

EXECUTIVE SUMMARY

Environmental Assessment

In September 1995 and with concurrence by the Environment and Waste Management Committee, Council requested the Parks and Recreation Commission to consider an environmental assessment on the protection and preservation of the Western Painted Turtle nesting grounds and other wildlife habitat near proposed trail development in southeast Deer Lake Park. Concerns of turtle nesting activity, reportedly of the Western Painted Turtle, a blue listed species, was an issue raised by residents affected by a trail proposal removing park tenant homes and extending public access in southeast Deer Lake.

AXYS Environmental Consultants were hired early 1996, demonstrating a thorough methodology maximizing field time, and drawing upon the expertise of a herptile (reptile and amphibian) specialist. The consultants spent a total of 282 person hours on 47 days observing turtles between February and August, and other important park wildlife, vegetation, resources or environmental features referred to as Valued Ecosystem Components.

No Western Painted Turtles were observed. Two introduced turtle species were recorded; the Red-eared Slider and Northern Diamondback Terrapin. The turtle population at Deer Lake was estimated at 78, with by far the most being Red-eared Sliders and only 3.8% Terrapins. Historical data suggests that the Western Painted Turtle population may never have been high, but may have been present as recently as 1993 in an unconfirmed sighting by a herpetologist.

Valued Ecosystem Components observed by the consultants did include Mink, Great Blue Heron, and Green-backed Heron. There exists no federal or provincial legislation to protect these species since they are not designated rare or endangered under section 6 of the Provincial Wildlife Act, however, the mandate of the Ministry is to protect native species and their habitat.

Red-eared Sliders are exotics, not native to British Columbia and often mistaken for Western Painted Turtles. Their reproductive viability in our northern latitude appears limited except under ideal circumstances. Observations in Deer Lake Park suggested Red-eared Sliders do not breed successfully likely due to lethal freezing, lack of solar exposure, high predation, and disturbance by the public.

Northern Diamondback Terrapins are native to brackish estuarine water areas and Deer Lake represents suboptimal habitat. They do not appear to be reproductive. It was suggested that the Terrapins also occur through the release of unwanted pets.

There are questions as to the origin of Western Painted Turtles in North American pacific coastal areas. Western Painted Turtles are most abundant in the Okanagan Valley and the Kootenay region. It is probable that coastal occurrences are the result of accidental or deliberate introductions of pets. Such an occurrence of turtle capture from interior British Columbia and release into Deer Lake was reported by a Deer Lake resident. Because of this, the status of Western Painted Turtles in Deer Lake has not been officially recognized by the Ministry of Environment, Lands & Parks.

Recommendations

The first ranked turtle management option of the consultant recommended maintaining the current status of the turtle population. Also, trail development can proceed unabated as there appears to be minimal environmental concerns related to Valued Ecosystem Components observed or expected. It was suggested that the existing exotic turtle population remain, as they do offer a desirable urban wildlife experience. Reintroduction of Western Painted Turtles was considered, but rejected because the uncertainty of the factors which caused the initial decline and because the lake represents marginal habitat for this species.

The consultant evaluation of proposed trails was based primarily on potential impacts to valued ecosystem habitat, rating trails further inland from the lake, away from creek corridors and along previously disturbed landscapes as having the least impact. There were no crucial impacts of concern reported. The removal of residential buildings and infrastructure and incorporation of native vegetation were reported to enhance habitat for turtles and other wildlife, as well as increase riparian habitat which is typically high in wildlife value and moderates the effects of any remaining park development such as trails along the lake.

The first rated trail option by the consultant for southeast Deer Lake Park follows entirely along the existing roadway of Deer Lake Drive and has the least impact to habitat (See drawing #2 attached report). There are, however, other factors which play important roles in providing desirable trail experiences such as recreational opportunities, passive refuge away from development, and views, which, in the opinion of staff, make the second rated option by the consultant far more desirable. The consultant's second rated trail option passing through a portion of the Eagles estate, and proceeding west along the foreshore and returning to Deer Lake Drive, has been approved in principle. The recommended option is noted as "2A" in drawing #2 attached report. Other trail options proceeding across the creek (Option 2B) or for a lake boardwalk (Option 3) create excessive disturbance to wildlife corridors and riparian edges. The boardwalk is the only option which completes the perimeter lake trail but possesses questionable safety, liability, and significant cost considerations.

Final trail alignment detailing and cost estimates of Option 2A including how and where the path may cross through the Eagles estate would be held back until the forthcoming Eagle's Estate Conservation Management Plan is complete and addressed in 1997, with trail construction recommended for 1998.

