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MASTER PLAN

SANDY LAKE PARK

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STUDY TEAM:

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Bedford Parks & Recreation Department

July 1986

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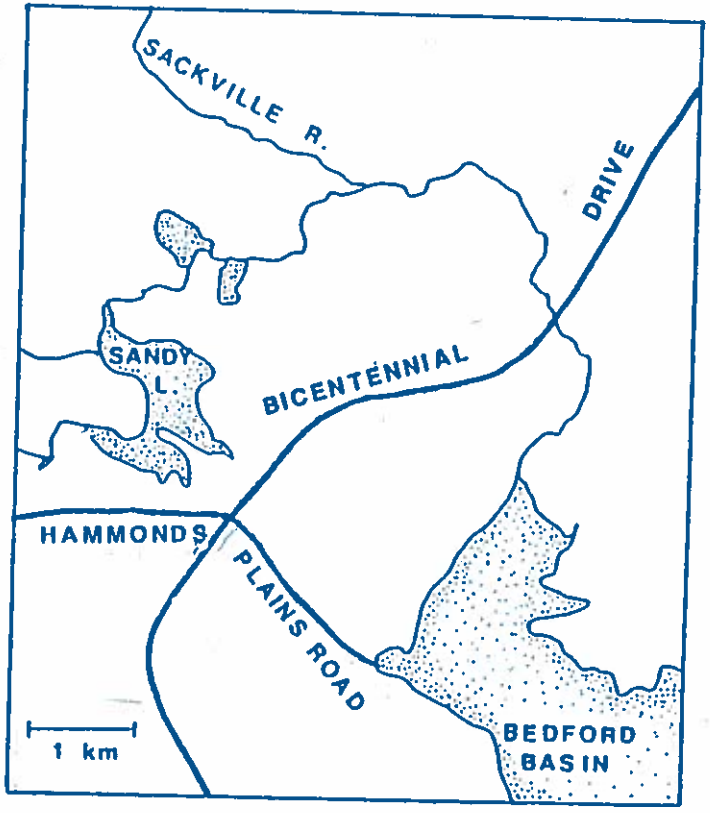
PREFACE

The Town of Bedford is in an enviable position. While still early in its growth, it has acquired extensive land holdings in the Sandy Lake area and designated these for park use. In older municipalities such as Halifax, Montreal and Vancouver, large parks established early in their histories have become increasingly valued for both establishing and maintaining a rich and enjoyable quality of urban life. Similarly, Sandy Lake Park can be envisioned as being even more valued and central to the life of Bedford as the Town grows.



ACKNOWLEDGEMENTS

Many dedicated and helpful individuals assisted in the preparation of these plans. We would like to acknowledge their contribution, to formally recognize them and thank them for their assistance.

The Bedford Parks and Recreation Commission who provided guidance and input about the future they desired for the park.

Bob Nauss, Recreation Director and his Staff who provided us with a detailed understanding of the community's recreational needs and answered innumerable questions.

The Bedford Village Ratepayers Association and the Sandy Lake Ratepayers Association who informed us about their recreational desires and wants for Sandy Lake which will almost be a neighbourhood park for these residents

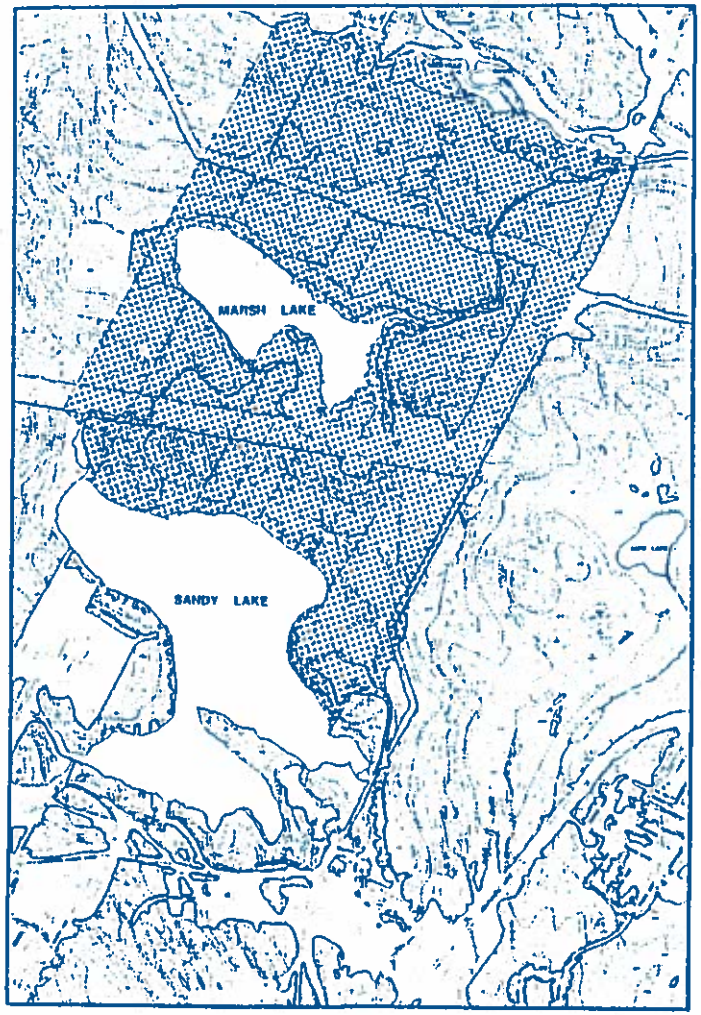
This study would not have been possible without the assistance of Employment and Immigration Canada as well as the Nova Scotia Department Labour and Manpower. Both these agencies provided funding for this study through the Job Development Program.

INTRODUCTION

Previous planning studies during the 1970's identified the Sandy Lake area as a potential park site because of its varied natural attributes and close proximity to the metro area. The report Growth Through Recreation states "Sandy Lake and its surroundings comprise one of the finest landscape units around the Metropolitan area."

The scope of this report is twofold. First the park character is reviewed, identifying opportunities and constraints for recreational development. The second portion of the report deals with development of a master plan for the short and long term development of the park. This includes a program of activities, concept alternatives, design guidelines, phasing and cost estimates.

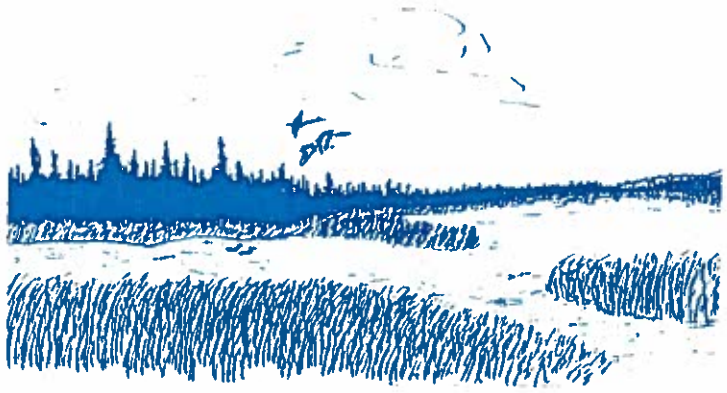
Currently the Town owns several unconnected parcels of land. While conducting this study it was assumed that the intermediate parcels would eventually be acquired as part of the park. The study area is bounded on the north by the Sackville River and on the east by the Jack Lake Land Assembly as well as the DND rifle range. The boundary then follows the eastern and northern shoreline of Sandy Lake, to the stream which flows into Marsh Lake from Sandy Lake.



Site Description

The gently rolling terrain of the park is dominated by Sandy Lake and its drainage system. Compared with other regional lakes, Sandy Lake has a large surface area with a mostly steep rocky shoreline. Dense vegetation surrounds most of the lake. Two small sand beaches are on the lake, one of which is on Town owned land.* The lake flows through a small marsh area, where waterfowl can be seen, into a fast flowing rock bottom stream. This stream passes through a dense stand of hemlock trees whose canopy overhangs the stream allowing filtered sunlight. The stream empties into Marsh Lake, which is very shallow (2m deep) and surrounded by an edge consisting of marsh, bog and floating aquatic vegetation. Numerous small birds nesting in the marsh can be seen flying about as well as occasional ducks, heron, osprey. Mammals such as deer, porcupine, or muskrat can also be observed. The stream flowing from Marsh Lake to the Sackville River is similar to that emptying Sandy Lake in that it consists of both slow moving marsh portions and faster moving shallow sections.

Surrounding both lakes are densely forested hills, which at some points allow good views of the lakes. Marsh Lake's forest edge, which is less dense, provides excellent views of the lake and its wildlife. Softwood forest consisting of red spruce, hemlock and white pine predominates on the slopes. Hilltops are covered with hardwood species such as beech, birch, maple and oak. Low lying areas between the hills are rather poorly drained and support stands of balsam fir and black spruce. The softwood stands, which cover most of the site, are so dense that movement through them is very difficult and restricts access to many portions of the park. Development of a trail system would improve this. The contrast of hardwood and softwood forests, as well as unique species such as hemlock and white pine, can provide a diversity of trail experiences which enhance enjoyment of the park, while improving access to important features such as the lakes, streams and marsh.



*The town owns a two-thirds share in this property.

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The remaining significant features of the park are three power transmission corridors. The largest of these, passing between Sandy Lake and Marsh Lake, bisects the entire site and is approximately 100m wide. It is possible to locate facilities and trails so that these disturbed areas do not intrude unduly on the park experience. Inevitably they will have to be crossed at some point, as is the case for example when going to Marsh Lake. It is possible to develop a replanting program in the corridors which will improve their recreational value. The replanting can be done in a manner which will provide some visual screening and maintain the Power Corporation's access for maintenance.

