontario Parks, London Zone Office, 2002

At Komoka, the day-use opportunities currently attract visitors who enjoy a good hike in a natural setting, and anglers (in season). The majority of these visitors will be from areas within an hour's drive, or if beyond that, will be visitors touring in this area of the province as part of an extended visit that includes other destinations.

There are few suitable areas, unconstrained by features of natural heritage significance, within the regulated park, and within the acquired lands, where campground development could be considered (see Section 4.4). Water-related recreational opportunities as good as those available at Pinery, Rondeau, or Port Burwell Provincial Parks could not be provided. But Komoka could provide camping opportunities:

- for visitors travelling to (or through) the London-Middlesex area for reasons additional to visiting Komoka (i.e., tourist camping);
- for visitors primarily interested in Thames River angling opportunities (in season);
- for visitors seeking an outdoor overnight/several overnights recreational escape from their regular routines regardless of the significance of Komoka's natural setting (i.e., cottage camping); and,
- for groups seeking group camping opportunities. Group camping is currently in demand at all London-area camping facilities from organizations such as Scouts Canada and Girl Guides. Reports from these organizations suggest demand exceeds supply — group camping reservations need

to be made months in advance to guarantee access to group campsites.

Within 50 km	Number of parks	Number of campsites
• Provincial Parks	0	0
• Conservation Areas	6	1,963
• Private Parks	19	2,963
Between 51 km & 100 km	Number of parks	Number of campsites
• Provincial Parks	6	2,191
• Conservation Areas	11	2,658
• Private Parks	61	10,244

Source: Ontario Parks, London Zone Office, 2002

There are few tourist or cottage camping opportunities remaining in the London area, since existing facilities are already operating at or near capacity during July and August. The nearest public opportunities are provided by Fanshawe Conservation Area, where seasonal camping sites predominate. Other opportunities are available at Pittock, Wildwood, Dalewood, Lake Whittaker and Springwater Conservation Areas.

Komoka is not well known to the general public. Management of the area has been deliberately low key — the intent being to control public interest and anticipation about the park until such time as a management plan is in place, and funds are committed to park development and to operating the park. Therefore, forecasts of demand for recreational opportunities at Komoka are necessarily based upon trends in park use at other parks, and the capacity of other parks to meet these trends.

Expected future park users can be categorized as follows:

- day users from the London vicinity (hikers, picnickers, anglers, canoeists, etc.);
- overnight tourist campers for whom the London area may or may not be a trip destination;
- cottage campers from the London area; and
- group campers.

Two factors suggest that there could be a market for camping at Komoka:

- There is a demonstrated demand for tourist, cottage and group camping in the London area. The regional supply of overnight camping opportunities is remaining constant relative to the steadily increasing demand which is associated with the overall growth of population; and,
- There are few alternatives to Komoka where camping opportunities can be provided to serve this market, and particularly so convenient to London.

4.3 Other Available Outdoor Recreational Opportunities

Within the London urban area, hiking opportunities that are similar to, but less extensive than, those at Komoka are provided within the following 12 natural (semi-wild) environments, (opportunities closer to Komoka Provincial Park listed first):

- Warbler Woods (City of London Natural Area)
- Sifton Bog (City of London Natural Area)
- Sharon Creek Conservation Area (Lower Thames River Conservation Authority)
- Millstream Conservation Area (Lower Thames River Conservation Authority)
- Longwoods Conservation Area (Lower Thames Valley Conservation Authority)
- Cold Stream Conservation Area (St. Clair Region Conservation Authority)
- Medway Valley Heritage Forest (City of London Natural Area)
- Westminster Ponds - Pond Mills (City of London Natural Area)
- Kilally Meadows (City of London Natural Area)
- Regina Mundi - Kirk Cousins ESA (Kettle Creek Conservation Authority Natural Area)
- Meadowlily Woods (City of London Natural Area)
- Fanshawe Conservation Area (Upper Thames River Conservation Authority)

Cottage camping and overnight tourist camping

opportunities are provided by 19 private campgrounds in the London-Middlesex area.

Beyond London and Middlesex County, similar opportunities are provided at the following operating provincial parks:

- Along the shore of Lake Erie:
 - Wheatley Provincial Park
 - Rondeau Provincial Park
 - Port Burwell Provincial Park
 - Long Point Provincial Park
 - Turkey Point Provincial Park
 - Selkirk Provincial Park
 - Rock Point Provincial Park
- Along the shore of Lake Huron:
 - Pinery Provincial Park
 - Point Farms Provincial Park
 - MacGregor Point Provincial Park
 - Sauble Falls Provincial Park

However, only a few of these available park areas provide natural heritage settings of similar significance, where natural heritage and geomorphological landform features combine in such a dramatic way. Few of these areas (Pinery and Rondeau being notable exceptions) provide as great a variety of hiking trails. Among the provincial parks, only Komoka has such a diversity of inland vegetative landform features representative of the Carolinian Life Zone.

In comparison with these other available park and outdoor areas, Komoka provides the best publicly available quality sport fishing opportunities, particularly resulting from the presence of Walleye (during spawning runs) and Smallmouth Bass.