It is recommended that staff continue programs of wildlife enhancement and awareness with shared involvement by outside academic institutions. A report is forthcoming on Purple Loosestrife, while other exotic plants noted by the consultants require further study in the context of the Deer Lake Management Plan. It is recommended that public awareness on the concerns of release of exotic species in natural ecosystems be implemented by information notices (Information Burnaby) or comprehensive signage in Deer Lake Park.

It is recommended that for any new trail development, staff continue with consideration of timing, construction methods, maintenance and set backs from the shoreline in the interest of preserving observed valued ecosystem components.

The Ministry of Environment, Lands and Parks have reviewed the environmental assessment and judge it to be thorough, complete and are in agreement with the conclusions. Copies of the attached report have been sent to all prior correspondents or delegations to the City of Burnaby concerning the Western Painted Turtle and trail development along southeast Deer Lake.

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Attachments

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**SUBJECT: DEER LAKE ENVIRONMENTAL ASSESSMENT FOR THE WESTERN
PAINTED TURTLE AND ANALYSIS OF PROPOSED TRAIL DEVELOPMENT**

RECOMMENDATIONS:

1. THAT the consultant's first ranked turtle management option of status quo be approved, allowing resident exotic turtles to remain without further management and without reintroduction of the Western Painted Turtle.
2. THAT trail and picnic Option 2A in southeast Deer Lake Park be approved in principle for 1998, subject to review, trail alignment detailing and costing in conjunction with the Conservation Management Plan of the Eagle's Estate.
3. THAT trail development in northeast Deer Lake Park across Deer Lake Brook be considered as a future Capital project.
4. THAT further detailing and costing of trails proposed in south Deer Lake Park proceed in conjunction with the 1997 Deer Lake Masterplan process.
5. THAT Staff pursue information notices and/or signage in Deer Lake Park advising against the release of exotic species into natural ecosystems.
6. THAT Staff continue to pursue programs of wildlife and habitat enhancement and awareness, removal of exotic vegetation, and trail development methods in the interest of preserving valued ecosystem components in Deer Lake Park.
7. THAT a copy of this report and the consultant's presentation be sent to Council.
8. THAT copies of this report be sent to prior delegations and correspondents to the City concerning trail development in southeast Deer Lake Park and the Western Painted Turtle.

REPORT

The Deer Lake Environmental Assessment for the Western Painted Turtle and analysis of proposed trail development arose during a series of events concerning trail development along the east perimeter of Deer Lake. These events are highlighted, followed by results of the environmental assessment.

BACKGROUND

In recent years, acquisition of lakeside properties of northeast and southeast Deer Lake Park created the potential to add to the goal of a perimeter lakeside trail. At the meeting of 1994 May 18, the Commission approved a three phased park development of 5137 Dale Avenue on northeast Deer Lake. The first phase completed demolition of an existing house and restoration as lawn in 1994.

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The second phase proposed a bridge over Deer Lake Brook and path connection along the foreshore (Attachment #1), but was held back for reasons detailed below involving study of the Western Painted Turtle. The third phase recognized the possibility of future interpretive additions, as the site possesses archeologic value as a former cranberry harvesting, elk hunting and campsite location of the Coast Salish.

The Commission received a report concerning southeast Deer Lake Park trail development on 1995 June 07. The properties of southeast Deer Lake Park were acquired by the city at considerable expense and providing public access has remained a high priority. The proposal for southeast Deer Lake trail development was tabled for Commission to consider the requests of delegations and correspondence concerned with the initiative. Tenants and supporters expressed interest in retaining existing rental housing to maintain surveillance for public safety, providing revenue to the City, and preserving habitat of turtle nesting activity, reportedly of the Western Painted Turtle, a blue listed species.

Initiated from Council to the Environment and Waste Management Committee, a motion was passed 1995 September 19, for the Parks and Recreation Commission to consider an environmental assessment, and protection and preservation of the Western Painted Turtle nesting grounds and other wildlife habitat near the proposed trail at the southeast corner of Deer lake. As this assessment may have had implications to trail development to the northeast corner of Deer Lake, by Deer Lake Brook, both trail initiatives were delayed.

Concurrent to the above, a consultant was hired to assess the heritage value of the Eagles Estate garden, as recommended by the Community Heritage Commission and authorized by Council at their meeting of 1995, July 10. The consultant report identified the Eagles Garden as a significant heritage resource and in 1995, December 04, Council authorized that the garden be further studied in the interest of determining Heritage Development Potential and a Conservation Management Plan. Any further trail development through the Eagles Estate would require consideration according to this plan.

**ENVIRONMENTAL ASSESSMENT FOR THE PAINTED
TURTLE, AND VALUED ECOSYSTEM COMPONENTS****Assessment Methodology**

The purpose of the environmental assessment was twofold. Firstly, to identify and report population status, habitat characteristics, and human influences on the Western Painted Turtle throughout the littoral areas and waters of Deer Lake. Secondly, to provide an environmental assessment of trail development options in northeast and southeast Deer Lake Park in the interest of protecting the Western Painted Turtle and all other sensitive or endangered wildlife observed or expected to occur in the park.