Overall the park cannot be said to be in a 'natural' state. Substantial human alteration has occurred. Most of it has been cut over for logging in the past and significant disturbances such as logging roads, a stripped hilltop, abandoned vehicles and the power corridors remain. Three alternatives for dealing with this present themselves:

1. Take no action and leave them to naturally regenerate.

2. Rehabilitate the sites by planting indiginous species.

3. Absorb disturbed areas into the park plan where possible by using them for such site development requirements as parking, roadways and trails.

The third option has the advantages of minimizing further disturbances in the park, and reducing the amount of unattractive disturbed sites. Site development costs during construction will be reduced.

The small cove on the eastern side of Sandy Lake provides nearly ideal conditions for beach development. The water is clean and shallow with a sand bottom. The lake water is very warm. Surface temperatures of 24 degrees Celsius have been recorded.

This shallow area will warm quickly and should allow swimming for as long as air temperatures are suitable. The existing beach runs the length of the cove but is very narrow and often is submerged after heavy rainfalls. A small ridge behind the beach can be removed to expand the beach. This will need to be done under the guidelines of the NS Department of Environment. Care must be taken not to increase sedimentation in the lake or cause windfall problems from opening up this area of shallow rooted trees. This will improve drainage in the flat area behind the beach and allow it to be developed into an open area for play, sunning, and picnicking.

Outstanding Issues

Access - Access to the park is currently obtained from Smiths Road, which is a private road. This leads to an old logging road which crosses the property of the Seventh Day Adventists. This situation will be unacceptable when the number of park users increases. Smiths Road will have to be upgraded (e.g. widened and surfaced) and taken over as a municipal street. The Town will need to negotiate an easement across the Seventh Day Adventists land or attempt to purchase the necessary property.

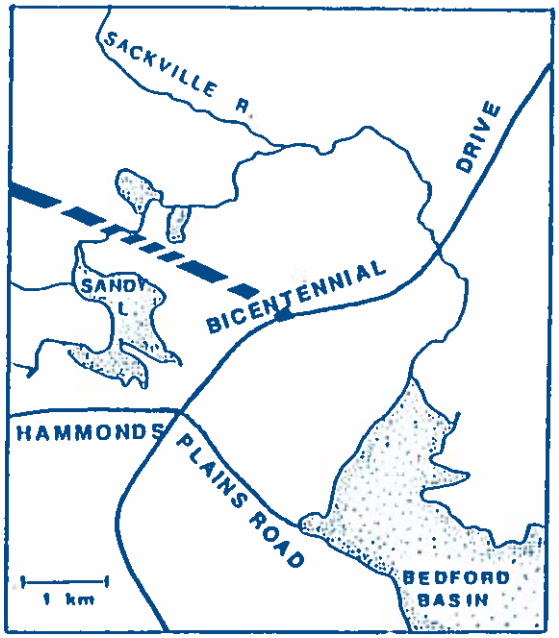
If no agreement can be reached regarding the existing access, an alternative is to use the power corridor. An inexpensive agreement could be reached with the Power Corporation to purchase the necessary land or gain an easement. This would be a less attractive way to enter the park. The Smiths Road entry is preferable.

Greenman Property - The so called 'Greenman Property' is a large parcel of land within the park which controls access to the remainder of the park. Additionally, it contains significant natural features such as the natural beach in conjunction with a large area of flat land. These features have excellent potential for recreational use and any concept plan can therefore be expected to exploit this area.

Ownership of this property is still not resolved. The Town owns a two-thirds share in the property, with ownership of the remaining one-third unknown. It is essential to obtain title to the remaining share before any development can occur.

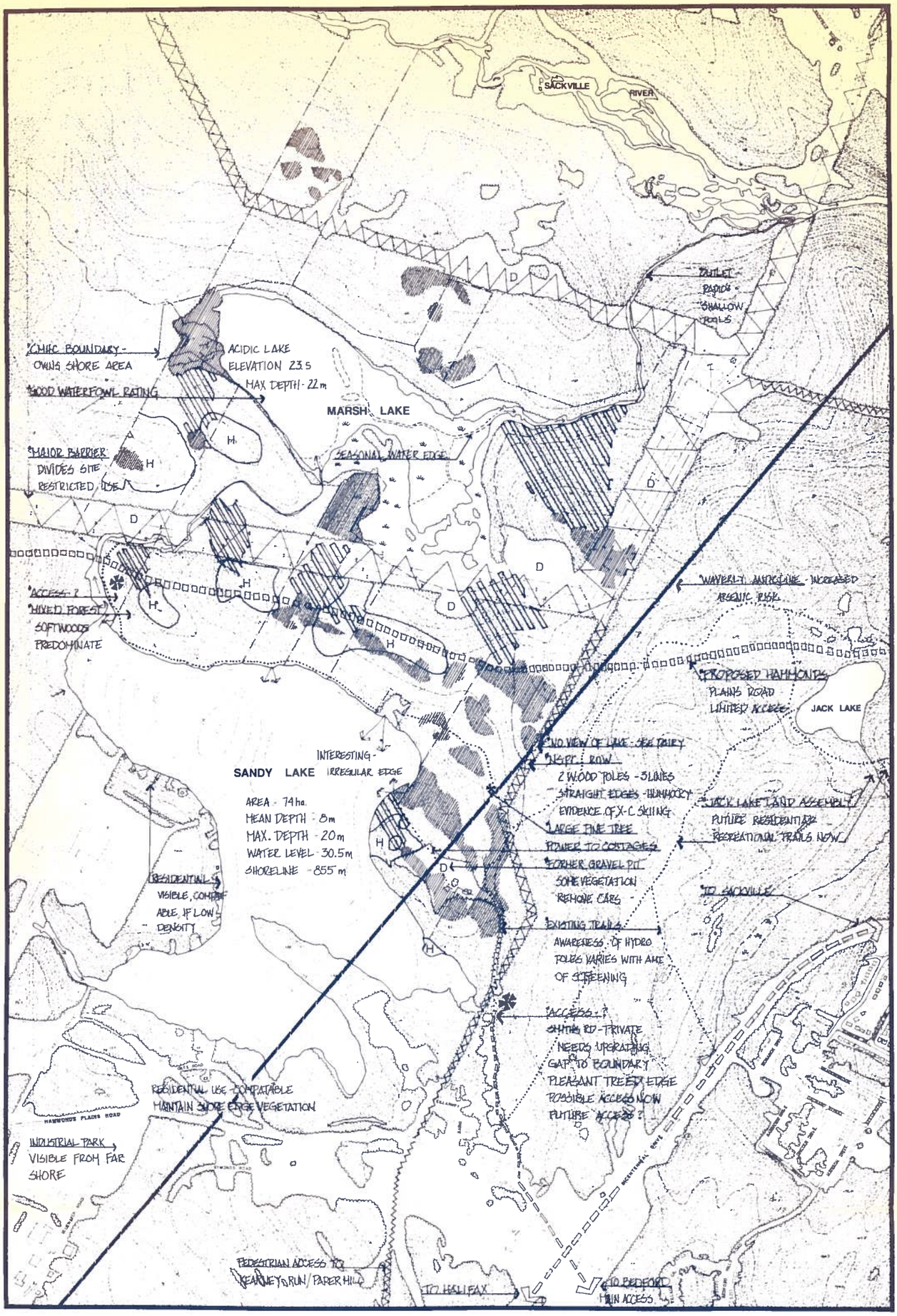
Drinking Water - There is no water servicing to the site and it is unlikely to be extended to it because of the cost. Therefore an on-site water supply must be relied upon. The risk of arsenic contamination in drinking water wells is very high in this area because of the nature of the bedrock into which the well is drilled. While it can not be guaranteed the well water will be contaminated, there is no way to be assured it won't until after incurring the expense of drilling. It is therefore proposed that Sandy Lake be used as a water supply. The water quality has consistently tested as being suitable for drinking. There is very little likelihood that water quality will deteriorate in the future because of the limited development that can be expected in the area draining into Sandy Lake. This land is all zoned as a Secondary Development Area on the Town's Generalized Future Land Use Map.

Hammonds Plains Bypass - The NS Department of Transportation is considering four alternative highway alignments, one of which passes through the park between Sandy and Marsh Lakes. They have so far expressed no preference for one over another. The addition of a major highway corridor in a park which already contains a very wide power transmission corridor is not desirable. The NS Power Corporation has indicated that locating the highway in the transmission corridor (to avoid disturbing further land) is not a reasonable alternative because of the prohibitive expense of moving the power lines. The highway would act as a barrier to movement through the park and would require pedestrian underpasses. If the highway is built it would increase vehicular access to the more remote portions of the park. In this case it would be essential that the highway be built to scenic parkway standards. This would involve less clearing of the right of way.



Remaining Property - At present the Town owns several unconnected properties. In order to develop trails throughout the park it is important that the Town purchase or lease the properties or negotiate easements across them. The properties between Sandy and Marsh Lakes are more important in this regard than those north of Marsh Lake.

In summary Sandy Lake Park encompasses several distinct landscape types. There is a large fresh water lake, marsh, bog, several streams, river, flood plain and both hardwood and softwood forests. This diversity provides opportunities for both concentrated (e.g. swimming, boating) and dispersed (e.g. hiking, bird watching) recreational activities. Active pursuits are ideally centered around Sandy Lake because of its water quality, beach and flat land which can support many visitors. Marsh Lake should be preserved for more passive activities because of its sensitive marsh and bog shoreline which can support only a limited number of visitors. While developing park facilities there is an opportunity to incorporate disturbed areas into the park for such uses as roads, parking and trails.