The designation of the Thames River as a Canadian Heritage River will contribute to public interest in Komoka, and in turn, Komoka protects a natural heritage area that is both provincially significant and significant to the heritage values of the Thames River valley.

4.4 Development Constraints

The park area landscape presents a number of challenges to large scale development of traditional park facilities. These constraints include:

- The Thames River and development setbacks required from flood plain areas and from the steep river banks.
- The presence of the Komoka Park Reserve and Adjacent Lands Life Science ANSI, which includes most of the naturally forested areas on both sides of the Thames River. Provincially significant life science ANSIs are strong candidates for nature reserve zoning within a provincial park context.
- The presence of the Komoka Provincial Park Earth Science ANSI, which includes most of the tableland areas within the regulated park. Earth science ANSIs are strong candidates for either nature reserve or natural environment zoning in a park context.
- Within the provincially acquired lands north of the Thames, naturally regenerating areas of grassland and wetland habitat are becoming significant habitat areas for field birds, waterfowl and shorebirds (Ambrose et al, 2002).
- The water wells operated by London and Middlesex Centre and the associated waterline and hydro line easements. The areas surrounding these wells require protection from extensive development.
- The Union Gas high pressure transmission pipeline easement crossing the southwest corner of the acquired lands north of the Thames and the west portion of the regulated park.

Structures and traditional park facilities should not be developed in the above areas. This leaves two large areas that can be considered as

potential locations for park facilities. These are:

- The area of former agricultural fields found near the southeast end of the regulated park, fronting on Gideon Drive.
- An area of the acquired lands north of the Thames River and north of the Union Gas pipeline easement, outside of the regenerating wetland and grassland habitats that are significant.

A third area, but much smaller, is at the former Kilworth MNR field office, where there is space available for limited development of park facilities. Safe entrances from Middlesex County roads are available at all three of these sites.

If camping were to be provided as part of the development of Komoka Provincial Park, it would need to be located within the acquired lands on the north bank of the Thames. There is insufficient unconstrained space on the lands south of the Thames River. The acquired lands provide the largest area generally unaffected by the constraints identified above. However, there are some difficulties with this area:

- The former aggregate operations extracted to a depth close to the water table, with the result that portions of this area are wet. A wetland is developing in the easterly portion of this area.
- It is not clear whether the dry portion of this area is sufficiently large to accommodate campground development. Additional land might be needed to develop a campground. There is sufficient space for group camping.
- There are questions about the integrity of a dike on the adjacent property to the north. It retains water in the Komoka Ponds, which are adjacent to the intersection of Glendon Drive and Komoka Road.

5 MANAGEMENT ISSUES

The issues are grouped under four headings:

- 5.1 Policies and Boundaries
- 5.2 Park Use
- 5.3 Resource Management
- 5.4 Neighbouring Influences

Background information for most of the issues is described elsewhere in this report; cross-referencing is provided.

5.1 Policies and Boundaries

5.1.1 Classification

The park is now classed as a Recreation Park. The majority of the present area in regulation is a provincially significant life science ANSI. This ANSI straddles both banks of the Thames River. Only the southern portion is included in the area regulated under the *Provincial Parks Act*. In addition, a large part of the regulated park falls within the Komoka Provincial Park Earth Science ANSI, which identifies the glacial history of the Komoka delta. This earth science ANSI overlaps the life science ANSI.

Issue: The majority of the regulated park is within two provincially significant ANSIs. Typically, recreation class parks emphasize outdoor recreation opportunities for large numbers of people. By comparison, natural environment class parks emphasize high quality recreational and educational experiences in an attractive outdoor setting, while nature reserve parks emphasize earth and life science values that require special management to best contribute to parks system protection and heritage appreciation objectives.

There is a disparity between the management objectives suggested by the park's present classification and the natural heritage values that the park protects. Komoka's classification should be reviewed (see Section 6.2, page 20).

5.1.2 Park Boundaries

The regulated park is confined to the south side of the Thames River (see Section 1.1 and Figure 2)

Issue: The present boundaries do not include acquired lands north of the Thames River that contain portions of the provincially significant Komoka earth and life science ANSIs. The large area of acquired lands within the former gravel extraction area potentially provides a site for development of camping areas and/or group activity areas such as playing fields. A small wetland is developing within a portion of this property suggesting restoration of natural habitats is feasible within the former extraction area.

Ontario Parks has been approached by local interests regarding the feasibility of developing and operating a golf course on this site (see Section 5.2.3).

The boundary question directly relates to the classification issue.

5.1.3 MNR Bush Lot

This bush lot was acquired according to the original land acquisition plan (which included all of the undeveloped lands north of the Thames River and south of Glendon Drive). Today, this parcel is isolated from other acquired lands closer to the north bank of the Thames River — the intervening private lands (such as the Komoka Ponds property) not having been acquired. It is a significant woodlot because of its size, the Black Oak community found within it and the small area of remnant prairie associated with it.

Issue: Can this woodlot contribute significantly to objectives for Komoka Provincial Park? The answer to this issue relates to the park classification and park boundary issues.

