

Oakville Expands and Renovates Lawn Bowling Green

CHRIS MARK, ASSISTANT DIRECTOR – OPERATIONS, TOWN OF OAKVILLE PARKS & RECREATION

This past spring, the Town of Oakville expanded and renovated its lawn bowling green in downtown Oakville. The process, which took approximately eight weeks to complete, took several years to plan and approve due to many neighbourhood contentious issues. Following four public meetings, several Council Meetings, and several years of fund raising, the Oakville Lawn Bowling Club is now playing on a newly sodded, irrigated, tile drained and regulation size green.

Since the Club's inception in 1903, members have played on a green 109 ft. x 120 ft. Unfortunately, club members found it very difficult to bowl on a regulation size 120 ft. x 120 ft. green at other clubs, especially during tournaments due to their home green being 11 ft. smaller in one direction. Plus newcomers to the game should ideally be trained on a regulation size green. Provincially sanctioned tournaments were not able to be accommodated due to the non-regulation size green.

The primary elements of the expansion were as follows;

- Excavation and green expansion of 11 ft. This included relocation of light poles and a retaining wall.
- Installation of new plinth around the entire green
- Installation of new irrigation system and shed to house plumbing and controller equipment
- Installation of tile drainage system
- Installation of new bentgrass surface over the entire green

Local Issues

The green expansion was very contentious with local neighbours due to:

- 1) the Club being located in a Heritage District, hence change is very difficult to accept, and frankly completely undesired by some local people. Heritage Review Committee Approval was required on the design of the shed, exterior colour and finish, and material for the new retaining wall and perimeter fence;
- 2) several trees required removal due to the 11 ft expansion; and



- 3) 11 ft. of passive adjacent parkland from a small parkette would be lost.

Project Funding

The construction project was a partnership between the Club and the Parks and Recreation Department. Since the Club had been saving for the project for several years, a Green Expansion Sub-Committee wanted to be fully involved in the project from planning to supervision. The funding for the expansion was as follows:

Town of Oakville Loan	\$35,000
Trillium Foundation Grant	\$22,000
Parks and Recreation Dep't *	\$13,000
Club Savings	<u>\$10,000</u>
Total	\$80,000

* needed to replace 2 other retaining walls not dependent on expansion, but required replacement

This was an interesting project because it took many twists and turns along the way. Initially, the scope of work was simply an expansion of 11 ft., new retaining wall and irrigation. Due to grant money being available, a drainage system and an entire new sodded surface over the green was included later in the project. The Heritage Committee applied significant pressure to replace a chain link fence with a picket fence which appears in historic photos. Hence, the work was not tendered as one large project with one general contractor, but broken up into many quotations for all the various work elements. This resulted in many sub-trades coming off and on the site and coordination was critical. The on-site supervision was pro-

vided by the Club Volunteer Committee, with all invoices paid by the Town so GST rebates would assist in reducing the overall cost.

A soil and turf consultant was added to the project team since the soil for the new green and a proper nutritional program was assessed to be very important. Based on soil samples, the soil in the adjacent parkette was a very close match with the green, hence the bulk of the material required for the 11 ft. expansion could come from the parkette. This provided significant savings as the original budget estimate accounted for all green base material being imported from off-site. Additional material would be an 80/20 mix (sand/peat) to level the surface. Starter fertilizers were incorporated prior to sodding for additional nutrients.

Tile Drainage System

When it became apparent additional grant funds would be available, it made sense to include a drainage system for the green. Previously the green, although sand based, was poorly drained and required significant squeegee work following heavy or extended rainfalls. In total 13,500 sq. ft. were tile drained. The system included 22 trenches using 2 in. drainage pipe installed on 5 foot centers. A 4 in. diameter header line was placed along one end of the green, installed approximately 14 in. deep. A laser level was used for each line to ensure positive drainage.

The entire green is situated approximately 3-5 feet below street level, hence there were no catch basins available to provide an easy outlet. Water could either be collected in a sump hole and pumped up into a curb catch basin, or a rectangular drainage bed could be constructed behind a retaining wall to collect water from the green. The latter option proved to be the most cost efficient and effective method. The drainage bed was 12 ft. long x 4 ft. wide x 4 ft. deep. The bed was lined with filter cloth and filled with clear gravel. Filter cloth also was installed across the top of the bed to ensure no backfill material would migrate down into

the bed. Within the drainage bed, a 10 ft. long, 4 in. drainage pipe was installed connected by 3 header lines exiting from the green.

Green Renovation

With additional grant funds, the entire green surface was renovated since the majority of the turf was *Poa annua* and not bentgrass. (Originally the soil consultant expressed concern an 11 ft. expansion would be sodded with #1 bentgrass when the majority of the green was *Poa annua*.) The following process was undertaken for the renovation:

- All existing turf was sprayed with Round-up. Fourteen days following the application, sod was removed to a depth of 1 inch.
- 2-4 inches of 80/20 mix (sand/peat) was added to the green and rototilled to a depth of 6-8 inches over the entire green.
- Entire bowling green area was leveled with a laser level and prepared for installation of #1 bentgrass.
- Starter fertilizers were incorporated into the new soil mix. 0-22-0 agricultural grade sulphomag was incorporated at 25 kg/1000 sq. ft. A second fertilizer, 38-0-0 S.C.U, was also incorporated at a rate of 5 lbs/1000 sq. ft.
- Bentgrass turf was installed using plywood boards.

The green expansion and renovation was a challenging project in many respects. Luckily, the lead volunteer from the Club was an exceptional individual who spent hundreds of hours obtaining quotations for the various work elements and performing the site supervision.

Since additional funding was obtained late in the project, it required a concerted effort by all to organize the work and keep all trades working in unison and harmony. Because of very heavy rains during May and June, the contractors' schedules were constantly revised.

Now that essentially a brand new green has been installed, a proper fertility and maintenance program was required. Unfortunately, previous budget cutbacks had reduced maintenance which resulted in the green becoming essentially *Poa annua*.

- A fertilizer program was developed which delivered nitrogen and potassium at 1:1 or 1:2 ratio.

- Monthly applications of greens grade sulphate of potassium (0-0-50) at a rate of 3 lbs/1000 sq. ft.
- Topdressing the green every 3 weeks with regular aerating of perimeter areas where players stand to bowl.
- 5 applications of greens grade 36% magnesium (Pro-mag) at a rate of 4 lbs/1000 sq. ft. Applications timed 1 month apart.
- Application of a dormant (November) ammonium sulphate (21-0-0) at a rate of 5 lbs/1000 sq. ft.
- Utilize a deep tine aerator such as a verti-drain twice per year. This has a shattering effect and does not remove soil from the green.

On June 11, 2000, Oakville Mayor Ann Mulvale threw out the first ball on the new green. Club members began play approximately one week later. To assist the new green for 2000, no major tournaments are proposed except club matches.

Prior to the project, Oakville had possibly one of the worst greens in southern Ontario. It is now one of the best. The drainage system works superbly, and after several applications of topdressing sand, the green is becoming more level and playing much faster. An infestation of pythium blight immediately following the sod installation was detected and controlled with an application of truban fungicide.

The project was a success because all involved worked cooperatively and quality professional individuals were engaged to perform and provide consultation on the work. Special thanks to David Smith, DCS Agronomic Services, who provided the turf and soil consultative services, Jim Baker, Bakers Landscaping, who installed the drainage system and new green, and Robert Trillia who was the lead member of the Oakville Lawn Bowling Club and provided on-site supervision and financial accounting for the project. It was truly a team effort. ♦

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