LEGEND:

- PARK BOUNDARY
- EXISTING VEGETATION
- DISTURBED AREAS
- HARDWOOD AREAS
- VEHICULAR ACCESS - EXISTING
- VEHICULAR ACCESS - PROPOSED
- EXISTING TRAILS
- DRAINAGE
- EXISTING CONTOURS
- EXISTING SPOT ELEVATIONS
- SLOPES 0-10%
- NORTH FACING SLOPES
- HYDRO CORRIDORS
- VIEWS
- WAVERLY ANTICLINE

ANALYSIS
SANDY LAKE PARK
BEDFORD PARKS & RECREATION DEPT.

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4. The "Recreation Complex" - Providing a water park (cable water ski, water slides, bumper boats, etc.) with overnight accommodation (conference centre and campground), and attractions (zoo, aviary, etc.) plus other outdoor activities. There is no other park within the region offerring this range of activities and attractions. Such a park would be for the region as well as Bedford residents.

Following a discussion with the Commission it was decided that the type and level of development represented in Concept Two was what the Commission envisioned for Sandy Lake.

That concept was to be taken and developed further as the Master Plan.

Program

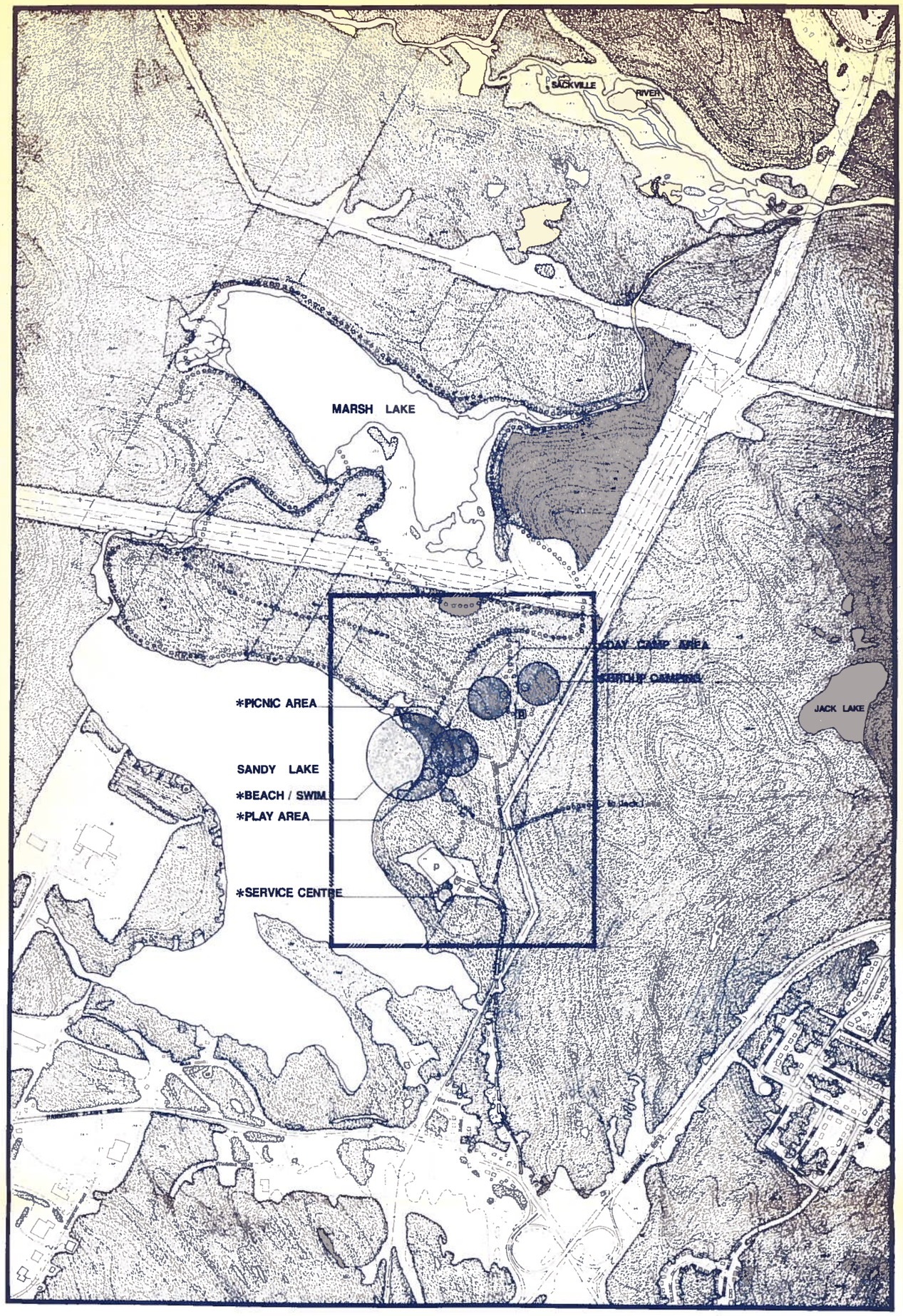
The program is a listing of the desired activities wanted for a certain site. The concept plans develop the relationships between the program elements and the quantity and type of the activities. As noted in the section on concept alternatives, different activites were suggested for each plan.

In the concept selected, the program activites are:

- supervised swimming
- a beach and back shore area
- picnicking
- children's play area
- building for concessions, washrooms, changerooms, etc.
- services - phone, water, sanitary
- park service compound area
- day camp area
- group camp area

Winter uses would include:

- cross-country skiing
- tobogganning
- sleigh rides
- Christmas tree 'choose and cut'
- ice skating



LEGEND

- Use Area
- Parking
- Vehicular Access
- Pedestrian Access
- Structure
- Barrier
- Screen
- Area Enlarged for Master Plan

CONCEPT
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The Plan

The Master Plan developed for Sandy Lake focuses on a central area with facilities for swimming and picnicking. Support facilities are provided in the main park building. In it there is also space for community programs. A day camp area and a group camp ground have also been provided. A trail system provides year-round access to all areas of the park.

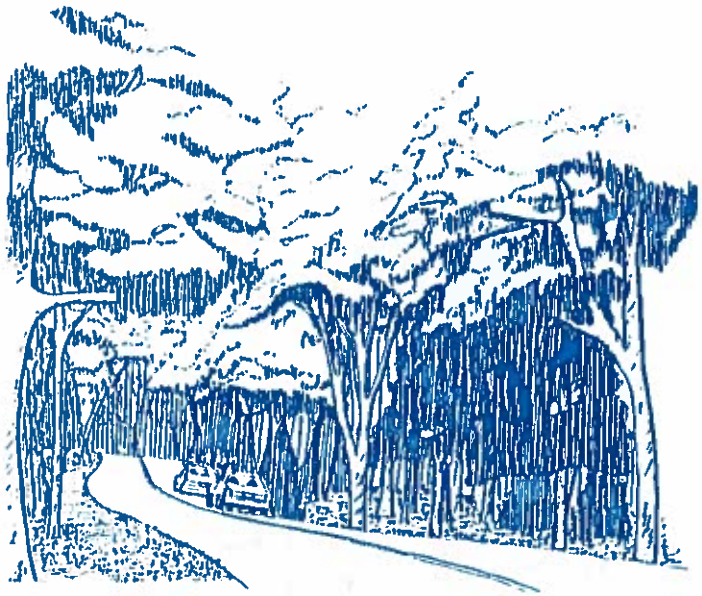
Arrival

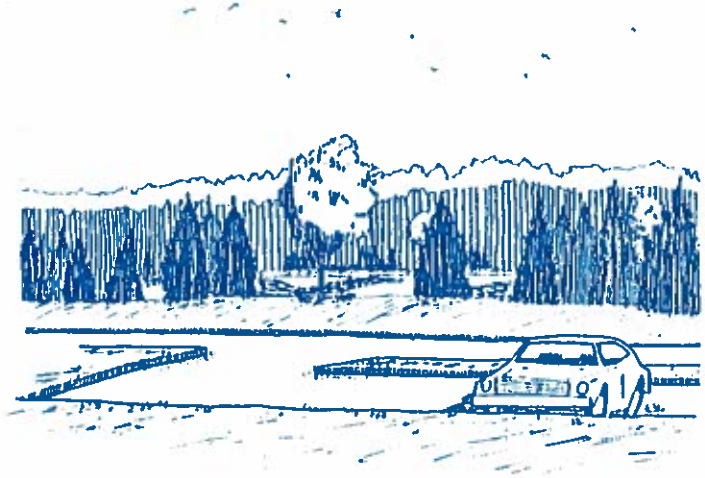
The preferred access to the new park at Sandy Lake is from Smiths Road which has been widened and improved to a two lane hard surfaced road. The road continues beyond the last house and winds its way into the park. Trees near the edge of the eight metre wide road with grass shoulders give a sense of enclosure and form a canopy above the road. Just from the road the visitor knows this is a park area.

Once inside the park boundary, a sign welcomes the park visitors, and informs them what facilities are available and where they are located.

The road curves to the left and leads into the main parking area. For those visitors who are just out for a drive there is a turn around in front of the parking lot entrance allowing them to return the way they came or go to the picnic or camp areas.

Designed as a series of several smaller parking lots with planting medians and berms, the parking lot is in keeping with the desired recreational experience. The intent is to create several smaller parking "rooms" rather than one big open paved field. Upon arrival, if it is not a busy day or if you are early, there are parking spaces perpendicular to the roadway, either side of the drop-off-zone. If those are full, there is more parking in one of the two main lots. A parking area for up to four buses is included along the far side of the lot.





Behind the paved parking area is a gravel area for overflow parking on those days when there are a larger number of park users, such as Bedford Days or Canada Day.

