

SPORTS TURF MANAGER

... for safe, natural sports turf

SUMMER 2005 • VOL. 18, NO. 2

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Bowling Green Construction Basics

LLOYD WOODS, NATIONAL GREENS ADVISOR, BOWLS CANADA

18TH ANNUAL STA FIELD DAY

With each new year bringing record-breaking attendance, this is an event you don't want to miss. It is being held Wednesday, September 14th at the Milton Leisure Centre. Our 2005 theme is *Environmental Stewardship: Healthy Soil... Healthy Turf*. See the inside front cover for session information. A full brochure will be mailed to all STA members.



Bowls, better known in Canada as lawn bowling, is a game that can be played as a social game or a competitive sport. However, no matter how one chooses to play it, lawn bowling is more fun and can be played with greater skill and finesse on a green that has been built with care and of course, is well maintained.

For quite a number of years, bowling greens have been built on a sand rootzone somewhat similar to golf greens and playing fields. However, unlike golf greens, etc., which are usually built with a sand/peat mix, bowling greens must be constructed using a pure sand rootzone to provide the hard, firm, damage-free surface and the fast pace needed for good bowling.

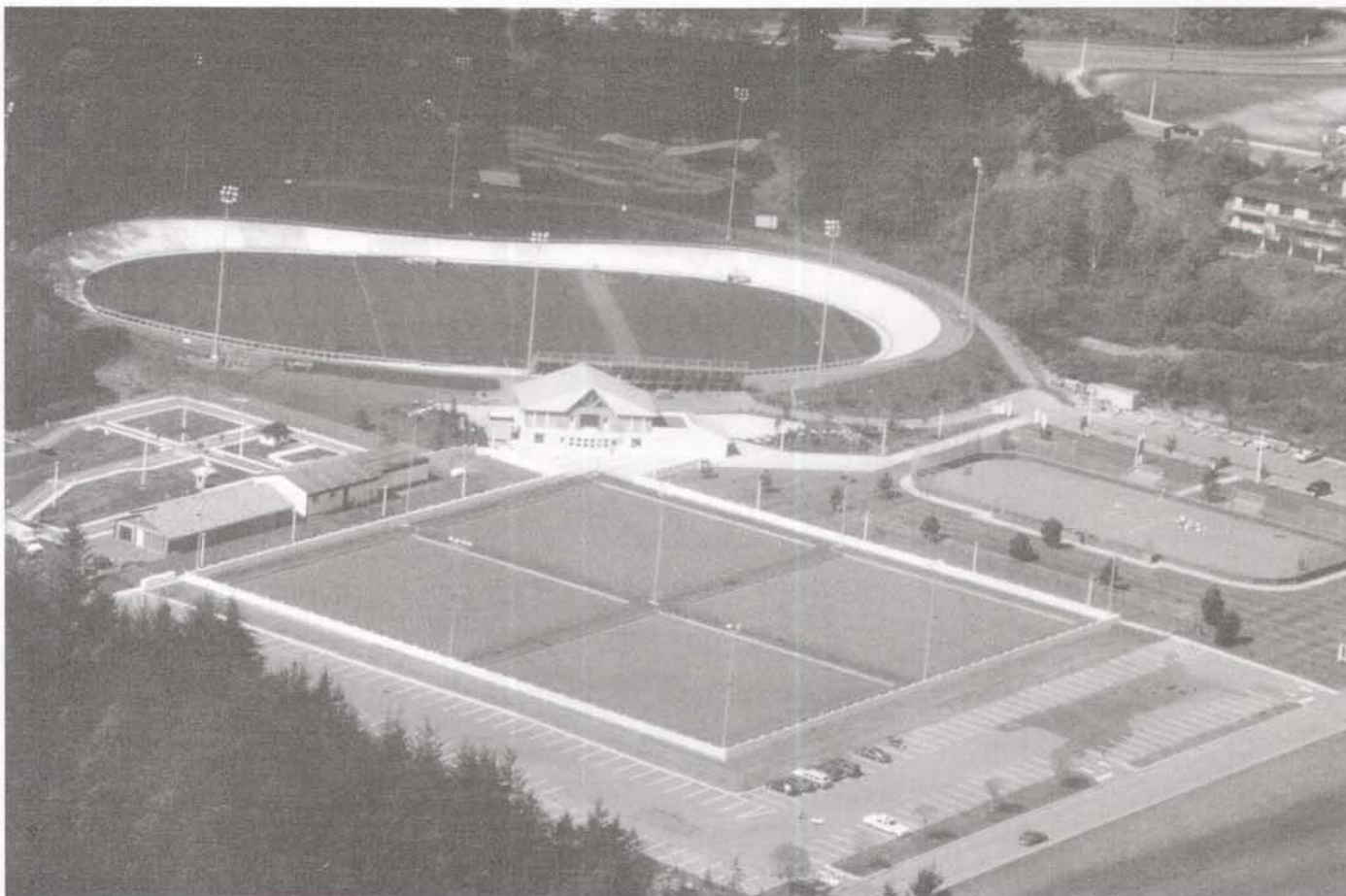
In most of Canada, optimal time for seeding is about August 20, which means that the schedule of construction should

