

Recommendations Regarding Developing a Disc Golf Course in Leddy Park

Summary Conclusion. Leddy Park is an inappropriate location for disc golf. Among the reasons are: lack of coherent decision making process; outspoken public opposition; uncertain park priorities; serious environmental and safety concerns; and inadequacy of course planning and design.

It is acknowledged that residents in the Burlington area could benefit from a professionally designed disc golf club. Research indicates that disc golf is a growing recreation sport that can be enjoyed by persons of all ages. However, it is recommended that the City Council authorize a task force comprised of Parks and Recreation Department and other city departments to look at alternative sites within the city of Burlington, possibly involving other communities within Chittenden County to find the optimum location for a professionally designed 18 hole course dedicated to disc golf that would be suitable for hosting local, regional and national tournaments as well as being usable by families.

Unresolved Issues/Questions

A. Lack of Public Consensus. There is no clear community consensus regarding development within Leddy Park. During the process undertaken by the working group the group was advised by members of the Btown Disc Club and heard from a number of its membership advocating for development of a course within the park (Btowndisc.com). However the working group also received an outpouring of community sentiment in favor of protecting the woodlands in the park and/or opposing the development of a course in Leddy Park.

B. Park Priorities & Lack of Master Plan for the Park. Following from the issue above regarding lack of an agreed consensus regarding park development, it is recommended that Parks and Recreation resolve conflicting sentiments on park development by involving the residents of Burlington in developing a Master Plan for guiding future development activities within the park. Items to be considered/included would be:

1. Incorporating the objectives of the Municipal Development Plan
2. Incorporating the objectives of the Open Space Plan
3. Assessing benefits of active versus passive uses within existing park woodlands
4. Updating the Forest Management Plan for the park
5. Understanding applicable development constraints (e.g., storm water runoff and development regulations/limitations)

The Parks and Recreation Department should develop a Master Plan for the park before any further activities relating to disc golf are authorized in the park.

C. Environmental Concerns. Certain areas within the existing woodlands where original course holes were sited have been identified as unsuitable for disc golf. These locations are areas west of the bike path and south of Leddy Park Road. Chittenden County forester, Mike Snyder, indicated these areas are unsuitable sites for disc golf for a variety of reasons, including erosion potential. The following issues impact the park and its current use and bear on the decision to develop a disc golf course within the park.

1. Erosion - Erosion and Storm Water. Leddy Park has existing erosion and storm water runoff control issues (ravines on the north and south of the arena). There does not appear to be current erosion or storm water management plans for Leddy Park. It is suggested that Parks and Recreation immediately investigate the situation and implement plans to reduce erosion at both the north and south ends of the arena, including creating runoff detention ponds for water washing from the parking lot during heavy rains, regardless of any further disc golf decision making process.

2. Soil Compaction – Flora & Storm Water. Disc golf courses tend to suffer soil compaction issues. Closely monitoring season of play is key to avoiding the worst soil compaction issues. It is not clear whether Parks and Recreation or Btowndisc would monitor and control season of play.

On soils sensitive to compaction play should be avoided during spring and other times of wet conditions. Soil compaction and resulting elimination of ground cover in the park will have negative impacts on shallow rooted trees such as oaks and other vegetation and will enhance storm water runoff problems in the park. Compaction also increases risk from invasive species. Practices such as laying down wood chips were mentioned to help mitigate soil compaction. This would require a minimum of 4 to 6 inches of wood chips on all areas of heavy traffic. The Burlington Land Steward does not recommend wood chips be put in any wooded areas due to the potential for creating invasive species problems. And, whatever the current use of the woods, a disc golf environment would alter the current woodland by clearing trees and understory and with risk to additional trees that are not protected from being repeatedly hit by discs (per Mike Snyder and see **Exhibits A and B**).

3. Wildlife Impact. Clearing out existing understory growth in the park for disc golf fairways has the potential to negatively impact existing wildlife habitat within the park. The county forester noted that some songbirds may leave and that small mammals would likely see reduced habitat. It is recommended that these impacts be the subject of a more sophisticated study prior to authorizing any additional cutting within the park.

These important environmental issues should be addressed prior to any further decision making regarding disc golf in Leddy Park.

D. Safety and Private Property Concerns. Safety and property concerns investigated by the disc golf working group were:

- Leddy Park Road, access, traffic and sidewalk safety
- Private property concerns
- Adequacy of bathroom facilities in the park
- Potential alcohol use/abuse in the park.