5.1.4 Former MNR Kilworth Office

This building was purchased in the late 1970s for possible use as a park office. Instead, it was used until 1997 as an MNR sub-office. It has been determined by the City of London that the building has historical heritage value. Since 1998, it has been vacant.

Issue: Is this building potentially suitable for park uses? Should this building be removed? Do its heritage values make an important contribution to possible objectives for the park — these being directly related to the issue of park classification? Could it be moved again by an agency or organization able to restore and maintain it? See Section 3.5 for a discussion about this building.

5.1.5 Park Name

From the time public land acquisition began, the name “Komoka” has been used for the park — principally because Komoka was the largest settlement area near the park area. As noted in Section 3.5, page 7, “Komoka” is a name of some historical and cultural significance to the area within and around the park.

Issue: Is “Komoka” an appropriate name for the park? There are now settlement areas closer to the park than Komoka, notably Kilworth Heights, and the name “Kilworth” is also historically significant within and around the area of the park (see Section 3.5, page 7). There may be other names that merit consideration.

5.2 Park Use

5.2.1 Access

The public currently has two well-defined access points: the site of the former MNR Kilworth Office at the east end of the regulated park (capacity about 12 cars), and the parking area at the south edge of the regulated park opposite the intersection of Gideon Drive and Brigham Road

(capacity about 20 cars). About 50% of the visitors are using the former Kilworth Office (Glendon Drive) access point, and about 30% of the visitors use the Gideon Drive access point. Other points of access being used by the public include the Thames Valley Trail near the intersection of Gideon Drive and Carriage Drive, and the south end of the Komoka Road bridge (west end of the regulated park). Access to the acquired lands occurs from many informal locations. The Thames River is also a point of access, as canoeing the river is becoming increasingly popular.

Issue: Access points will need to be formally defined at locations that can accommodate projected visitation and vehicular traffic, and that can provide safe access from County roads (see Section 3.9).

5.2.2 Present Park Use

Patterns of present park use are described in Section 4.1. For the most part, park use focuses on the existing network of trails (see Section 5.2.4 below). Other popular uses include canoeing on the Thames River, and sport fishing.

Issue: Park use needs to be managed to mitigate impacts upon natural heritage features and values found within the ANSI. There is a need to separate certain types of use to minimize conflicts among users, and discourage other uses. Careful zoning of uses and of the areas within the park will be required.

5.2.3 Potential Park Use

The anticipated growth of population around the park area will affect potential park use (see Section 4.2). Demand for natural areas for hiking and demand for recreational activities such as picnicking, canoeing and camping is growing.

In response to the growing participation in golf, local interests have inquired about developing

and operating a golf course within the area of the former gravel extraction area north of the Thames River. These interests believe they can create a top-quality public golf course on this property while protecting and maintaining the life science ANSI along the north bank of the Thames River.

Issues: Can Komoka accommodate some of the growing demand for outdoor recreational space in the London area?

Should the province enter into an agreement to permit the development and operation of a golf course within the former gravel extraction area? If this were to be considered, the area for a golf course would likely not be included within park boundaries.

5.2.4 Trails

Komoka's trail network is extensive, and provides high quality day use opportunities (see Section 3.6). Hikers/walkers are the largest group of trail users. Cross-country skiing is popular during winters with sufficient snow. Other current users are cross-country runners, joggers, mountain bikers and horseback riders. The trail system also provides access to sport fishing opportunities along both banks of the Thames River.

Issues: The trail network is confusing and there are too many duplicate trails. This causes visitors to be uncertain about which trail to follow. There are also conflicting and incompatible uses occurring along the trails.

Some duplicate trails are within sensitive natural heritage areas. Trail redundancy should be avoided in these areas. Trails through sensitive habitats important for sustaining significant species may need to be closed.

Certain uses of the trail system cannot be sustained because of the damage to the trails and the associated widening of trail routes which, in turn, can negatively affect the edges of plant

communities beside the trail routes. Some uses conflict with other uses for safety reasons. For example, mountain bike riding, though it may not be a significant cause of trail damage, can be a safety hazard to hikers/walkers. Nearby riding stables encourage patrons to use the park's trail system. Horses are causing significant damage to some trails, particularly rutting, and eroding and trampling trailside vegetation, thus exposing areas of soil alongside the travelled trail surfaces. This encourages invasive plant species to flourish (their faeces are also a means by which invasive species are introduced into the park's natural areas). Horses can be incompatible with the hikers for safety reasons. Uses that cause negative environmental impacts and create safety hazards may need to be controlled or prohibited.

5.2.5 Non-Conforming Uses

Many of the public comments received have complained about the number of hikers who let their dogs run free in the park. This is not permitted by the regulations under the *Provincial Parks Act*. Dogs running loose harass wildlife and can be a threat to other park users.

The use of dirt bikes and off-road vehicles has, at times, been a problem within the acquired lands north of the Thames. Rutting and soil disturbance caused by these vehicles have a negative impact upon naturally regenerating sites within the former gravel extraction areas.