Locating the parking lot in an area that had already been disturbed was believed to be the best solution as another large area would not need to be cleared for this use. Also, since the disturbed area is larger than needed initially for the paved parking area, an overflow area can easily be included at this time.

The total number of parking spaces provided is 192; 104 in the paved area and 88 in the overflow area.

Assuming four passengers per car and four bus loads of park users, over 925 potential park users could be accommodated here at one time.

Core Area

Leading from the parking lot at the drop off zone is a wide, hard surface path which the park visitor follows to the core area.

The visitor who follows the path to the end will arrive at the main park building, a modern, wooden, modular structure. It contains a concession area, changerooms, washrooms, telephone, storage areas, staff space, first aid supplies, and public meeting space. Decking links one unit to another so there is a unified appearance. In total the structure contains approximately 300 square metres. One can enter the building as he approaches it and exit on the other side to the beach area. This building can be used year round fot recreation programs, meetings, cross-country ski rentals or instruction and so forth.

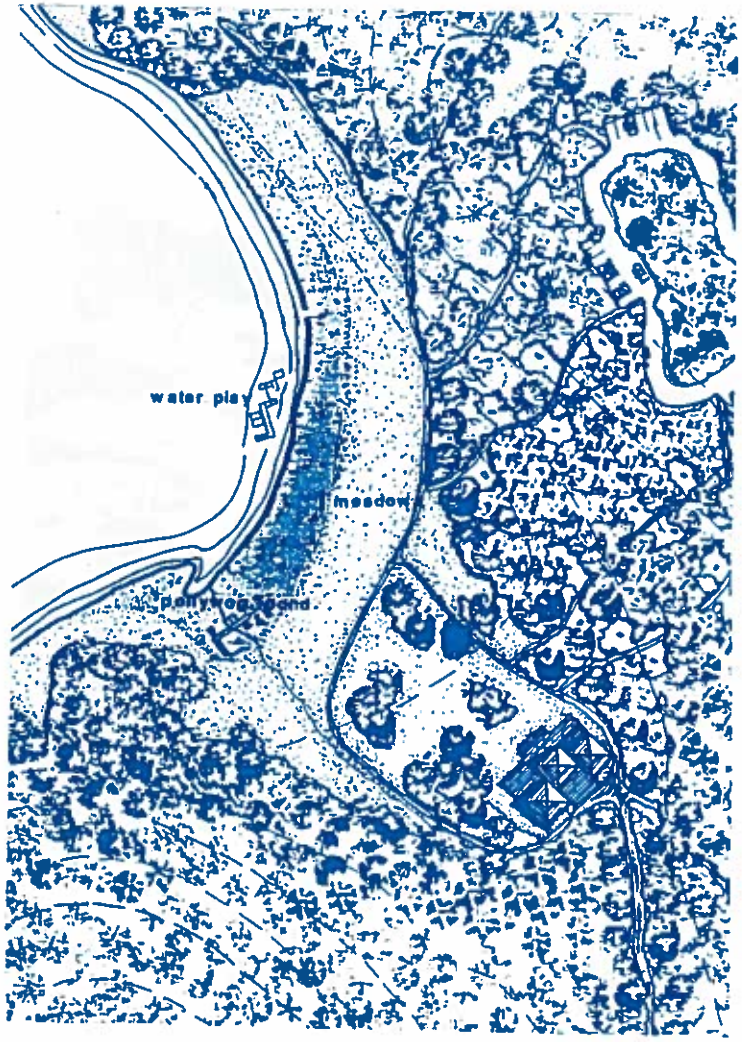
Should the visitor not want to go to the main building, smaller trails take the visitor past a few picnic tables and on to the beach area. Another trail leads off to the east and connects with the existing Jack Lake trails.

The main feature of the park is the beach/swim and picnic area. It is located around a shallow bay with a gently sloping wet sand beach. Back from the water's edge is a wide sand beach, an ideal place to sun. Behind the dry sand beach is a grass meadow. The area is large enough that lots of activity can be going on simultaneously - frisbee, volley ball, people sunbathing and playing in the sun. Several trees in the meadow area provide some shade and blend in with the native trees on the hillocks rising behind the beach and swim area.

The warm, clear, shallow water has enticed many people into the water. There's lots of room for everyone as the bay itself is over 1.5 ha; Sandy Lake covers about 74 ha. It's a safe place to swim and the life guards keep an eye on all the activity. One area where there's a lot of activity is at the water play ground - where water play has been combined with some play apparatus like slides, climbers, pulley glide ride and floating platforms.

For younger children there is the Pollywog Pond; a separate water and sand area developed around the stream which flows over its rocky course into Sandy Lake. Equipment that allows the children to manipulate both the water and the sand has been included in the design.

Observing all the activity at the beach but back from it, separated by a pathway, are the picnickers. Several picnic sites have been created. From these sites the water and beach are clearly visible, but the picnickers have some privacy as most tables are screened from one another. The trees also provide shade. Some sites have two tables so a group could picnic together. Several tables are near the main park building for the convenience of those users who have purchased their food but don't nessarily want to eat on the patio deck.



Picnic Area

Another vehicular route is possible. Instead of continuing to the main parking lot, if the park visitor turns right after he enters the park, he can wind along a six metre wide paved road. Trees hang over the roadway creating with the sunshine a dappled effect on the pavement. Following the road, the visitor discovers a series of small clustered parking spaces perpendicular to the roadway. Each cluster has seven parking spaces. Again keeping the quality of the recreational experience in mind, small units are preferred rather than a large institutional parking lot.

Paving this road and parking areas will keep the area from being dusty, a condition that doesn't make for pleasant picnics.

These picnic sites are different from the ones near the beach. These sites are intended for users whose primary activity will be picnicking. Here the sites are more enclosed having been located in small clearings in the existing vegetation. Filtered views of the lake may be possible, but other picnickers are not seen because of the vegetation. A few sites are larger and contain two tables. Also some of the sites have a raised grill so park users can have a cook out. Trash receptacles are located adjacent to the pathway.

Winding through the picnic area is a hard, firm surface pathway that connects the picnic sites and eventually goes to the beach area. Following the path in the beach area one direction leads to the main park building; going in the other direction, the path leads to the hiking trails.

Recreational Trails

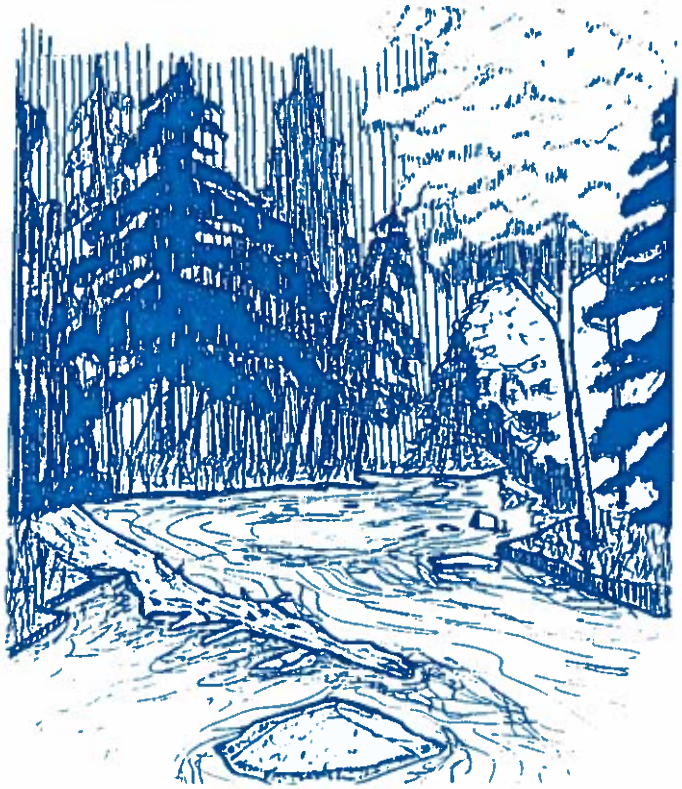
At the far side of the core area is the trail head. A series of stacked loop trails leads the park users through the park. In the winter, the trails can be used by cross-country skiers. One trail follows the north shore of Sandy Lake along to the outflow stream. The trail continues along the side of the stream - sometimes the stream is wide, other times it is narrower and faster. The remains of an old weir are visible. Soon the park visitor must decide whether to continue on to an observation area looking over Marsh Lake or follow another trail across the stream. By following the trails, the park visitor will be able to experience all the different landscape types present in the park: hardwood forest, mixed forest, mature hemlock forest, alder edge, bog and marsh.

These trails allow the park visitor to see other parts of the park not accessible by car and are the only way to reach the natural zone around Marsh Lake. An afternoon stroll can become part of a beach or picnic visit.

The shortest trail is 2.8 km. Taking the largest and farthest loop gives a 5.6 km trail. In total the trails cover 9 km. By combining different routes a walker/skier could exceed the 5.6 km length.

This type of trail system offers the opportunity to go for a shorter walk or a longer one. It also ensures variety of experiences for repeat users of the park.

In addition to the recreational trails developed at Sandy Lake, from the main park building a trail leads over to connect with the existing Jack Lake trails.



