

Landscape Architecture | Site Design

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2577336 Ontario Limited c/o Eric Zou 4151 Highway 7 East Markham, ON L3R 1L5



RE: LINKSVIEW DEVELOPMENT / BLUE MOUNTAIN GOLF & COUNTRY CLUB

Mr. Zou,

Baker Turner inc. provide consulting services in Landscape Architecture, including Golf Course Design and Evaluation. In 2014, BTi was retained by Landex Capital Corporation to undertake an assessment of the proposed Plan of Subdivision for their lands with respect to the adjacent golf course.

You have requested that we review our original report, as it related to the most recent development concept plan prepared by MHBC.

On Friday, September 19, 2014, I met at Blue Mountain Golf & Country Club with Jim Malley (General Manager) and Don Campbell (Golf Course Superintendent). I was able to tour the course and undertook a detailed examination of holes 14, 15, 16, and 18. These holes border the Linksview Development. I observed that a well-defined hedgerow follows the boundary between the two properties. It is comprised of a mixture of both deciduous and evergreen trees, varying in height from 3 metres to 15 metres. The density of the canopy varies, but does provide an effective barrier to golf shots that otherwise would leave the course and enter the Linksview lands.

The purpose of my visit was to evaluate the existing layout of the course with respect to errant shots and potential danger to the occupants of homes currently being planned as part of the Linksview development. Using accurate ortho air photography from First Base Solutions and the Plan of Subdivision provided by Landex, I was able to document existing conditions quite accurately. The photographs I took on site provided information related to the hedgerow. With this information, we were able to accurately document the alignment of the golf holes and potential conflicts along the shared boundary.

There is considerable literature concerning the alignment of golf holes and issues related to errant golf shots. The most current and highly recognized publication on this matter is "Golf Course Architecture" (Second Edition) by Dr. Michael J. Hurdzan. This book was published in 2006.

The Evaluation Process

Holes 14, 15, 16 and 18 parallel the southern boundary of BMGCC, playing from west to east. Since the inception of the golf course, the lands adjacent to the southern boundary have been used for agricultural purposes. Conflicts or dangers from errant shots were of less concern when the properties south of the course were used for agricultural practices

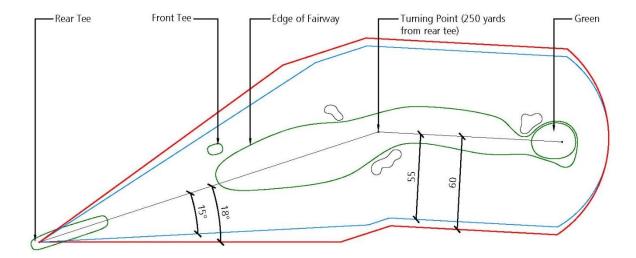
The boundary was considered "out of bounds" and therefore the main deterrent for golfers to avoid hitting errant shots to the right. The hedgerow, which has been allowed to mature, deflected many of the balls that would otherwise have left the property. The proposal by Landex to develop their lands adjacent to the golf course requires an evaluation of continuing play on the course and dangers that errant shots may cause.



White Stake

The center line of play for each of the holes were documented and the distance from the center of play through the hole, including the tee and the green, was measured. This is documented on the accompanying plan. A review of literature regarding safety zone setbacks from the center line of golf holes to adjacent properties would indicate that a safety distance should be taken into consideration. However, the consensus varies as to what that safety distance should be. The second edition of Golf Course Architecture 2006 by Michael Hurdzan states that it is now common practice, for safety reasons, to see a 121 metre corridor for each hole. This would indicate a distance from the center line of holes adjacent to the property line of 61 metres. This distance does not take into consideration other mitigating factors, such as dense hedgerows which are found along the common property line. However, the existing trees can only be considered useful in terms of mitigation if they are within the golf course property and subject to maintenance and additional plantings. The Cone of Safety is generally considered to define the area which is at least a 15 degree angle on both sides of the rear tee area, combined with a 61 metre setback. The centerline setback minimum is 55 metres. This was described in earlier editions of Hurdzan's book. A cone of safety angle of 18° is used by our firm. In evaluating the conditions at the BMGCC boundary, we have applied 55 and 60 metre setbacks and 15° and 18° cones of safety.

The zone of safety is the area surrounding a golf hole in which 92% of all golf shots can be expected to come to rest. That means that 8% of errant shots can still fall outside the zone of safety, the majority of which will come to rest slowly. It can be expected that 60% of all errant shots will be on the right side of the hole, since the majority of golfers are right handed and their errant shots are more likely to travel to the right, also referred to as a slice. The majority of these errant shots which fall beyond the zone of safety are moving slowly, having already bounced within the zone of safety or having been deflected by trees or shrubs. It must be remembered, however, that there is no absolute guarantee of safety with respect to golf balls leaving the property. It can be expected that, from time to time, golf balls may be intentionally struck to leave the property.