Issues: A public awareness program supported by on-site park management is needed to successfully address the long-standing practice, by some park visitors, of letting dogs run freely in the park. Dogs off-leash often worry other park visitors, which lessens their enjoyment of the park. Providing areas to allow dogs to roam freely is not something that contributes to the core values and objectives of the provincial parks system.

Public notices, fencing and on-site enforcement are the key tools for controlling off-road vehicle

and dirt bike use.

5.2.6 Entrance/User Fees

As noted in Section 3.6, no fees are currently collected at entrances to the park. The province's *Ontario Parks Business Plan* (MNR, 1996) requires that fees be collected at all operating provincial parks

Issue: Current government policy requires that the provincial parks system be largely self-sufficient financially, which means that user fees must provide the majority of operational funds for the parks system as a whole. Park visitors should be willing to pay entrance fees that contribute to park protection, to quality outdoor recreational experiences and to publicly shared social and environmental objectives provided by the Provincial Park System throughout Ontario.

5.2.7 Park Management Facilities

Park management facilities are discussed in Section 3.6. At present, a warehouse facility and an associated former residence, and the closed office facility (in the former MNR Kilworth Office), comprise the management facilities.

Issue: The existing management facilities may or may not be sufficient to meet the operational demands of the park classification and boundary option to be selected. Park development options will need to review this issue.

5.2.8 Park Use and Natural Heritage Conflicts

Park use and natural heritage conflicts are evident in a number of ways:

- trail widening and duplication of trail routes because of overly intensive and competitive use from the combination of pedestrians, mountain bikers and horseback riders;
- littering, particularly at park entry points;
- unorganized picnicking and camping, particularly along the river banks where it can compromise Spiny Softshell Turtle habitat;

- dogs allowed to run free, harassing wildlife;
- vandalism, not just of park signs encouraging careful use, but of components of plant communities around the signs;
- removal of plants for replanting in home gardens, or for home-use in flower arrangements

Issue: As the park becomes better known, use will increase. Regardless of the park classification and boundary option selected, monitoring of park use and enforcing reasonable park use will be necessary. On-site management of the park will need to be considered.

5.3 Resource Management

5.3.1 Significant Plant and Animal Species

As noted in Sections 3.3.1, 3.3.2 and 3.3.3, Komoka includes the habitats of a number of significant species. Species such as interior woodland birds, Spiny Softshell Turtles, and Queen Snakes cannot withstand pressures from frequently repeated human activity. The occasional hiker will not pose a problem, but large numbers of hikers will.

Issue: As more is learned about the locations of significant habitat areas, trail locations may need to be reviewed and visitor control techniques will be needed. Zoning of especially sensitive habitat areas will be required. If significant habitat areas are to be sustained, then human activity must be moderate. This will require visitor use monitoring, and perhaps enforcement activity. Again, this raises the issue of and need for on-site management of the park.

5.3.2 Heritage Appreciation Theme

The Komoka landscape has an interesting glacial and geomorphological history important to the understanding of southwestern Ontario's landscape surrounding the London area. The heritage value of the Thames River is significant (see Section 3.3), and the park area is

associated with an interesting cultural heritage (see Section 3.5).

Issue: To guide heritage appreciation activities within the park, an interpretive or heritage theme needs to be developed. The theme should link the interesting features of the park into a story line that can be presented in a variety of ways to park visitors. This will tell why the park area is important, and provide an understandable rationale for required park use and resource management activities.

5.3.3 Habitat Management

As more use is made of the park, and as land development activities push closer to the park area, active habitat management may become necessary to sustain particularly sensitive habitats and to control invasive, non-native plants that are spreading into the park area. This may include restricting human access to certain areas, improving vegetation cover, removing competing non-native vegetation, fencing, fire management techniques, erosion control measures, wildlife reintroduction or control measures, etc.

Issue: Detailed monitoring of sensitive habitat conditions is required on an ongoing basis so that change and, more importantly, rates of change of natural habitats and features can be detected. This information is critical to assessing when, where and how habitat management intervention should be planned. The overall objective should be to manage the park's ANSIs and valley lands so that habitats remain largely self-sustaining.

5.3.4 River Management

River management is discussed in Section 3.3. Within the park area, a key objective is retaining the Thames River corridor in a natural state.

Issue: A memorandum of understanding among the various agencies with interests in the management of the river would be helpful in

clarifying jurisdictional roles and relationships. In a legal sense, management of the riverbed within the park is governed by the *Provincial Parks Act* and regulations. However, there are other important interests in the river — particularly the maintenance and security of the water well fields serving the needs of the Township of Middlesex Centre, and flood and hazard management by the UTRCA.

5.4 Neighbouring Influences

5.4.1 The Komoka Ponds

Privately owned property abuts the north boundary of the acquired lands. A large portion of this property, formerly a gravel pit, is now flooded, and known locally as the "Komoka Ponds". This area, along with property to the east between the ponds and the MNR bush lot, was included in the original Komoka Provincial Park acquisition plans, and would connect the acquired lands to the south with the MNR bush lot (see discussion of this woodlot in Sections 2.1 and 5.1.3). Although there were acquisition discussions between the province and the landowners, no agreement was ever reached.