Camping Areas

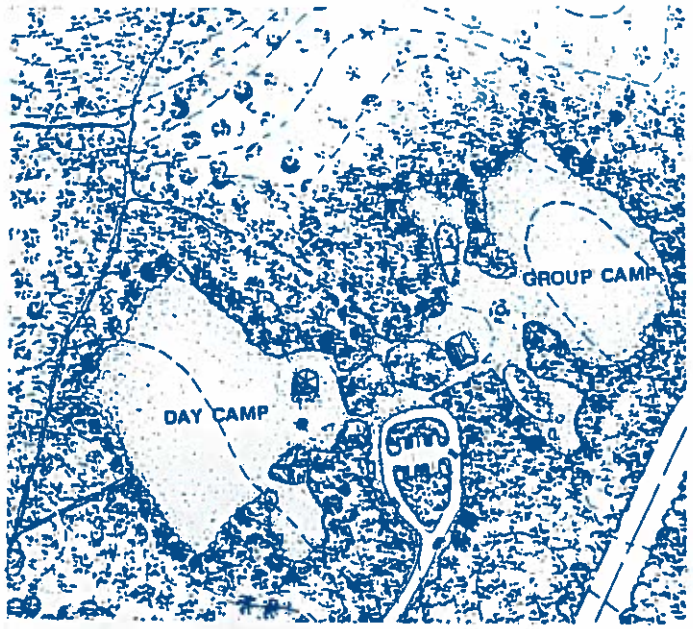
If the park visitor follows a gravel road off the picnic area road, he'll come to the camping area where sites for both a day camp and a group camp have been located. Access to the camping area can be controlled by a gate, restricting use to designated campers. The six metre wide gravel road leads to a turn around where limited parking has been provided inside the loop. This means it is screened from the camping areas.

Since it is anticipated that many campers will arrive by bus, a dropoff/loading area is included as part of the turning loop. This will also allow a space where groups can assemble.

The day camp is reached by taking the trail to the left. The central focus in this area is a 12m wooden hexagon structure which provides shelter on rainy days and shade on sunny days. Generally the structure has open sides, but can be closed off by blinds that fastens or canvas that rolls up and down. A fireplace is part of this building. It is used for both cooking and warmth.

Nearby are the flag pole and the fire ring. A large cleared meadow suitable for ball games and field activities is visible from the building. Leading from the meadow are several other smaller clearings where a small group of campers could gather for a program. The surrounding vegetation blocks views to other parts of the park. Access to the rest of the park is via a trail from the area leading to the other trails.

Going to the right from the turning loop, the visitor arrives at the group campground. The intended users of this area are organized groups camping over night or several nights. The design allows for two groups to use the facility simultaneously, each in their own small clearing. If the demand is greater additional "rooms" can be created so more groups can use the site.



The large open field, for ball games, field activities and so forth, would be shared. Having a large field means it can be used as needed rather than providing facilities or markings for a particular sport.

The structure proposed for the group campsite is a 140m2 with a concrete floor and fire place. This site also has a central fire ring for campfires and a flag pole.

Access to the rest of the park is from the trail that leads off from behind the arrival area.

Each of the camping areas is suitable for other group activities - programs sponsored by an agency, company picnics and so on; as the site is a self-contained unit within the park. It is separate but access to other park areas is provided.

These are the facilities that a visitor to Bedford's Sandy Lake Park could enjoy. It is envisioned as a year round park that serves the Town of Bedford but because of its attractive beach and picnic grounds could easily attract visitors from outside the Town.

To help the park operate efficiently, a service centre has been included in the design. The centre is designed as a fenced, well-screened compound near the entrance. The service centre has a garage for repair and storage of equipment. Additional planting is required here to screen the compound from the parking lot. This area is also located in part of the previously disturbed area.

At this time a boat launch has not been included. The site proposed in concept alternative two would be very expensive to construct, due to the length of road required. If a boat launch at Sandy Lake is necessary two locations outside of the boundaries proposed for the park are:

An easement or lease of land behind the dairy

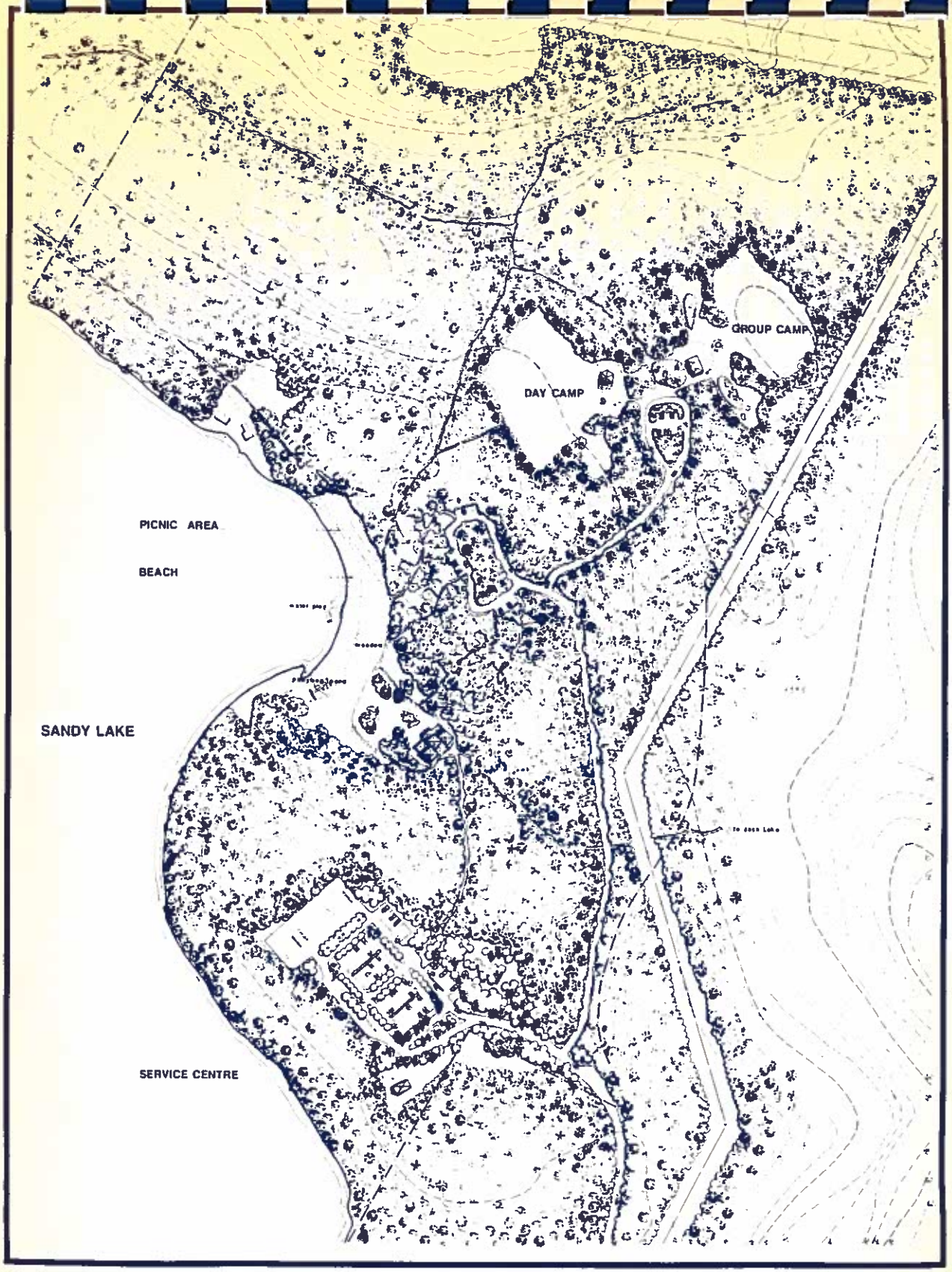
An easement from the entrance road across the Seventh Day Adventists land to the first cove.

Revenue

With the program and development proposed for Sandy Lake Park, there is the potential to generate some revenue.

Possibilities include:

- Entrance fee
- Equipment rental
  - boats/canoes
  - wind surfers
  - cross-country skis
- Facility rental
  - main park building
  - group camp ground
  - day camp site
- Program fees
  - instructional (outdoor recreation)
  - activities (swimming, boating)
- Special activities
  - 'Choose and cut' Christmas tree operation
  - sleigh rides/wagon rides
- Commercial leases (Community organization)
  - concession
  - attractions (if desired)



MASTER PLAN

SANDY LAKE PARK

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DESIGN GUIDELINES

During the preparation of the concept plan for the development of Sandy Lake Park ideas about the design of various activity areas were discussed. In the preceeding section in the discussion of the Master Plan reference was made to the recreational experience and type of Park envisioned at Sandy Lake. The success of the park depends on the detailed design as well as the functional relationship of one activity area to another. In this section those ideas are expressed and the intent is expressed as design guidelines for the development of the different activity areas proposed.

From the park users' viewpoint the attention paid to the details can make or break the recreational experience. The appearance or character of the park is important, playing a large role in the subjective experience of the park user. People arrive at a park with certain expectations, ideas about what is to be there and what it is to look like. For instance, if a park user knows that picnic facilities are provided, he would expect to find picnic tables, trash receptacles, water, and so on. And he probably has an image of what a picnic table looks like but picnic tables can be round, square or rectangular; fixed or moveable; wood, metal, fiberglass or concrete. All of these tables are readily available commercially. Certain designs may be more suitable for a park location than other designs. To provide a sense of harmony and unity, all of the picnic tables should be the same and appropriate to their location.

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Sandy Lake is intended to be a recreational park. A place where residents can go to participate in certain recreational activities. Although it is a park and may look "natural" it's urban context must be remembered, and the park resource must be managed to maintain its "natural" appearance. This also means that the facilities suggested for Sandy Lake should respect and compliment this "natural" appearance. Using the example of picnic tables, since Sandy Lake is to be a "natural" park, wooden tables fit in. If concept four - a recreation complex - had been selected colourful metal or plastic tables would look right.

The following design guidelines were prepared so that readers can be aware of the intent of the designers in preparing the master plan. When developing the plan, certain assumptions were made about future uses. These guidelines give information about the type of development, the size of development, and the materials to be used; details that are important in the preparation of final designs for the park facilities.