AXYS Environmental Consultants were awarded the tender early in 1996 demonstrating a thorough methodology maximizing field time, and drawing upon the expertise of a herptile (reptile and amphibian) specialist. The consultants spent a total of 282 person hours on 47 days observing

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turtles in the field between February 9, and August 26, 1996. The majority of observations were conducted on sunny days during the hottest summer months when Painted Turtles should have been most active. Turtles species were observed by trail, canoe, lawn and creek surveys following standard and recognized methodology developed by the Ministry of Environment. Whenever possible, turtles were captured, and further identified to sex/age class and marked. In combination with the search for Western Painted turtles, other Valued Ecosystem Components (VEC's) of wildlife and plants were identified and documented to develop recommendations for trail construction with minimal impact. The Ministry of Environment, Lands and Parks has reviewed the environmental assessment and judge it to be very thorough, complete and are in agreement with the conclusions.

Status of Western Painted Turtles in Deer Lake Park

No Western Painted Turtles were observed, and consultant opinion was that it was highly unlikely to have missed resident Western Painted Turtles given the amount of time surveying, particularly during peak summer months of expected activity, varied techniques of observation, and high confidence of species identification. Two introduced turtle species were observed, Red-eared Sliders and Northern Diamondback Terrapins. The turtle population at Deer Lake was estimated at 78, with by far the most being Red-eared Sliders with only 3.8% of observations being Terrapins.

Historical data suggests that the Western Painted Turtle population may never have been high. Previous studies at Deer Lake (1984 Douglas College students single sighting; 1988 LGL Consulting Ltd. Wildlife Resources Inventory no sighting; 1993 B.C.I.T. students no sighting) confirmed only one Western Painted Turtle. The species, however, appears to have been present at Deer lake relatively recently, with reports of informal surveys of herpetologists by capture (one) in 1992 and by observation (four) in 1993. Due to the uncertainty about the origin of the turtles (natural or introduced), these occurrences were not officially recognized by the Ministry of Environment, Lands and Parks or the Conservation Data Centre. There have been observations of a marginal population of Western Painted Turtles at nearby Burnaby Lake as recently as 1994. Results from the current consultant study suggest that the Western Painted Turtle has been recently extirpated from Deer Lake Park.

There is also question as to the origin of Western Painted Turtles in North American pacific coastal areas as the species does not seem to be abundant in these localities. Western Painted Turtles are most abundant in the southeastern interior United States, and more locally, Okanagan Valley and the Kootenay region. It is probable that coastal occurrences are the result of accidental or deliberate introductions of pets. Such an occurrence of turtle capture in the Okanagan and subsequent release into Deer Lake was reported by a resident of Deer Lake.

Exotic Turtles Found in Deer Lake Park - Red-eared Slider

Red-eared Sliders are exotics, not native to British Columbia and often mistaken for Western Painted Turtles. Only a subtle difference of red ear stripe (Red-eared Slider) verses yellow ear stripe (Western Painted Turtle) distinguishes the two species when seen from above. When overturned, however, differentiation is much more obvious with the Western Painted Turtle possessing bold orange undershell markings verses yellow of the Red-eared Slider. The native

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range of the Red-eared Slider encompasses southeastern United States. It remains unclear whether Red-eared Sliders could maintain a viable reproductive population in this northern latitude, although in ideal circumstances there is evidence to suggest that they may be able to reproduce successfully in the Vancouver area.

The consultants documented a total of five nesting sites from this year (one) and previous years (four). The single nest from this summer belonged to a Red-eared Slider, and even though the turtle dug and packed down a hole, no eggs were found during excavation two days later. Of the four prior nesting sites, photographic evidence from a resident for one site confirmed a Red-eared Slider, while the others contained desiccated eggs beyond recognition, or no eggs at all. Turtles exhibiting signs of courtship or nesting behaviour were not handled, or otherwise disturbed, during the course of the study, as this could lead to abandonment of the nest site and therefore, a possible decrease in reproductive success.

Prime nesting habitat for turtles in Deer Lake appears to be limited, and may be reflected by the evidently low or non-existent level of reproduction documented in the consultant study. Turtles require well drained sandy or gravelly areas with exposure to the sun, and should be undisturbed, as eggs or nestlings may be in the ground for most of the year. Very few sites at Deer Lake contain this combination of suitable nesting habit and lack of disturbance. The north shores and beach areas with large open space and southern exposure are likely the most appropriate nesting areas at Deer Lake, yet still represent marginal habitat due to the high level of disturbance. The only confirmed nesting sites (containing eggs) were located on the lawns of residents at the southeast corner of Deer Lake. These nesting records may be because of increased monitoring by the residents, and lower levels of disturbance. However, these sites receive relatively little sunshine and likely not sufficient solar heat required for egg incubation.