Issue: The Komoka Ponds are gradually developing into waterfowl and wetland habitat. The ponds are becoming a significant staging area for migrating waterfowl. These lands are higher in elevation than the province's acquired lands to the south. Two issues are apparent: the habitat and recreational values the property could potentially contribute to park objectives; and the potential safety hazard of these flooded lands upon the lower-level acquired lands to the south. Acquiring these lands might be justified to protect the developing wetland and waterfowl values, to gain control of the ponds, and to allow consideration of expanded recreational development for Komoka Provincial Park.

5.4.2 Local Municipal Uses

Local municipal uses within or abutting the park area include the water well fields located on the

north bank of the Thames River, two sewage treatment facilities also near the north bank of the Thames, and a municipal road maintenance garage on Gideon Drive abutting the regulated park (see Sections 2.2 and 4.2). These municipal uses, being essential, will continue.

Issues: As park use increases, site security for the municipal uses may become an issue. A memorandum of understanding detailing operational protocols to protect abutting park values and to maintain site access and security should be negotiated among the municipalities and Ontario Parks.

5.4.3 Municipal Growth and Planning

Urban growth is inevitable, particularly to the north, east and south of the park area. The Kilworth Heights area of Middlesex Centre is expanding westwards across lands bordering the north bank of the Thames River. This may create conflicts with Komoka life science ANSI values located north of the Thames. To the east, London has recently granted planning approvals for the development of the River Bend Planning Area (see Section 2.2). Associated with this are approved road improvements, including the extension of Oxford Street westwards from London across the Thames River. Once this development is underway, pressure to develop lands between River Bend and Komoka will become a reality.

Issues: Both the City of London and the Township of Middlesex Centre will need to be kept informed about Komoka Provincial Park objectives. Urban development planning will need to consider mitigating measures to recognize the ecological functions of natural habitats associated with the park. Ontario Parks and the two municipalities should jointly monitor development proposals near the park area.

5.4.4 London's Proposed Ring Road

London's City Council has adopted a ring road corridor protection plan to allow for the future

development of a multi-lane freeway connecting London's east-west road network across the north side of the City with Highways 402 and 401 to the southwest.

Issue: The ring road corridor closely approaches the southeast corner of Komoka Provincial Park. It crosses through the middle of the nearby provincially significant Kilworth Shores Earth Science ANSI. Development of a multi-lane highway within this corridor will affect:

- natural corridors and ecological linkages between the park area and the Dingman Valley complex to the south of the park;
- the fragile Kilworth Shores ANSI, which is one of the very few remaining undisturbed landform features relating to the glacial and geomorphological history of the Komoka area; and,
- development patterns near the park.

The proposed ring road would create significant development pressures on lands to the south of the park area, eroding existing ecological connections and linkages between the park area and the Dingman Valley complex.

The municipal planning processes that will inevitably result from London's approved corridor protection plan will create a need for the province and the City of London to enter into detailed discussions about options for aligning a multi-lane roadway within this corridor so that impacts upon Komoka Provincial Park and the nearby related ANSIs are minimized.

6 PARK CONCEPT OPTIONS

6.1 Komoka and Parks System Targets

Komoka Provincial Park is now a recreation class park. As already noted, the park classification is a significant planning issue (see Section 5.1.1), since the emphasis of the recreation class on outdoor recreational opportunities, for large numbers of people, is incongruous within a park that is predominantly a provincially significant life science ANSI, most of which should be considered as a nature reserve zone. There is very little area within the regulated park that can be devoted to recreational opportunities for large numbers of people.

An ambitious land assembly was the starting point for the creation of a provincial park at this location. The original acquisition target included most of the undeveloped lands within the area bounded by Glendon Drive on the north, Gideon Drive on the south and on the west, Komoka Road. In many ways, this acquisition target would have implemented Osmond Langtvet's 1960 vision for the park. This vision of a large near-urban park incorporating a significant component of the Thames Valley coloured the 1983 decision to classify Komoka as a potential recreation park.

The original acquisition plan could have been completed, but the cost would have been burdensome to the parks system. Not unexpectedly, the acquisition initiative was scaled back, and a more realistic objective of securing stewardship of the significant natural heritage features became the main acquisition target. Nevertheless, the former Pioneer Sand and Gravel Pit site was acquired, and today represents over a quarter of the total land holdings.

The significance of the life and earth science features within the regulated park and other acquired lands, and the protection within those lands of one of the few natural valley landscapes

within the Thames River watershed, are important contributions to the provincial parks system's protection and heritage appreciation objectives. Nowhere else in southwestern Ontario are inland glacial history themes so well represented in the parks system. The Thames River valley features within the park area are significant to the understanding of the landscape of the entire London area.

The provincial parks system early settlement and transportation themes (see Section 3.5) are represented within the park area. The park contributes to understanding the early settlement of Middlesex County. There is enough preliminary archaeological evidence within the park to suggest it may well contribute to several indigenous peoples' themes as well.