The following are design guidelines for each facility, or use area.

PICNIC SITES

Picnic sites are planned for two locations:

1. Behind the Beach where views out to the water are possible; some of the beach area will be visible; and ideally the other picnic sites will not be visible although a distant table may be seen occassionally.

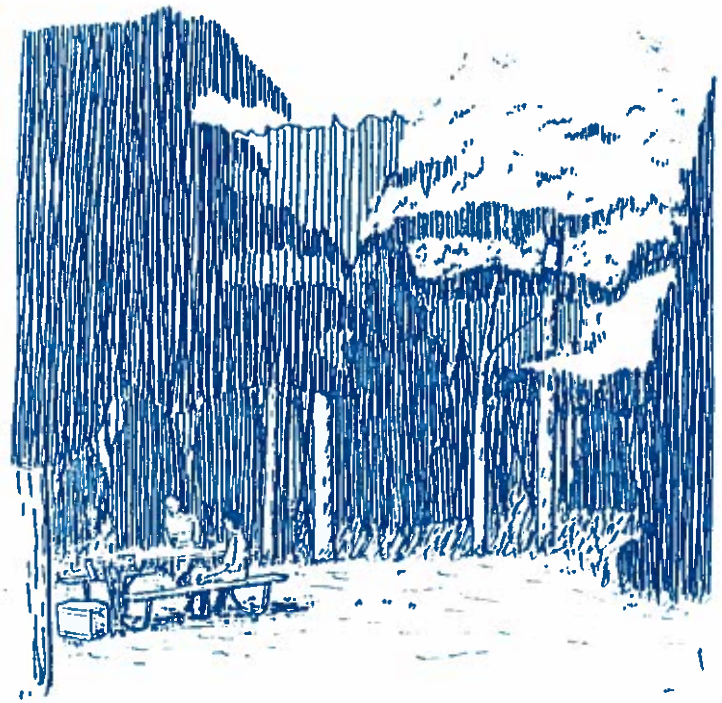
2. Small Clearings in a picnic area reached by a separate road from the main entrance road; clustered parking is provided and a hard firm surface trail leads from the parking to the picnic sites and on to the beach area.

The Site - In the picnic area, all sites are in clearings made in the existing tree cover. As much existing vegetation as possible is maintained to screen one site from another. Each site contains a walk-through table with wooden seats and top on a hard, firm, level, well-drained surface. Heavy duty tables, those weighting approximately 90kg are recommended. These tables can be moved around the site to take advantage of sun/shade but since they are much heavier than the standard wooden table are less likely to be pilferred. As some people prefer to prepare their food at the site, a raised rotating grill at approximately half of the sites is suggested. The grill must be in a clearing and all overhanging branches removed.

Those sites in the more immediate back beach area are more open although the table itself may be located near a group of trees. No attempt to completely screen one picnic tables from another is made, but the tables are placed a distance from one another so picnicking groups do not have to mix. The tables are the same but no fire grills are provided here.

Some sites in each location should have two picnic tables to accommodate large families or groups that want to be together. Tables with an overhang at both ends so a wheelchair user could picnic at Sandy Lake are recommended.

The Path - Winding from the clustered parking lots throughout the picnic area is a hard firm 1.5m wide trail; it eventually connects to the path in the core area. Trash receptacles are located adjacent to the path. Sites are serviced by a Cushman-type vehicle which collects refuse.



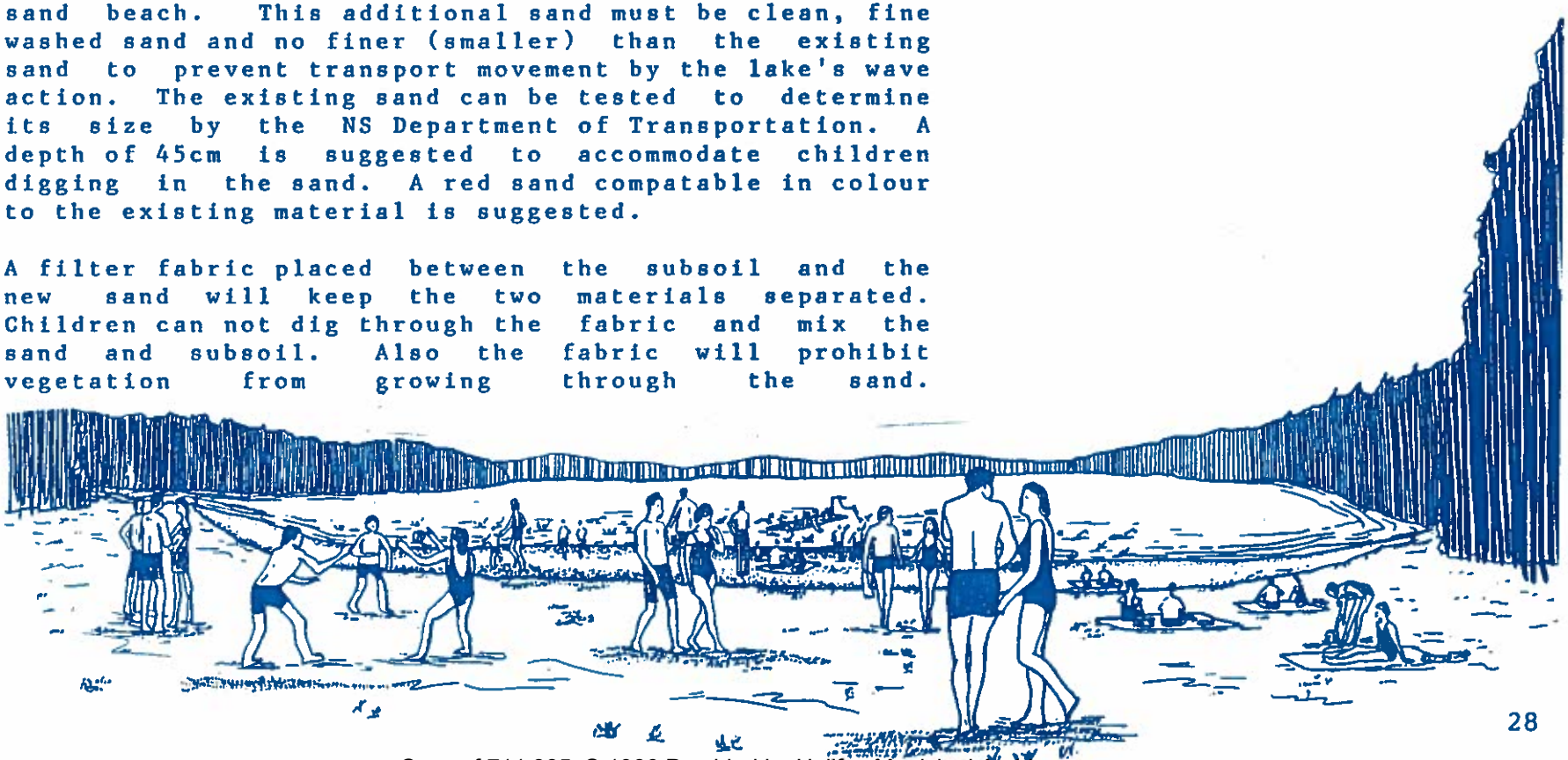
Trash Receptacles - A container compatable with the surroundings is recommended; one with wooden slats that holds a metal can with lid is suggested. Lids are essential to prevent scavenging birds or wind spreading garbage. The frame is permanently anchored and the can is removable for easy emptying. Consideration might be given to attaching the lids to the holder so the lids do not disappear. Both the can and the holder should allow for drainage.

BEACH AREA

An essential component of the proposed Sandy Lake Park is the beach area which consists of the water, (wet beach) a sand beach along the water's edge and a grass area behind the sand beach. Related to the beach but separated informally from it by a pathway is the picnic area.

Additional sand will be needed to develop the dry sand beach. This additional sand must be clean, fine washed sand and no finer (smaller) than the existing sand to prevent transport movement by the lake's wave action. The existing sand can be tested to determine its size by the NS Department of Transportation. A depth of 45cm is suggested to accommodate children digging in the sand. A red sand compatable in colour to the existing material is suggested.

A filter fabric placed between the subsoil and the new sand will keep the two materials separated. Children can not dig through the fabric and mix the sand and subsoil. Also the fabric will prohibit vegetation from growing through the sand.



The sand area of the back beach averages 15m in width. At one end of the beach near the stream is a children's play area. (See Play Areas). The grass area of the beach averages 25m in width. It is open and big enough to accommodate both those who wish to sun bathe and those who wish to play frisbee or volleyball. An occassional tree or group of trees may be planted near the back of the grass beach to provide some shade. Native trees that blend with the existing forest are recommended.

The back beach area wraps around the water in this small cove; the beach gradually tapers, decreasing in width, returning to the native tree cover at the water's edge.

PLAY AREAS

Pollywog Pond

Water and sand together have high play value and such a natural feature as a stream running through the beach area to the lake is an ideal site for water-sand play. The stream course will require modification to ensure a flow rate that does not create stagnant ponds. At present, the steam is narrow (approximately 50cm - 100cm) easily crossed, and has a definate stone edge. Crossings via stepping stones can be incorporated into the final design of the area.

The area itself is at the southern edge of the sand beach, making it easy to use the water from the stream for sand play. Also because it is at the edge, a safe play area out of the mainstream beach activities can be created. In addition the incorporation of other play apparatus is suggested. Some standard playground equipment may be appropiate, especially those structures with clatter bridges and/or pulley glide rides which could span the stream.