All evidence of nesting behaviour in Deer Lake Park suggests Red-eared Sliders do not breed successfully. This may have been due to many reasons including winter mortality due to lethal freezing, lack of solar exposure or appropriate substrate for nests, insufficient nesting habitat, insufficient viable population, high predation pressures, and disturbance by the public. Female turtles and hatchlings are excessively susceptible to predation during nesting activities, or when emerging from the nest. A study from southwestern Quebec has shown 86% mortality of Painted Turtle nests due to racoons, and 25% nest failure due to flooding and failure of hatchlings to emerge.

From resident reports and observations, it would appear that persons adding or removing turtles is the major factor in sustaining the current population. Red-eared Sliders are the common pet store variety and disposed to many urban lakes as unwanted pets. It is possible that Red-eared Sliders could have competed with former Western Painted Turtles, although the resources of Deer Lake Park were judged to be ample for the existing total observed population.

Exotic Turtles Found in Deer Lake Park - Northern Diamondback Terrapin

Northern Diamondback Terrapins are native to brackish estuarine water areas and Deer Lake would represent a suboptimal habitat. This was evident in the apparent poor health of the four captured for study who were lethargic and two with blindness. The Terrapin population does not

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appear to be reproductive given the lack of reproductive behaviour observed, absence of nestlings, old age of the few individuals, and inappropriate habitat for this species. It would appear likely that these remaining Terrapins were also displaced from the release of unwanted pets.

Other Valued Ecosystem Components (VEC's) Found in Deer Lake Park

The list of other possible wildlife or plants of importance or Valued Ecosystem Components (VEC's), were researched by firstly referring to Red or Blue-listed species of concern previously recorded within a 10 kilometre radius of Deer Lake Park, secondly, by species expected to occur in this ecoregion, and thirdly, by consultation with staff, naturalists and local residents. Utilizing opportunistic survey concurrent to the systematic survey for the Western Painted Turtle, only Mink, Great Blue Heron, and Green-backed Heron were observed from a list of 36 total possible VEC's for Deer Lake Park. No rare plants were found.

CONSULTANT TURTLE MANAGEMENT OPTIONS

Three management options were presented by the consultant for turtle populations. These options were prefaced by qualification that any modification of habitat affects species differently. Removal of shoreline shrubs for turtle nesting habitat may negatively affect foraging habitat of other wildlife. The only turtle species observed were not native and as such have a lower priority, although they can provide viewing enjoyment. There exists no federal or provincial legislation to protect a blue listed species such as the Western Painted Turtle, since they are not designated rare or endangered under section 6 of the Provincial Wildlife Act, however, the mandate of the Ministry is to protect native species and their habitat.

Consultant First Ranked Turtle Option - Status Quo

The consultant's first turtle management option recommended that trail development proceed unabated as there appears to be minimal environmental concerns related to Painted Turtles or other VEC's. The consultant results suggest that Western Painted Turtles are no longer present at Deer Lake and managing their population would require reintroduction. Both resident turtles are not native to the Lower Mainland, with relatively low management priority or protection of their nesting or breeding habitat required. Furthermore, the current population is most likely reproductively inviable so that maintaining such a population in this urban environment may be very difficult, if not impossible. That said, resident turtles do offer an urban wildlife experience, and permitting their continued presence may be desirable.

Consultant Second Ranked Turtle Option - Habitat Enhancement

Habitat enhancement by increasing shoreline heterogeneity could benefit the exotic turtle and other wildlife species and not likely conflict with trail development. Creating additional basking habitat by floating logs enhances viewing opportunities of turtles. Gravel nesting substrate could be created at certain protected shoreline locations, however, fluctuating water levels of Deer Lake would inevitably wash away such installations, compounded by the fact that breeding has been observed to be unsuccessful. Habitat enhancement could be combined with continued monitoring

of the existing population of exotic species of turtles, perhaps through student involvement.

Consultant Third Ranked Turtle Option - Western Painted Turtle Reintroduction

It was felt that Western Painted Turtle reintroduction would not be advisable until further determination of those factors which affect populations were known, perhaps by reintroduction scheme of Western Painted Turtles on an experimental basis with a follow-up study involving an academic institution. That said, Deer Lake Park represents marginal habitat for Western Painted Turtle and from a provincial perspective, is likely not of critical importance for maintaining Western Painted Turtles, particularly with more suited habitat existing in interior B.C. Successful reintroduction of Western Painted Turtle may necessitate removal (lethal or translocation) of existing exotic turtles, compounded by a continual influx of unwanted exotic pet turtles released by residents. Deer Lake has not shown evidence of successful turtle breeding behaviour, with no guarantee of success.