If all of the acquired lands are included in the park, then the potential exists to provide many of the outdoor recreational opportunities typically found in larger provincial parks. The acquired lands north of the Thames, whether included within the park boundary or not, will become a significant legacy as urbanization continues around the park area.

6.2 Park Concept Options

There are four realistic park concepts for Komoka. The concepts principally differ by how much land north of the Thames would be added to the existing regulated park south of the Thames to constitute the future Komoka Provincial Park. The best option will be the one that contributes the most to provincial parks system objectives while providing the most sustainable balance between protection of the area's significant features and provision of outdoor recreational opportunities.

The four park concept options are described in Table 6 (see page 10) and illustrated by Figures 7-1 to 7-4 (see pages following page 25). Table 6 illustrates the connections between classification and boundaries, and the possible management priorities on which a park goal

statement could be based. In addition, for each option, the possible range of outdoor recreational opportunities and required supporting facility development is presented. Table 7 (see page 24) provides pros and cons for the four park options.

To summarize Table 6:

1. A nature reserve classification would be most appropriate if the preferred option is:
 1. to retain the park boundaries as they now are (see Figure 7-1, Option 1, page 26), or
 2. to add to the park only the provincially acquired lands, and other available lands, that are within the ANSI along the north bank of the Thames River (see Figure 7-2, Option 2, page 27)..
2. A natural environment classification is recommended if the boundaries are extended to include all of the acquired lands north of the Thames River plus other available lands within the ANSI along the north bank of the Thames. This option anticipates continued natural restoration of former gravel extraction areas and possible development of day use opportunities and group camping opportunities within the non-ANSI areas north of the river (see Figure 7-3, Option 3, page 28).
3. A recreation or natural environment classification is recommended if development on the non-ANSI areas is to include a full range of overnight camping opportunities. Additional lands may need to be acquired to implement this option (see discussion at Section 5.4.1, page 18, and see Figure 7-4, Option 4, page 29).

Expansion of the regulated park onto lands on the north side of the Thames River will need to be supported by a business case and site evaluation that will look at costs and revenues, the type of opportunities that could actually be provided and landscaping requirements such as

protection and management of ANSI values, and buffering of park uses and resources from adjacent land uses.

6.2.1 Zoning

Within provincial parks, zoning is applied to guide park management activities and to set out the types of uses permitted geographically within the park. Five zones are used within the provincial parks system south of the Canadian Shield:

1. Nature reserve (NR) zones protect fragile and/or significant natural heritage features or areas that require specific park use and/or management controls.
2. Natural environment (NE) zones protect important natural landscape areas. Generally, natural environment zones contain features that are not highly sensitive to reasonable amounts of visitation and passive recreational activities. These zones can serve as buffer areas for nature reserve zones.
3. Historical (H) zones protect significant cultural heritage features or areas requiring specific park management control and/or deserving site-specific heritage appreciation programming.
4. Access (A) zones are areas where low intensity facilities - roads, visitor control structures, basic day use facilities and small scale interpretive facilities - support entry into the park.
5. Development (D) zones may include a wide range of visitor facilities including campgrounds, swimming areas, picnic areas, major interpretive facilities, and visitor support services such as stores and food and beverage concessions.

Normally, provincially significant ANSIs occurring within provincial parks are placed in nature

reserve zones. Nature reserve zoning is recommended for both the life science and earth science ANSI features at Komoka. This would also mean that the Thames River, for its entire length within the park, would be within a nature reserve zone. Given the presence of species-at-risk habitat along the river banks (Spiny Softshell Turtles and Queen Snakes), and the presence of sensitive natural heritage sites (the former tufa deposits), this zoning would be appropriate.

Natural environment zoning is recommended for upland areas abutting the ANSIs.

Depending on the amount of development proposed, park entrance areas could be zoned either as access zones or as development zones. Development zoning would apply to any campground areas.

Regardless of the park concept option that is chosen, two zoning recommendations should apply:

1. nature reserve zoning for all ANSI areas and the Thames River; and
2. natural environment zoning for the upland areas immediately abutting the nature reserve zones.