1. Adequacy of Roads to Access the Park, Traffic and Sidewalk Safety:

Leddy Park Road is narrow and there is no existing sidewalk (and no apparent place for a sidewalk). As such the road is not pedestrian friendly. In the course of the working group discussions it was noted that drivers leaving Leddy Park and wanting to make a left turn on North Avenue go through the shopping center to utilize the traffic light at the shopping center. In addition, residents of Leonard Street and Lakewood Parkway often wait to make a left turn out of their streets. When leaving the shopping center and using Leddy Park Road to make a right on North Avenue the sight distance to incoming cars on Leddy Park Road is hard to see incoming cars without entering Leddy Park Road. This might be corrected by working with David Hauke owner of the center to trim or remove a few cedar trees.

It is recommended that a traffic study be conducted to determine the effects of an additional 500 to 1000 additional vehicles per week on traffic on Leddy Park Road and surrounding streets due to disc golf traffic.

2. Private Property Concerns and Setbacks:

This issue was not mentioned in the minutes of the Parks and Recreation meeting minutes

dated September 23, 2008. However, area neighbors and the NPAs are quite concerned about setbacks. The soccer field setbacks at Leddy to private property are quite heavily treed and help reduce the noise from the players and cheering section. The area along the Lakewood neighborhood fence is mostly cleared of trees and brush by the power company to maintain a clear area under the power lines. It is recommended that abutting homes have a minimum of 150-foot setback to the center of the fairway. As noted in the section on professional disc golf course design, below, setbacks are required to minimize trespass issues (see **Exhibit H** to see what disc throwing scatter patterns look like when overlaid on the original course layout for Leddy Park). Setbacks may be a moot point on the Lakewood side of the park due to Mike Snyder recommending the area south of Leddy Park Road as off limits for disc golf.

3. Access to Bathroom Facilities:

Warren Spinner informed the group of the hours of access to the bathrooms in the Leddy Arena and the bathrooms by the tennis courts. The hours seemed adequate, although the locations may not always be most convenient for disc golfers.

4. Alcohol use in the Park:

It is evident from visiting other disc golf courses that some players leave beer bottles on the course. However walking the 18 holes at Waterbury in November there were only two bottles on one location and four in another. It should be considered that alcohol use will increase but to what extent is not predictable.

E. Proper Course Design. There are no published standards for setbacks from fairways to pedestrians by the expert designers of disc golf courses. The Professional Disc Golf Association (PDGA) recommends that fairways are constructed to be 20-40 feet wide. In his report on statistical disc golf walking and throwing patterns, Steve West, indicates a scatter pattern for a 390-foot basket in excess of 175 feet to the left and right of the fairway (see **Exhibits D and H**). West assesses optimum fairway size as being approximately 3/4th to 1 acre per hole. This is consistent with good course design guidelines found on the web (see **Exhibit F**). For reference discs can travel 820 feet (see **Exhibit E**). The record for an “ace”, or hole-in-one is 726 feet (see **Exhibit G**).

Given the scatter patterns shown in West’s report one can readily conclude that walking paths and disc golf fairways should not be mixed and the setbacks from fairway to fairway should be taken seriously if accidents are to be minimized (see **Exhibits C, D, E, G and H**).

Disc golf courses are most successful where little or no other activity is taking place (see **Exhibits C, F, I and K**). In fact, in December 2008 Kansas State University banned disc golf from campus during week days because of campus damage and injuries, suggesting a dedicated disc golf course off campus as a safe alternative (see **Exhibit J**). It is interesting to note that photos of courses covered with grass that are sited in lightly wooded settings show few signs of compacted soils. This includes some courses that have populations of as few as two trees per holes (see **Exhibits J & K**).

F. Ongoing Costs. A realistic projection of ongoing maintenance costs and city oversight remains to be determined (see **Exhibits B and L**).

G. Alternative Sites for Disc Golf. The City, either through the disc golf working group or the Parks and Recreation Commission, has not fully assessed the suitability of alternative sites for a disc golf course, either within Burlington or within Chittenden County.

H. Single Use Dedicated Area for Disc Golf. Due to safety concerns, disc golf should not be a played in Burlington city parks unless it is restricted to single use areas dedicated to disc golf.

References:

Exhibit A – Professional Arborist Report – Bidwell Park – tree damage & defoliation

Exhibit B - Bidwell Park disc golf issues – soil compaction & erosion

Exhibit C – PDGA.com – discussion of dedicated space solely for disc golf

Exhibit D – leddypark.org – A statistical model of Boy Scout disc golf skills

Exhibit E – Innovadisc.com – disc throws up to 820 feet

Exhibit F – Innovadisc.com – site disc golf away from other activities

Exhibit G – motodom.com – 726 foot shot for a hole-in-one

Exhibit H – leddypark.org – map of original course plan with scatter pattern overlay

Exhibit I – reporterherald.com – site disc golf away from other activities

Exhibit J – K-State banning disc golf from campus due to damage and injuries

Exhibit K – Gateway Disc Sports –course design and installation – open course

Exhibit L - Olympia Disc Golf Facility Assessment – ongoing maintenance costs & tree damage