CONSULTANT MANAGEMENT OPTIONS OF OTHER VALUED ECOSYSTEM COMPONENTS

The environmental consultant concluded that there appears to be minimal negative impacts to the three observed VEC's (mink, Great Blue Heron and Greenbacked Heron) from the proposed trail options in northeast and southeast Deer Lake Park. In addition, based on the general understanding of habitat requirements for most of the other VEC species expected at Deer Lake but not documented during the study, it was speculated that most species would not suffer negative impacts from the proposed trail development. However, some trail options may have greater impacts than others, and were compared as described in the section that follows.

It was recommended by the consultants for the city to continue to provide awareness and enhance opportunities for existing wildlife with examples such as bat and bird boxes, turtle information notices, interpretive brochures and pet control. These initiatives are being accomplished through participation with the community on environmental initiatives and with B.C.I.T. through the Burnaby Lake Systems Project.

Removal of exotic plants such as Purple Loosestrife was highly recommended as it poses an immediate threat to marsh and emergent shoreline plant communities in Deer Lake. A report on the management of Purple Loosestrife is in production and will be forthcoming in the near future to the Commission. Other exotic plants such as Japanese Knotweed and Fragrant Water-lily were also observed outcompeting native species and wildlife movement, and should be studied and managed, which are considerations to be added to the Deer Lake Park Management Plan of 1997. Non-native plantings should not be introduced within Deer Lake Park.

Other recommendations in park practices included relaxing the extent of trimming and pruning of trailside vegetation while maintaining sight lines. New trail construction should minimize disruption of sensitive riparian habitat. Trail construction should be limited to periods when creek levels are lower (less usage by minks), outside of sensitive fish times, and when breeding birds have finished nesting. The consultant further recommended that management of succession in the heritage meadow zone should include consideration of the nesting and roosting requirements of the

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Greenbacked and Great Blue Heron.

CONSULTANT TRAIL ANALYSIS

Attachment #2, illustrates three inland trail options, and one boardwalk option of southeast and south Deer Lake Park in the interest of achieving pedestrian access around the entire lake. There are two zones proposed for trail development currently owned by the city which flank private land. These include the southeast zone by the Eagles Estate and south zone connecting 6450 Deer Lake Drive to the meadow trail. The consultants were asked to comment on trail options and removal of tenant housing within the two specified zones and not on existing private property. The boardwalk, which avoided private property, was the only option to provide complete public access around the lake perimeter. Analysis and ranking of each trail option was based on the potential impacts to valued ecosystem component habitat. Reference to landscape architectural features such as recreational opportunities, accessibility, safety, and costs was secondary in the evaluation.

Consultant Rating of Southeast Trail Options (Attachment #2)

Option 1 represents using Deer Lake Drive entirely as a trail route with connections to three small day use areas requiring removal of existing tenant housing. This option follows an already disturbed roadside landscape, and was the furthest upslope from riparian habitat. As such, it was judged to have the least impact to valued ecosystem components.

Option 2A passes through the lower lawns of the Eagles estate, through the day use area of the Eagles cottage, and day use area of site 6649 to join with Deer Lake Drive. The trail follows largely disturbed residential landscapes, but was closer to the riparian edge. Option 2A was judged to have the second least impact to valued ecosystem components.

Option 2B also passes through the lower Eagles estate, cottage and site 6649, but crosses over the creek to site 6595. The creek was felt to possess significance as a wildlife corridor, and any crossing may disrupt mink observed in the area. For this reason, Option 2B was judged to have the third least impact to valued ecosystem components.

Option 3 is a boardwalk, floating or raised on piers, which bypasses all on-shore development and private property. Any such boardwalk and its use, was considered to create the most disturbance and impact to riparian habitat. Heron and mink activity were recorded relatively frequently in the southeast corner of Deer Lake. Option 3 was judged to have the most impact to valued ecosystem components.

Consultant Recommendations South Trail Option (Attachment #2)

The south trail proposal links the west end of Deer Lake Drive to existing meadow trails within Deer Lake Park by crossing an existing woodland and creek ravine. The riparian habitat, particularly of the creek outflow to the lake, was judged to have high wildlife value as a corridor between lake and forest habitat types. It was recommended that trail development be limited as much as possible upslope from the lake, and that any lower stream access remain as secondary or dead end dirt

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paths. Where possible, trails should follow disturbed areas from residential development, such as lawns.