Actual dimensions of this envelope can vary depending on the following factors:

- 1. A dramatic change in elevation if the golf shot originates from a point significantly higher than the landing area, the envelope on both sides of the center line should be expanded. This is not the case at BMGCC.
- 2. Wind playing into the prevailing wind will exaggerate errant shots as much as 5%. This would have an effect of increasing the envelope. Likewise, playing downwind will decrease the size of this envelope. This is the case at Blue Mountain, since the prevailing wind is from the northwest.
- 3. Trees have a significant effect in intercepting the path of a golf ball. When trees are on the periphery of a golf hole, the envelope can be significantly reduced. Trees outside the golf course property can provide substantial shelter in reducing the distance of an errant shot. However, trees can only be considered mitigating factors if they are within the golf course.
- 4. Out of bounds this is perhaps the severest penalty in golf. It not only results in lost golf balls, but it effectively creates a two shot penalty. A ball leaving the golf course property must be replayed from its original starting point. Out of bounds therefore will be avoided by golfers at all costs. This tends to move the effective center line of the course away from the out of bounds. This is the case at BMGCC.
- 5. Bunkers and water features these can also alter the perceived preferable direction of play and therefore modify the envelope. However, neither water nor bunkers provide protection for adjacent properties.



15th Tee



Woodlot Edge



Hedgerow (typical)



15th Green Near Property Line



16th Green Near Property Line



Out of Bounds

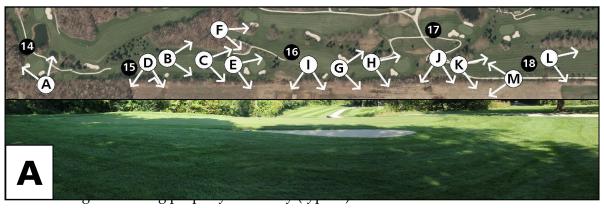


Dense Hedgerow Edge Near Tee



Additional Tree Planting on 18th Hole

With these principles in mind, we have overlaid the center line of play for Holes 14 - 18, adding to this line the Cone of Safety and a 60 metre setback from the center line. Areas outside of the golf course have been identified where the Cone of Safety and setbacks fall on Linksview lands (including the proposed buffer). The following is a summary of each hole.



Lower hedge row adjacent to 15th green. 16th tee looking towards hedge row at landing area 16th fairway with intermittent hedge row at property line.

14th green looking back to the tee. Out of bounds at woodlot (behind).



15th fairway at landing area looking towards green.



15th green, out of bounds right.



Mature hedge row along property boundary (typical).



Lower hedge row adjacent to the 15th green.



16th tee looking towards hedge row at landing area.



16th fairway with intermittent hedge row at property line.



Dense hedge row at property line at 16th green.



Thick hedge row near 16th green.



18th tee looking towards hedge row.



Right of 18th tee adjacent to dense hedgerow looking towards landing area.



18th fairway moving away from property line. Additional tree planting on right.



18th cart path looking back to the tee. Hedge row on left.

The following analysis summarizes my assessment of the current situation.

Hole 14

This hole is a par 3 with a maximum length of 166 yards. It plays at a right angle to the southern boundary. The safety envelope extends approximately 15 metres into the woodlot. A buffer zone is not planned for this area.

Recommendations: The density of the trees and the proposal to maintain the woodlot as nature preserve provides sufficient mitigation.

Hole 15

This hole plays parallel to the property line. The tee is located immediately adjacent to the woodlot which intercepts most errant shots towards the right side. The hedge row provides additional mitigation for most of the hole's length. The proximity of the fairway and the green to the south property boundary none the less still presents danger to the proposed residential lots.

Recommendations: The centre line of play from the tee should be directed further away from the property line. The fairway and green should be relocated approximately 60 metres away from the southern edge of the proposed buffer.

Hole 16

This hole plays diagonally towards the existing southern boundary of the property. The current landing area centre line is 22.7 metres from the property line. The centre of the green is 29.1 metres from the property line. The hedgerow at this point is sporadic, varying from low dense, thick shrubs to trees up to 12 metres in height.

Recommendations: The centre line of the hole from the tee should be moved left and the fairway redefined accordingly. The green and the centre line of the fairway should measure 60 metres from the southern edge of the proposed buffer.

Hole 18

This hole is a long par 5. The tee and the centre line of play is 37.5 metres from the property line. From the first landing area the hole plays diagonally away from the property line. While the hedge row is sporadic, approximately 30 trees have been planted adjacent to the property line.

Recommendations: The tee should be relocated directly adjacent to the property line and the hole directed away from the property line. The centre line of play should be relocated 60 metres from the southern edge of the proposed buffer.

Conclusion

- 1. The current alignment of golf holes 14, 15, 16 and 18, present areas of danger within the proposed residential lots and parts of the proposed park
- 2. While the hedgerow will intercept the majority of errant golf shots, it cannot be relied on to protect all areas. The hedge row will however greatly reduce the number of errant shots entering adjacent developed areas thus providing added protection to residents and reducing liability to the golf course.
- 3. The 10 metre buffer provided by the developer represents 16.6 percent of the setback requirement.
- 4. Realignment of holes 15, 16 and parts of 18 would appear to be feasible at modest cost without adversely affecting the playability of the golf course.
- 5. In establishing mitigation design changes to the golf course, there may be some latitude in reducing setbacks based on site conditions such as the density of the hedgerow, prevailing winds and the angle of play. This might allow for setbacks of greens for instance to be not less than 50 metres.
- 6. Notwithstanding that this report was originally prepared in 2014, the golf course and the land use proposed for the adjacent lands remains the same. The new concept plan for the proposed development incorporates the 10 meter buffer zones recommended.

Regards,

Baker Turner inc.

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