Although manufactured playground equipment is available, consideration might be given to other kinds of apparatus that could be used in sand and/or water play. For instance, water pumps activated by a hand lever or by pedalling could provide either a stream of water or a spray. Another possibility would be a water spray hoop that people could pass through. This could also serve as a sand wash.

Wet Play Area

In addition to a land-based water (stream) sand play area, the possibility of establishing a play area with supporting apparatus in shallow water should be considered. Such a development would offer high play value and certainly be an attraction. One manufactuer has developed a floating playgound - platforms with slides and climbers. Another manufacturer has an installation of standard equipment in a shallow water area in an European Park.

Such a design would have to incorporate the age range and abilities of youths that would be attracted to such play apparatus.

TRAILS

Well defined trails with a suitable surfacing material are important. Such a trail can:

- indicate clearly the direction in which to go
- aid in keeping people on the trail - walking on the same route
- help to decrease compaction of vegetation because a route is suggested.
- be used when other surfaces are too wet to use

Three different types of trails are proposed for Sandy Lake. The differences are a result of the intended use and the number of users anticipated. Each is discussed separately.

Main Trail

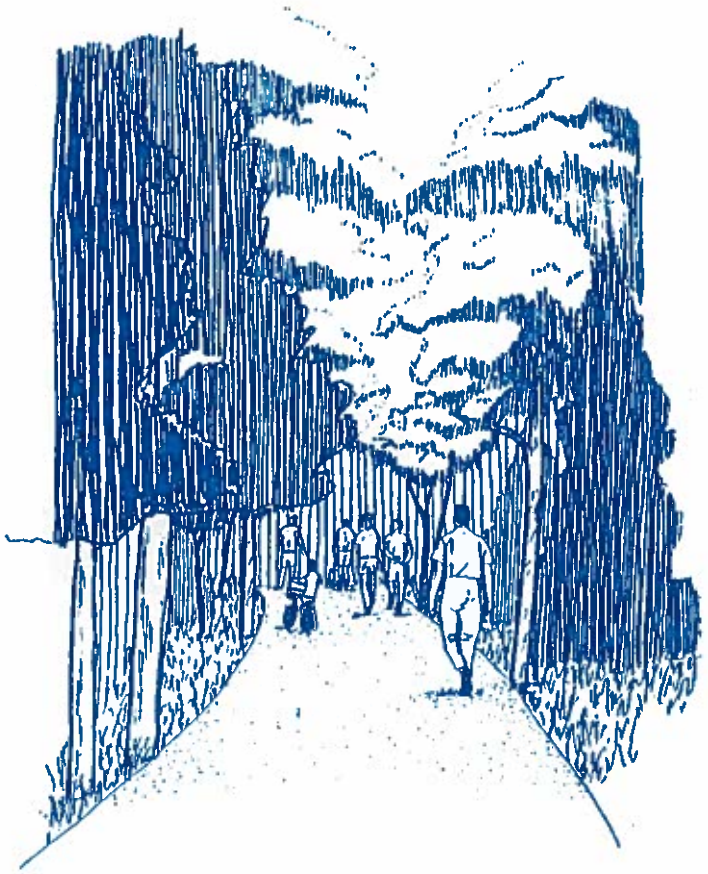
This trail is the route from the drop-off in the parking lot to the core area. It is the widest trail - 3 metres. In addition to serving all the park users who have come by bus or car and parked in the lot, this trail also provides access for service and emergency vehicles to the main building. It is the principle and most direct route to the main facilities.

A crushed stone dust trail surface (5cm deep) over a proper granular subbase (10cm deep) is recommended. This would provide a firm surface that is easy to walk on, useable by those individuals who have restricted mobility; and strong enough for vehicular access when necessary. Consideration should be given to establishing a proper edge for this trail so it will:

- have a finished appearance
- retain the surfacing material in place and not erode or fall away.

Core Area and Picnic Area Trails

In the core area the trail provides a route from the building to the two picnic areas and to the park beach. The trail also serves to separate the picnic area from the back beach. Since there are a number of routes possible and park users will not all use the same path, these trails can be narrower. A width of 1.5m is suggested. This is wide enough to accommodate two people walking together or allow people to pass in opposite directions.

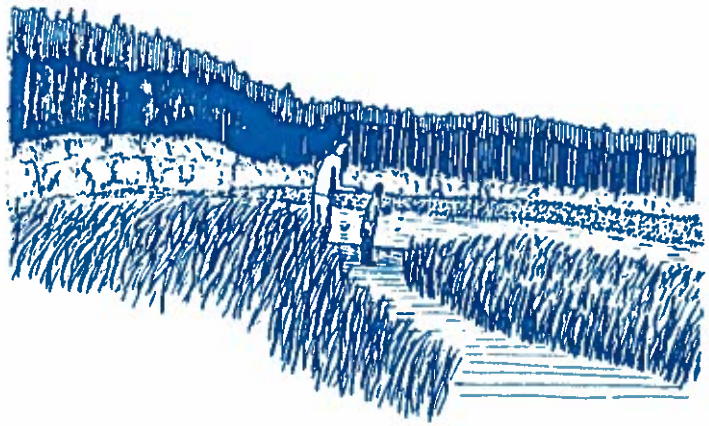


These trails too need a hard, firm surface. Again, a crushed stone dust surfacing on a prepared granular subbase is recommended, as this will be compatable with the main trail.

These trails are wide enough to allow a Cushman type vehicle to drive on them.

Recreation Trails

Throughout the rest of the park, a system of recreation trails is proposed. The intended use of these trails is for walking/hiking in the summer and for cross-country skiing in winter. The width suggested is 1.2m which is wide enough to allow for unorganized ski-touring (no track setting). This width is more than adequate to accommodate walkers/hikers.



Initially the recommended surfacing material for these trails is the natural earth, leaf-litter surface, using the existing forest floor material. If use on these trails becomes heavy and compaction is occuring, wood bark/wood chips could be applied and used as a surfacing material. These would be in keeping with the "natural" appearance of the trail.

In wet areas, boardwalks will need to be constructed. They should be as wide as the trail tread and high enough that they will be dry.

Where the trails cross the transmission ROWs, a definite route is needed to prevent the new seedlings from being crushed. The actual design will have to be detailed when final trail plans are prepared. This might be accomplished by surfacing material to show where the tread is, or by stakes to mark the route. A sign explaining the rehabilitation of the ROW and the necessity to remain on the paths might be considered.

At the beginning of the recreational trails (the trail head) a sign showing the overall plan of the trails is recommended. The plan shows the various loops and their length. Such signs might also be at major trail intersections.

An interpretative pamphlet explaining the features visible from these trails might be developed so the trail could be a self-guiding nature trail. The pamphlets could be available at the main building.

At this time the proposed development has provided trails for skiers, but because of the length of trails and the location of the park, the aim is to appeal to beginning skiers or those who want to ski for an hour or two. It is anticipated that serious cross country skiers out for a day of skiing will select other sites. However, should the Recreation Department in the future decide to set trails, the proposed tread width would need to be increased.

On these trails overhanging branches must be cut back, to allow a 2.5m clearance from existing grade. This will give satisfactory clearance based on the average snow depth recorded by Environment Canada.

In laying out ski trails, the maximum greatest sustained gradient for a distance of 100m or more is 12 - 15%. For short distances (less than 30m) a gradient of 20-25% is permitted.

SIGNAGE

At Sandy Lake, several different kinds of signs will be required - directional, informational, warning, regulatory. Signs should be attached to proper supports, all of which are similiar in form and colour. If more than one sign is required, they should be clustered together, not strung out one after another.

To give a sense of harmony, these signs should have the same -shape
-typeface (lettering style)
-colours
-material

If Bedford wants to have standard signs for use in all of its parks, that type of sign can be used at Sandy Lake. There is not a need for "rustic" or "natural" signs.

Near the entrance a sign showing the overall plan of the park (a map) is suggested. This would assist visitors in knowing what facilities are available, where they are located and the best way to get there. This map must be large enough that it can be easily seen from the car. A pull-off area from the main road where a car could stop to read the map in detail is preferred.

Transmission Corridors

The site is bisected by two transmission corridors for power lines. A third corridor forms a large section of the eastern boundary of the site, a small section of this corridor passes through the Greenman property.

From a park planning viewpoint, the wide corridor (approximately 100m wide) which cuts through the proposed park from the western edge to the eastern section where it turns north to the transformer station is a major barrier. Within the proposed park, the area covered by this corridor is 20 hectares (50 acres).

When standing in this corridor which is an easement, one can see the entire width and a considerable distance as there is nothing to block the view. It has been constructed in typical fashion; the ground is rough and uneven, slash remains and rock outcrops occur.

Throughout North America there have been numerous studies on secondary uses of transmission corridors including power line right of ways (ROW). Current secondary uses include agriculture, trails, parks, and parking lots. In Nova Scotia, two examples are:

1. The Shubie Wildlife Park where a transmission line passes through the park over pathways and ponds.

2. The Boys and Girls Club in Dartmouth have a linear park with planting, trails, part of a city owned ball diamond and a club building within the ROW.

Given that some secondary uses can occur under transmission lines and within the ROW, it is proposed at Sandy Lake, that the power ROWs be reclaimed to make them more "park-like" and to make crossing the ROW via one of the trails a more pleasant experience. Because the ROW is 20 hectares, the town would be eligible for assistance from Lands and Forests under their private woodlot management program. In addition to the ROW, the two disturbed areas near the corridor that have been cut can also be planted.

In the ROWs at Sandy Lake it is suggested that Christmas trees be grown.

Christmas Trees

-Will make the cut more "park-like" with trees of different heights, species, spacing.

-Will block long views of corridor, making trail crossings more pleasing.

-will give some wind protection and shelter

-will grow to allowable height as defined by the Power Corporation.