Table 6, Park Options

Classification Option	Park Boundaries	Management Priorities	Possible Outdoor Recreational Opportunities	Facility Development
Option 1, Nature Reserve Park	<ul style="list-style-type: none"> existing regulated park 	<ul style="list-style-type: none"> protection of ANSI self-serve visitor services information (e.g., trail pamphlets) 	<ul style="list-style-type: none"> hiking cross-country skiing canoeing fishing 	<u>South of Thames</u> <ul style="list-style-type: none"> trails, nature trails access and parking areas
Option 2, Nature Reserve Park	<ul style="list-style-type: none"> existing regulated park provincially owned portion of ANSI on north bank of Thames River (small portion of acquired lands) additional lands within ANSI on north bank if available 	<ul style="list-style-type: none"> protection of ANSI self-serve visitor services information (e.g., trail pamphlets) 	<ul style="list-style-type: none"> hiking cross-country skiing canoeing fishing self-guide heritage appreciation 	<u>South of Thames</u> <ul style="list-style-type: none"> trails, nature trails access and parking areas <u>North of Thames</u> <ul style="list-style-type: none"> trails access and parking area
Option 3, Natural Environment Park	<ul style="list-style-type: none"> existing regulated park all acquired lands on north bank of Thames additional lands within ANSI on north bank if available 	<ul style="list-style-type: none"> protection of ANSI management of outdoor recreational facilities limited visitor services programming 	<ul style="list-style-type: none"> hiking cross-country skiing day use group camping canoeing fishing horseback riding and mountain biking if suitable designated trails can be provided 	<u>South of Thames</u> <ul style="list-style-type: none"> entrance and fee collection trails, nature trails access and parking areas for trails <u>North of Thames</u> <ul style="list-style-type: none"> entrance and fee collection day use and group camping areas designated access to fishing and canoeing in the Thames
Option 4, Recreation Park	<ul style="list-style-type: none"> existing regulated park all acquired lands on north bank of Thames additional lands may be required (e.g., Komoka Ponds property) 	<ul style="list-style-type: none"> protection of ANSI management of outdoor recreational facilities opportunities for park-related recreational programming visitor services programming 	<ul style="list-style-type: none"> hiking cross-country skiing day use car camping group camping swimming play areas canoeing fishing horseback riding and mountain biking if suitable designated trails can be provided 	<u>South of Thames</u> <ul style="list-style-type: none"> entrance and fee collection trails, nature trails access and parking areas for trails <u>North of Thames</u> <ul style="list-style-type: none"> entrance and fee collection day use, car camping, and group camping areas (may require additional land) designated access to fishing and canoeing in the Thames constructed swimming facility (e.g., Earl Rowe Provincial Park pool or Bronte Creek Provincial Park pool) play areas

Table 7, Park Classification Options – Pros and Cons

Classification Option	Pros: Park management and operation priorities	Cons: Uses and activities that may be limited or discontinued
Options 1 and 2, Nature Reserve Park	<p>In Ontario's provincial park system, Nature Reserves are areas selected to represent the distinctive natural habitats and landforms of the province. They are protected for educational purposes, as gene pools for research to benefit present and future generations and for their intrinsic value to society.</p> <p>Management policies will give priority to the protection of all of Komoka's natural heritage features and values.</p> <p>The park's contributions to the provincial park system's protection objective and heritage appreciation objective can be maximized.</p> <p>The Thames River is designated as a Canadian Heritage River. The park will contribute to the protection of natural features within the Thames River valley as anticipated by its designation.</p> <p>Operation of the park will emphasize enhancement of natural heritage features and values</p>	<p>The focus of park management is on the park's contributions to the park system's protection and natural heritage appreciation objectives. Consequently, recreation activities and facilities are limited to those having the least impact on the park's natural landscape. The following recreational activities may be permitted:</p> <ul style="list-style-type: none"> • canoeing and kayaking on the Thames River • hiking on designated trails • historical appreciation (self-guided) • nature appreciation (self-guided) • orienteering (may be excluded from sensitive habitat areas) • painting and photography • skiing (cross-country) and snowshoeing on designated trails • sport fishing <p>Intensive recreational opportunities are not permitted in nature reserve parks, though picnic areas and facilities may be provided at park access and entry points.</p> <p>Present non-conforming use of the park (i.e., as a Nature Reserve) by mountain bike enthusiasts, cross-country running groups and horseback riders will be phased out.</p>
Option 3, Natural Environment Park	<p>In Ontario's provincial park system, Natural Environment Parks incorporate outstanding recreational landscapes with representative natural and historical features to provide high quality recreational and educational experiences.</p> <p>Management policies will emphasize providing high quality recreational and educational experiences in a manner that complements the protection of the park's provincially significant natural heritage features and areas.</p> <p>Balanced contributions will be made to all four provincial park system objectives: protection, recreation, heritage appreciation and tourism.</p> <p>Operation of the park will emphasize enhancement of the park's contribution to the Thames River as a Canadian Heritage River.</p>	<p>Natural environment parks achieve a balance among the four objectives of the provincial parks system. They must be large enough to accommodate these objectives. Boundary expansion will be necessary and will require including the acquired lands on the north bank of the Thames (the former gravel extraction area and the MNR bush lot) plus acquiring some additional land to link together these areas.</p> <p>A wider range of recreational activities may be permitted, including horseback riding on designated trails and mountain biking on designated trails. These uses have negative environmental impacts on natural areas. The difficulty is that the more scenic and topographically varied area of the park on the south side of the Thames is the area desired by visitors interested in these activities. This also is the area containing the core of Komoka's provincially significant natural heritage features and areas, and park system policy requires this area to be managed as a nature reserve zone. As a result, though these uses may be permitted, there is insufficient area, outside of the provincially significant natural heritage features and areas, to provide quality opportunities for these activities.</p> <p>Intensive recreational uses such as picnicking and camping are normally provided in natural environment parks. There is insufficient space in the regulated park area to provide for picnicking, horseback riding, mountain biking and similar intensive uses without creating conflicts among users. Within the acquired lands, north of the Thames, space can be provided for camping but the likely trade-off will be the loss of some of the area naturally regenerating to open field, meadow and wetland. Though this regenerating area's natural heritage is not provincially significant, its habitats are now scarce in southwestern Ontario.</p>