Consultant Recommendations on Tenant Building Removal

It was recommended by the consultant that the net effect of removing residential buildings and infrastructure and incorporation of native vegetation, would enhance habitat for exotic turtles, valued ecosystem components and other wildlife. Additionally, removal of buildings and revegetation of areas close to the lakeshore would increase riparian habitat, which is typically high in wildlife value and moderates the effects of any remaining park development such as trails along the lake edge. It was noted that residents may protect turtles by maintaining and protecting nesting habitat, decreasing poaching, and monitoring turtles. That said, the turtles are exotic, the southeast shoreline represents suboptimal nesting habitat with limited sun exposure, and all evidence of nesting behaviour of the exotic turtles suggests they cannot breed successfully.

Consultant Recommendation for Trail Development Over Deer Lake Brook (Attachment #1)

The consultants recommended that there does not appear to be constraints to any of the valued ecosystem components in proceeding with further development of this trail. There is high rated turtle basking behaviour, albeit exotic turtles, noted in the water near this site as well as fisheries value, so retention of passive activity away from the water's edge is preferable.

STAFF TRAIL DEVELOPMENT RECOMMENDATIONS

Staff Recommendation for Southeast Deer Lake Trail Development

It was noted by the consultant that all trail options appeared to have minimal negative impact to observed VEC's. Furthermore it was speculated that most other VEC's expected to occur at Deer Lake Park would not suffer negative impacts from the trail options proposed. The four trail options were, none the less, compared to each other noting where respective impacts could be expected.

The consultant trail rating serves as a comparative guideline, yet overall, there were not crucial impacts of concern. Other landscape architectural factors of trail development deserve strong consideration, and may raise the desirability of the "lesser" trail options as ranked by the consultants. This was the case in comparing trail Option 1 versus 2A (Attachment #2). Although Option 1 was ranked superior in being further from riparian habitat, it possessed by far, the least desirable pedestrian experience entirely along a road. It would be a much more rewarding trail experience to grant pedestrian access closer (but not adjacent) to the shoreline, away from sidewalks and traffic. Trail Option 2A allows park users to pass continuously through the heritage Eagles estate, and proceed west to the next open space with excellent lake viewing opportunities. It is recommended not to cross the creek west of site 6649, noted as Option 2B, in consideration of the wildlife corridor values mentioned by the consultants. It is not recommended at this time to construct the boardwalk as noted in Option 3, which creates disturbance to riparian land/water wildlife, with questionable safety and liability concerns, and considerable cost.

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A long-term park acquisition program has finally achieved consolidation of a block of properties in southeast Deer Lake Park. The properties have been acquired in accordance with the Deer Lake Master Plan with the goal to expand public access around the lake. It is recommended that the Commission approve in principle, trail Option 2A, and development of small scale picnic/seating opportunities up to the private properties. Trail alignment detailing and cost estimates of Option 2A including how and where the path may cross through the Eagles estate would, however, be held back until the forthcoming Eagle's Estate Conservation Management Plan is complete and addressed in 1997, with trail construction recommended for 1998, pending Commission approval. At such time, staff would assess and report the opportunities and constraints of removing three park tenant homes affected. There are five other park tenant homes along Deer Lake Drive not directly affected by the proposal.

Staff Recommendation for South Deer Lake Trail Development

It is recommended that trail development at the west end of Deer Lake Drive be directed west and upslope from the lake, and that any lower stream access remain as secondary or dead end dirt paths following areas disturbed by residential development. Further detailing of this route would be considered in the Deer Lake Masterplan process of 1997 with trail construction recommended for 1999, pending Commission approval.

Staff Recommendation for Northeast Deer Lake Trail Development

Trail development on northeast Deer Lake Park across Deer Lake Brook (Attachment #1), could proceed as a future project of the Parks and Recreation Commission recommended for the year 2000, pending Commission approval.

STAFF MANAGEMENT RECOMMENDATIONS

Only exotic turtles were observed, with low management priority and questionable reproductive viability. Resident exotic turtles do offer an enjoyable wildlife viewing opportunity and their continued presence is desirable. Reintroduction of Western Painted Turtle was not considered appropriate due to uncertainty of success, marginal habitat with more appropriate habitat in interior British Columbia, and the need to remove exotic turtles while preventing further release of exotics by residents. It is recommended that no further action be initiated relating to the management of turtles and maintain the status quo.

It is recommended that staff continue programs of wildlife enhancement and awareness with shared involvement by outside academic institutions. A report is forthcoming on Purple Loosestrife, while other exotic plants mentioned by the consultants require further study in the context of the Deer Lake Management Plan.

It is recommended that for new trail development, staff continue with consideration of timing, construction methods, maintenance and set backs from the shoreline in the interest of preserving observed valued ecosystem components. It is recommended that public awareness on the concerns of release of exotic species in natural ecosystems be implemented by information notices

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(Information Burnaby) and/or comprehensive signage in Deer lake Park.