be arranged so that the green is ready to seed on that date. Construction delays that prevent seeding on schedule reduce the time for turf growth and development before the onset of cold weather, so a realistic, rigidly adhered to building schedule is most important.

Design of the Green

The playing surface of a bowling green is an area of bentgrass from 37 m to 40 m square, levelled to plus or minus 3 mm. It is surrounded by a wooden plinth which retains the playing surface. Outside the plinth is a shallow ditch (200 mm to 380 mm wide) and beyond that is a backboard that retains a surround, raised 229 mm above the playing surface. The system of boards around the green is called the backboard/plinth system. → page 6

Above: Installing the first lift of the rootzone.



Cover Story Continued: Lawn Bowling Green Construction Basics

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Choice of Site

For best results, the green should be built on undisturbed native soil to avoid differential settling. Land that has been disturbed needs a great deal of preparation and can markedly increase construction costs. Former landfill sites particularly should be avoided because of their inherent instability which history has shown can make the green very difficult if not impossible to keep level.

If the site is fairly level without trees, the costs of proper filling and levelling will be kept to a minimum and good access to sewer, water services and power will reduce the often considerable expense of bringing them onto the site.

Basic Construction

Following the survey locating the green on the site, the first operation is to make a

shallow excavation of about 30 cm deep. The bottom of this depression, the sub-base, is levelled to plus or minus 2 cm. If low places exist, they must be filled with fully compacted sand and then the entire area is compacted with a vibratory roller.

Trenching on 1.5 m centres to accommodate 4" drain tile with headers, outfall, etc. is done. After the trenching is complete, a 6 mil polyethylene barrier is laid over the entire area following the contour of the trenches. In this way, the drain system will work evenly and the tiles will hold some water at all times. The barrier is particularly important if the sub-base is sandy or if filling some areas of the sub-base with sand or aggregate has been done.

The drain system is then laid and levelled to plus or minus 8 mm.

Next, the footings for the backboard/plinth system are poured and customized

metal spreader brackets attached. The plinth boards are then bolted to the brackets so that they are level with the final playing surface and the edge of the backboards are attached so their top is 229 mm above the top of the plinth.

After the backboard is complete, the irrigation system is then installed just behind them.

Adding and Levelling the Rootzone

The first 15 cm layer of pure sand, processed to USGA specifications, is then put in place, wet completely, and fully compacted with a vibratory roller. Similarly, the second layer is installed and compacted. This brings the sand slightly over the top of the plinth and the critical final levelling process begins.

Above: Commonwealth Greens, Victoria, BC

A 3.6 m custom-built screeder and rails set in the sand and levelled to within plus or minus 3 mm are used. The green is levelled in strips (each 3.6 m wide) and a number of passes are made with the screeder until a true, well compacted sur-

For best results, the green should be built on undisturbed native soil to avoid differential settling. Otherwise, the land may require a great deal of preparation and thus increase costs.

face is produced that is within the plus or minus 3 mm specification.

After the first two sections have been levelled, the rail between them is carefully removed and is re-laid to serve as a guide for the next section. This procedure continues until the entire green is level, a process that can take 24 hours or so.

The surface must be kept continuously wet after levelling to prevent changes of level due to wind erosion.

Seeding and Development

The surface is fertilized with a good

starter fertilizer and scarified lightly. It is then seeded with an appropriate bentgrass, Pencilgrass is often used, and kept wet until germination is achieved and a turf begins to develop. At this time, a light rolling takes place to settle the crowns of the plants into the rootzone.

The first mowing takes place when the grass has reached about 2 cm, usually between four and five weeks from seeding. Subsequent regular mowings at a decreasing cutting height helps the turf spread and knit together. With any luck, the green should be playable at the end of July the summer following construction.

Regular mowing at a setting of 3 or 4 mm and weekly dethatching are needed to keep the playing surface free of thatch and fast and keen.

More Help

This is a very general look at bowling green construction. Material is available that provides detailed information on building and maintaining a quality green. Check the Bowls Canada website at www.bowlsCanada.com or send an e-mail to office@bowlsCanada.com for additional information. ♦

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at www.sportsturfassociation.com

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