Table 7 (Continued)

Classification Option	Pros: Park management and operation priorities	Cons: Uses and activities that may be limited or discontinued
<p>Option 4, Recreation Park</p>	<p>In Ontario's provincial park system, Recreation Parks are areas which support a wide variety of outdoor recreational opportunities for large numbers of people in attractive surroundings, particularly day use opportunities such as picnicking and swimming, and car camping.</p> <p>The operational objective will be to attempt to provide high quality picnicking, camping and swimming opportunities.</p> <p>Intensive high-impact activities such as horseback riding and mountain biking can be encouraged, to the extent that conflicts with natural heritage protection requirements and with camping and picnicking are avoided.</p> <p>Operation of the park will recognize the park's contribution to the Thames River as a Canadian Heritage River.</p>	<p>Recreation Parks encourage high-intensity uses and development of their landscapes. This management and park operation focus conflicts with the need to protect Komoka's provincially significant natural heritage features and areas.</p> <p>The regulated park area, given that a majority of it contains provincially significant natural heritage features and areas, does not have sufficient land base, and hence lacks the capacity, to permit intensive development of picnicking and camping areas.</p> <p>Provision of swimming opportunities will require construction of a swimming facility. While construction of an artificial lake for swimming within the acquired lands, north of the Thames, might be feasible, this creates competition for space with campground development possibilities.</p> <p>Boundary expansion will be necessary and will require including the acquired lands on the north bank of the Thames, plus acquiring additional lands, sufficient to link together the acquired parcels and accommodate a viable car campground.</p>

Figure 7-1: Option 1, Nature Reserve Park

Figure 7-2: Option 2, Nature Reserve Park

Figure 7-3: Option 3, Natural Environment Park

Figure 7-4: Option 4, Recreation Park

7 PUBLIC CONSULTATION PROCESS

7.1 Summary of Consultation

Public consultation began in July 2001 with the release of the Komoka Provincial Park Management Plan Terms of Reference, which provided an outline of the planning process. Accompanying its release was a public invitation to participate and comment on the terms of reference. Copies of the terms of reference were provided to the Byron Public Library and the Komoka Public Library, and were also provided by mail to adjacent landowners, to known interested individuals, interest groups and organizations, and in response to public inquiries. A policy proposal notice for this planning project was also posted on the Environmental Registry (EBR Registry Number PB01E3003).

During summer 2001, a user survey was conducted within the park jointly by the Department of Geography, University of Western Ontario and Ontario Parks. Though the main purpose was to gauge public perceptions about the park and to survey patterns of use, it also made park visitors aware that the management planning process had begun.

Thirty-nine comments have been received from the public. Of the correspondents, 23 asked for a copy of the terms of reference and/or asked to be kept informed about the planning process. The other 16 correspondents provided comments.

In summary, the comments suggest visitors enjoy the pleasure of having a natural area through which to hike. They want the park's hiking opportunities retained. They gave observations about activities which intruded upon nature hiking, such as horseback riding, dogs not kept on leashes by their owners, and mountain bikers using the trails. There was unanimous support for protecting the natural environment and natural features within the park area. Many

commented that Ontario Parks must have staff present to ensure protection of park features and to deal with dogs on the loose, inappropriate use of some of the trails by horseback riders and mountain bikers. One comment was received about making some of the trails accessible for physically disabled visitors. One respondent suggested that the former extraction area, on the north side of the Thames, could be used for more aggressive uses, such as mountain bike-riding. Another suggested that fencing of this area should be maintained.

To assist with the planning process, an Advisory Committee, representative of area interest groups and the two municipalities, has been established. At the beginning of the planning process, the consultants provided the Advisory Committee with two background reports: *Planning Issues - A Discussion List*, and *Summary of Background Information Sources*. This report, *Komoka Background Information, Issues and Options*, is based upon information in these two former reports, and addresses all of the issues raised by the public, the Advisory Committee and the consultants.

7.2 Next Steps

The public is invited to comment on this report, *Komoka Background Information, Issues and Options*. These comments will greatly assist in evaluating the planning issues and the park concept options. All comments received will be reviewed by Ontario Parks with the Advisory Committee and will be an important starting point for the preparation of a preliminary park management plan, which will be the next stage of this park planning process. The preliminary park management plan will set out Ontario Parks' preferred approach for the management and future development of recreational opportunities within Komoka Provincial Park.

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APPENDIX 1

Ontario Parks' Response to the Komoka Provincial Park Advisory Committee Recommendations

APPENDIX 2

Life Science Check List
from
An Updated Survey and Evaluation of the Life Science Resources
of
Komoka Provincial Park and Selected Adjacent Areas

J. Ambrose, G. Waldron, L. Rodger & D. Martin

APPENDIX 3

Komoka Provincial Park Use Survey: Summary of Results

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