It is recommended that a copy of this report be sent to all prior correspondents or delegations to the City of Burnaby concerning trail development along southeast Deer Lake and of the Western Painted Turtle (Attachment #3).

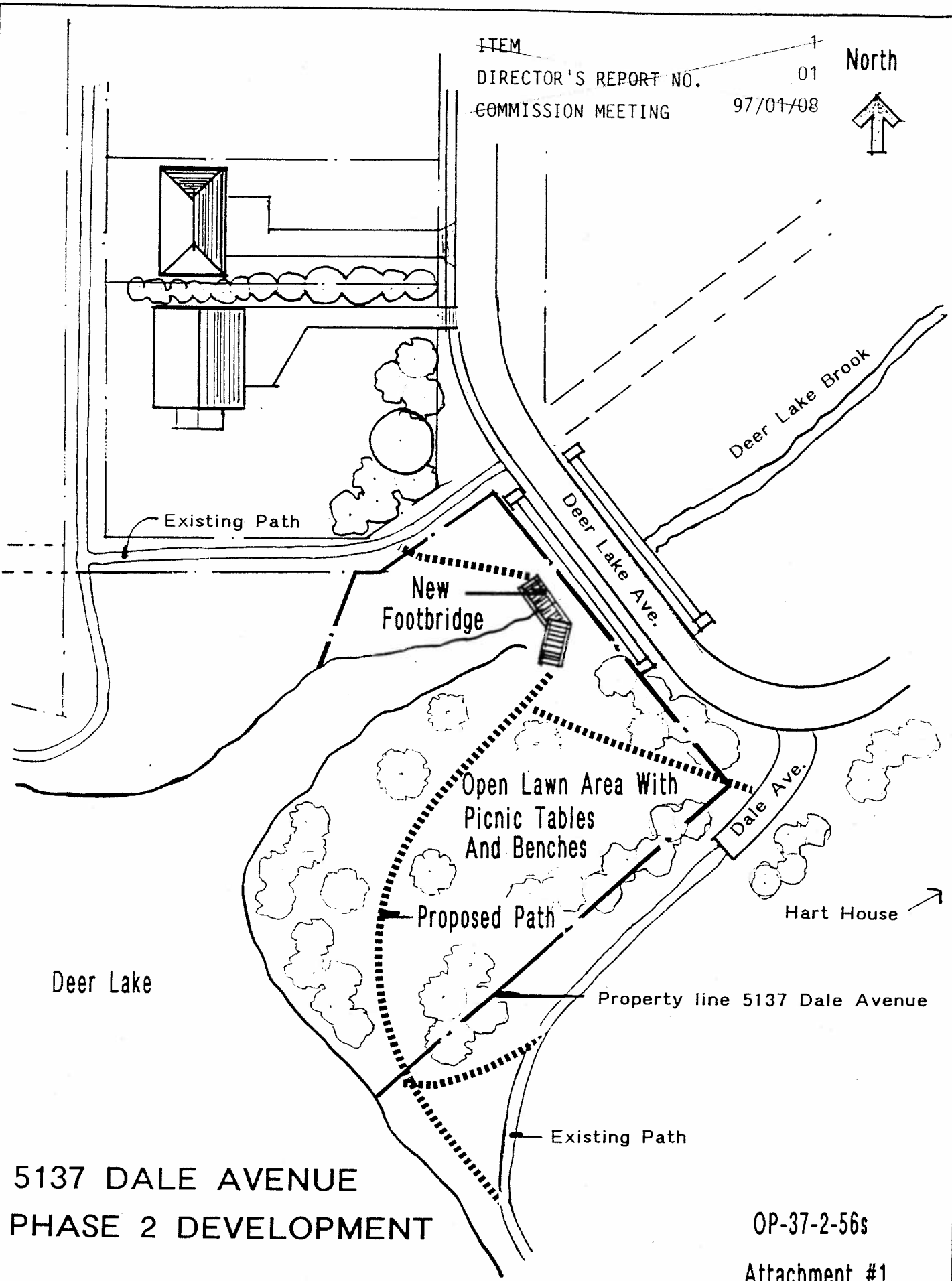
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Attachments (3)

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cc: Director Planning and Building
Director Finance
Director Engineering
Environmental Health