-will have a seasonal recreational potential - A "choose & cut" operation, can be combined with sleigh ride, bean dinner, etc.

-will offer some possible revenue ($15 - $20/tree in 1986)

Growing Christmas Trees requires:

- -An agreement with the NS Power Commission that they will not spray.

- -Maintenance - regular applications of fertilizer and shaping (shearing) for best form.

- -A planting schedule - regular planting to ensure both variety of trees and size of trees.

It may also be necessary for the Recreation Department to establish a policy on the use of herbicides. To ensure the growth of the desired species, competing trees will need to be removed. This may be done manually or a herbicide might be necessary. Lands and Forests can advise on this as part of the woodlot management plan.

With a "choose and cut" operation, at least two species of trees (fir and pine) must be grown. Not all of the area is suitable for these species, so some spruce may also be planted in the lower lying areas. In a natural stand, 1000 to 1200 trees/acre could be expected. This type of planting is preferred as compared to a fully stocked and managed area of approximately 2000 trees/acre. Seedlings, both container/pod stock and bare-root stock are available from Lands and Forests' Nursery at approximately $110/1000 seedlings. For best selection, orders must be placed as early as possible, preferably in October, especially for ordering balsam fir.

Before planting, preparing the area with a Roman discer is suggested. This machine churns up the slash on the ground and works it into the soil. More information is available from Lands and Forests.

In some cases Lands and Forest can assist with planting costs through federal-provincial grants. If the operation is for Christmas trees only, grants are not available. For more information on the management plans and grants contact John Murray, Extension Forester, Waverly, NS (861-2560).

Since the area to be planted is large, phasing the planting over several years may be necessary. This can be detailed in the management plan. For an initial planting, perhaps 30% of the area could be planted concentrating on sites where the trail crossings will be. This amount of planting would total 15ac. and a suggested ratio is 10ac. of Christmas trees and 5ac. of other species.

Where the trail crosses the right of way, the trail must be well defined so hikers/skiers will know where to cross and will not step on the seedlings and crush them.

PHASING AND COST ESTIMATES

Most likely, the development of Sandy Lake will be phased over several years. This section gives some suggestions on the possible phasing and an estimated cost. These costs are based on present costs and on known field conditions as based on available data and mapping. Not included in the cost estimates is the survey work required to implement detailed designs.

These costs are preliminary estimates only. A substantial saving is possible if groups volunteer their labour or if labour intensive programs are used for such items as clearing areas, constructing buildings, placing the sand for the beach, sodding, trail construction and so forth.

Phase One

Access to the park, parking, development of the core area and access to it are suggested as the initial phase. Complimentary to this would be trail development and some beginning work on rehabilitating the transmission corridors. Building the service centre at this time would also fit in.

Included in the core area development is the main building, the beach development, some of the picnic sites and the play areas.

Phase Two

Once the park is established it is anticipated that the demand for picnicking will increase. The extension of the road, clustered parking along the road, the development of 23 picnic sites and trails is suggested for construction during this phase.

Phase Three

Separate areas for day camp and for group camping with the required support facilities are suggested as the final development phase.

The rationale for suggesting the phasing in this manner is the importance the Recreation Commission attached to the various programe elements - the need for trails and a place to swim. Also progressing in this manner allows the roads to be constructed as needed for access to each area.

Based on these phases the cost estimates are as follows. Detailed estimates are given after.

Phase One

Roads & Parking	$271 214
Core Development	406 046
Beach Development	54 887
Recreational Trails	33 480
Service Centre	54 432
ROW Rehabilitation	28 007
	848 066*

Phase Two

Road & Parking	$ 80 785
Picnic Sites	16 876
Trails	37 692
	135 353

Phase Three

Road & Parking	$ 16 810
Day Camp Facility	126 628
Group Camp Facility	108 200
	251 638

. . . Total $ 1 235 057*

*Plus servicing costs for main park building. See detailed estimates.

CENTRAL AREA (PHASE ONE)

Roads and Parking

Item	Unit	Quantity	Price	Amount
Upgrade Smiths Road	m	518m	82	42 476
New Road (8m wide)	m	650m	117.5	76 375
Lighting	-	----	-------	4 000
Parking Lot				
Main (Paved)	m2	5800 m2	14.70	85 260
Overflow (Gravel)	m2	3060 m2	585	17 901
				226 012
Fees & Contingencies	(20%)			45 202
				271 214

Core Development
(1.34 ha)

Item	Unit	Quantity	Price	Amount
Clearing & Grubbing	ha	1.34 ha	12 500	16 750
Fill	m3	6700m3	7.50	50 250
Grading	ha	1.34ha	2 500	3 350
Building	m2	300m2	375	112 500
Topsoil & Sodding	m2	13 400m2	5	67 000
Picnic Tables	ea.	12	265	3 180
Trash Receptacles	ea.	4	193	772
Main Path				
(200m X 3m)	m2	600m2	45	27 000
Pathways				
(525m X 1.5m)	m2	787.5m2	45	35 438
Play area				
Clean up stream				132
Stream Play Area				9 500
Water Playground				9 500
Telephone				0*
Sanitary				**
Water				**
Landscaping				3 000
				338 372
Fees & Contingencies	(20%)			67 674
				406 046

*Initial Contact with MT&T has indicated that phone lines can be provided without a service charge.

**Estimate to be provided by Engineering Department at a later date.

Beach Development
(2250m2)

Item	Unit	Quantity	Price	Amount
Clean Existing Beach				264
Rough Grading	ha	.2ha	2 500	500
Filter Fabric	roll	10	360	3 600
Sand (45cm deep)	ton	1 655	25	41 375
				45 739
Fees & Contingencies	(20%)			9 148
				54 887

Recreational Trails
(9 km total length)

Item	Unit	Quantity	Price	Amount
Clearing & Thinning (9000m X 1.2 m)	m2	10 800m2	1.50	16 200
Boardwalk	m2	180m2	65	11 700
				27 900
Fees & Contingencies	(20%)			5 580
				33 480

Service Centre
(1350m2)

Item	Unit	Quantity	Price	Amount
Clearing & Grubbing	ha	.14 ha	12 500	1 750
Grading	ha	.14 ha	2 500	350
Gravel (15cm)	m3	205 m3	24	4 920
Garage (120m2)	m2	120 m2	270	32 400
Fencing	m	180 m	33	5 940
				45 360
Fees & Contingencies	(20%)			9 072
				54 432

Rehabilitation Power ROW and Disturbed Areas*
(23 ha) (57 ac.)

Item	Unit	Quantity	Price	Amount
Site Preparation (Roman Discer)	ha	23ha	438	10 074
1st Planting (1987)	ha	7ha	575	4 025
2nd Planting (1988)	ha	7ha	630	4 410
3rd Planting (1989)	ha	7ha	690	4 830
				23 339
Fees & Contingencies		(20%)		4 668
				28 007

* Does not include annual maintenance costs - fertilizer, weeding, herbicides (if used), shaping, etc.

PICNIC AREA (PHASE TWO)

Road & Parking

Item	Unit	Quantity	Price	Amount
Clearing & Grubbing	ha	.39 ha	12 500	4 875
Paved Road (645m X 6m)	m	645 m	88.20	56 889
Paved Parking	m2	378 m2	14.70	5 557
				67 321
Fees & Contingencies	(20%)			13 464
				80 785

Picnic Sites (23)

Item	Unit	Quantity	Price	Amount
Clearing & Thinning	m2	1100m2	2.50	2 750
Picnic Tables	ea	27	265	7 155
Trash Receptacles	ea	6	193	1 158
Fire Grills	ea	10	125	1 250
Topsoil & Sod	m2	350m2	5	1 750
				14 063
Fees & Contingencies	(20%)			2 813
				16 876
Trails (465m X 1.5m)	m2	698m2	45	31 410
Fees & Contingencies	(20%)			6 282
				37 692

CAMPING AREAS (PHASE THREE)

Road & Parking

Item	Unit	Quantity	Price	Amount
Road & Turn Around	m	315 m	35.1	11 057
Control Gate	ea	1		200
Parking (gravel)	m2	342 m2	5.85	2 001
Landscaping	--	------	------	750
				14 008
Fees & Contingencies	(20%)			2 802
				16 810

Day Camp Area
(1.11 ha) (2.75 ac)

Item	Unit	Quantity	Price	Amount
Clearing & Grubbing	ha	1.11 ha	12 500	13 875
Grading	ha	1.11 ha	2 500	2 775
Topsoil & Sod (10cm)	m2	11 100 m2	5	55 000
Flag Pole	ea	1	--	400
Structure -12m diameter (prefab, hexagon, wood on concrete slab)	ea	1	--	26 500
Tables	ea	6	265	1 590
Fire Ring	--	1	--	175
Pit Privies	ea	3	1 500	4 500
Trail (Clearing & Thinning) (60m X 1.2m)	m2	72m2	1.50	108
Trash Receptacles	ea	4	150	600
				105 523
Fees & Contingencies	(20%)			21 105
				126 628

Group Camping
(.81 ha) (2 ac)

Item	Unit	Quantity	Price	Amount
Clearing & Grubbing	ha	.81ha	12 500	10 125
Grading	ha	.81ha	2 500	2 025
Topsoil & Sod (10cm)	m2	8100m2	5	40 500
Flag Pole	ea	1	--	400
Structure - 140m2 (Prefab wood on concrete base)	ea	--	--	30 000
Tables	ea	6	265	1 590
Fire Ring	ea	1	--	175
Pit Privies	ea	3	1 500	4 500
Trash Receptacles	ea	4	150	600
Trail (140m X 1.2m)	m2	168m2	1.50	252
				90 167
Fees & Contingencies	(20%)			18 033
				108 200