ITEM
DIRECTOR'S REPORT NO. 01
COMMISSION MEETING 97/01/08

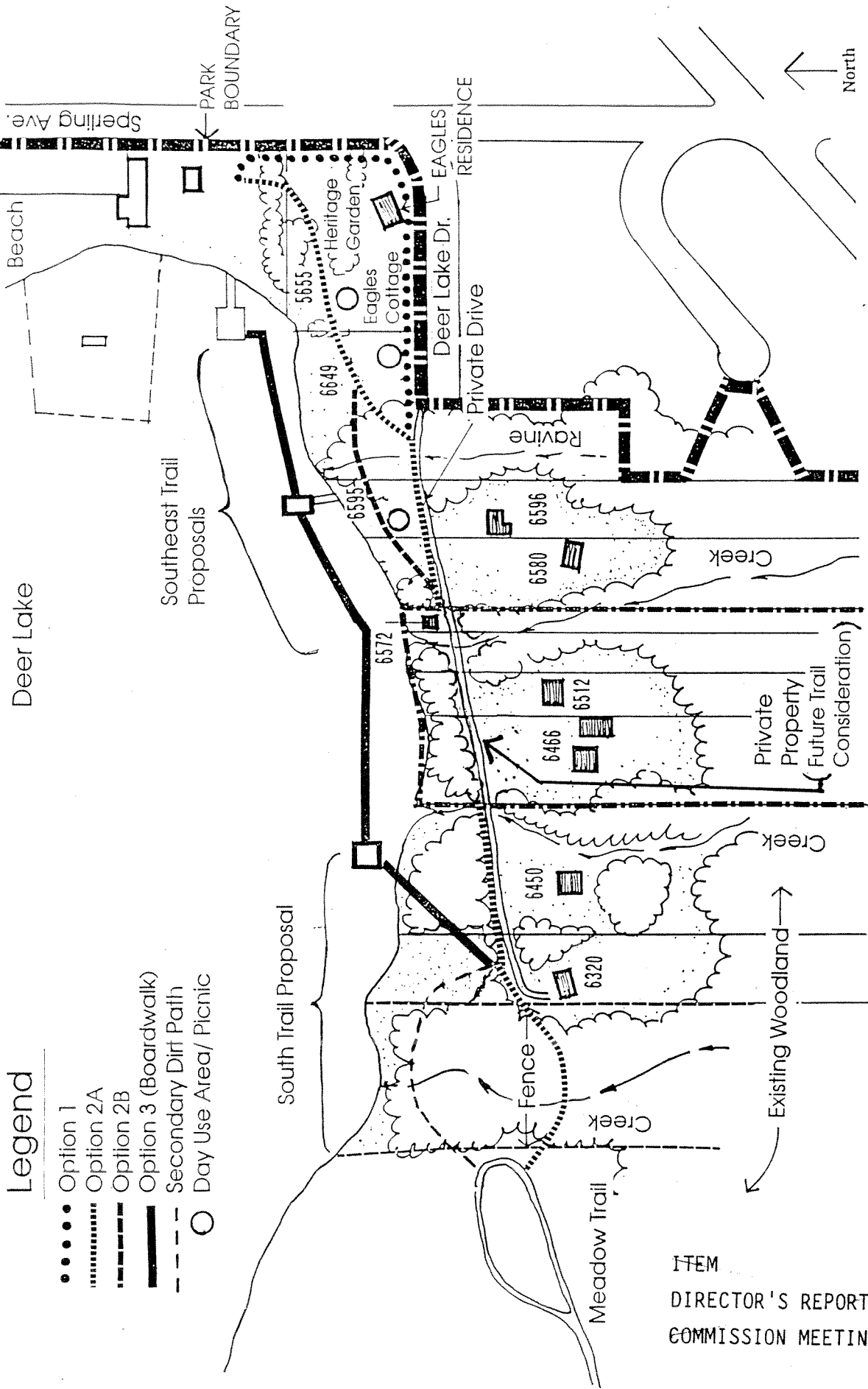


5137 DALE AVENUE
PHASE 2 DEVELOPMENT

OP-37-2-56s
Attachment #1

Legend

- Option 1
- Option 2A
- Option 2B
- Option 3 (Boardwalk)
- - - - Secondary Dirt Path
- Day Use Area/ Picnic



Dwg # O.P. 37 - 2 - 65s
 Date: November 1996
 Scale: nts
 Prepared by: Htd

Deer Lake Park South and Southeast Deer Lake Trail Options



ITEM 1
 DIRECTOR'S REPORT NO. 01
 COMMISSION MEETING 97/01/08

**DELEGATIONS OR CORREONDENTS RELATED TO TRAIL DEVELOPMENT IN
SOUTHEAST DEER LAKE AND THE WESTERN PAINTED TURTLE**

- Mr. & Mrs. G. Ahrens
- Ruth Baldwin
- Dr. V.C. Brink
- Dr. Robert Brooke
- Peter Brunning
- George Clulow
- Malcolm Coupe
- Ms. Lynne Helman
- Bill & Sherry Medlock
- William & Joan Moore
- Stephen Partington
- Helen Reid
- Andrew & Brenda Tan
- Mrs. L. Williams

