



Ross Restoration Guidelines

(A Preparatory Checklist)

The Donald Ross Society believes that the 400+ courses designed by the Scottish-born golf architect are works of art that merit close care and meticulous preservation. We realize that in some cases renovation work is needed, but we would emphasize, wherever possible, that the course also be restored to the approximate shape, look, and playing character of its original identity. We understand that in some cases accommodations are needed for the modern game, but we are also convinced that any such adjustments can be and should be done consistent with Ross' overall design intent.

Ross lived from 1872 to 1948. After his death, many of his courses were badly renovated by architects, some with famous names, who cared little for traditional design values. In recent years, however, a dedicated group of restoration-oriented architects have faithfully devoted their talents to restoring and bringing back Ross' work. The Donald Ross Society applauds such efforts. In the following outline, we distill the wisdom of recent restoration successes and provide a blueprint or checklist for clubs seriously considering restoring their Donald Ross design.

This document is the result of months of internal discussion and deliberation and represents the consensus of the board of directors and the officers of the Donald Ross Society. As part of any such effort, clubs should undertake the following steps. They are presented in an ideal sequence and are designed to help clubs ensure the highest quality restoration. While we are not in a position to endorse particular architects, we would urge clubs to work only with those designers who are comfortable with the basic strategies outlined below.

I. Archival Work: finding fossils.

- A. The Tufts Archives: the Donald Ross repository at the Given Memorial Library in the village of Pinehurst, North Carolina, houses more than 7,000 documents of more than 300 Ross courses. Archivist Audrey Moriarty catalogues a treasure-trove of artifacts, including original green sketches, design plans, field drawings, letters, and business records, all relating to the legendary Scottish-born architect.
- B. Aerial Photographs: Historic overhead photographs are indispensable in determining routing, bunker patterns, green shapes, trees, and angles of play.
 1. The United States Department of Agriculture: operates natural resources, soil, and water conservation agencies in local counties throughout the country that stock collections of dated aerial photographs taken from extremely high vantage points that allow for a direct, downward view.
 2. The Victor Dallin Aerial Survey Collection: stores more than 13,000 overhead images of more than 135 golf courses, primarily northeast and Mid-Atlantic properties, at the Hagley Museum in Wilmington, Delaware, all of them taken at slight angles from much lower perspectives.
 3. United States Naval Bases: overhead photos were once taken of all properties within a one hundred mile radius of U.S. Naval Bases for defense purposes.
- C. Topographical Photographs and Clublore: local historical societies may stock pictures of golf courses. Also, check clubhouse storage. Ask your club professional, superintendent, and senior members for pictures and narratives that describe how the course appeared after it first opened. □

D. Literature: do your homework through some basic research and reading.

1. Books:

- a. *Golf Has Never Failed Me: The Lost Commentaries of the Legendary Golf Architect, Donald Ross*.
 - b. *Discovering Donald Ross*: by Bradley S. Klein.
 - c. *Golf As It Was Meant To Be Played: A Celebration of Donald Ross' Vision of the Game*: by Michael J. Fay.
 - d. Club History Books
2. Historical Magazines: check the magazine collection at the USGA Golf House.
- a. *Golfdom*
 - b. *National Greenkeeper*
 - c. *American Golfer*
3. Newspaper Accounts: check local city and university libraries for both contemporary and dated newspaper accounts on microfilm.

II. Cultivate Membership Support

A. Education: develop an understanding and awareness of the destructive effect that committeemen and modernization have had on classical Ross designs.

1. Expert Guest Presentations: independent third party experts are persuasive, because memberships tend to trust those who don't have a personal interest or agenda in club politics.
 - a. Transformation of Ross Features: offer before-and-after comparisons that reveal the natural deterioration and transformation of original Ross features, especially bunkers, tees, and greens.
 - b. Hole-by-Hole Modifications: offer an historical account of all man-made hole modifications.
 - c. Overall Course Evolution: provide a chronological sequence of historical aerial photography that reveals the overall course evolution, namely with tree plantings and cross-bunker abandonment.

B. Preparation of Historic Visual Displays: stimulates a greater sense of pride and appreciation for your architectural heritage.

1. Outfit clubrooms with Ross memorabilia. Designate a prominent wall to hang field drawings, green sketches, newspaper articles, and dated black-and-white photography.
2. Convert revealing aerial photographs or original routing plans into informal placemats for all members to examine before meals or after rounds.
3. Commission an artist to paint a portrait or sculpt a bronze statue to commemorate Ross.

C. Value of Ross Traditions: Remember, heritage and tradition are valuable assets that can be marketed to attract new members and business engagements.

III. Hiring an Architect

A. Criteria: Identification of competent, qualified candidates.

1. Design Philosophy: the candidate should show a genuine respect, care, and concern for the course and its design history, and seek to identify, strengthen, and recover the Donald Ross character rather than undermine it.
2. Restoration Experience: take field visits to other sites to inspect the architect's craftsmanship and his interpretation of Ross' design features.
3. Phone Inquiries: talk to superintendents and club officials at courses where candidates have worked.
4. Schedule: determine whether candidate will be readily available, so examine his workload.
5. Location: the closer the candidate, the more on-site time he can devote to the restoration.
6. Interview: determine whether the candidate interacts well with the superintendent and the green committee.

IV. Developing a Long Range Restoration Master Plan: this is the process of coordinating a construction sequence and timeframe with a workable budget and vision for the next ten years. This will take responsibility for design decisions out of the hands of individual members, green committees, and superintendents and place it firmly into the hands of a capable visionary who can integrate modern agronomy and construction techniques with classical Ross principles of architecture.

A. Green Restoration: the process of recapturing the size, shape, contours, and orientation of original Ross greens and re-integrating them with the movement of the surrounding landforms. Donald Ross greens were

intricately shaped and set at slight angles to define strategic lines of play. Today, Ross' greens are much smaller manifestations of their originals with rounded-off corners. Plus, they have been raised by decades of topdressing, which no longer tie-in with their lost perimeter locations.

- B. Tree Management: Because of tree plantings and overgrowth, many Ross courses have been dramatically overdone with vegetation. Therefore, trees and shrubs must constantly be evaluated for removal. It all depends on the type of tree, its structure, and its relationship to critical golf course features. Ultimately, tree management is the process of evaluating how various species interact with their surroundings in the following contexts:
1. Strategy: How do trees affect the strategic playability of golf holes?
 2. Conditioning: How do trees affect surrounding turf quality in terms of allowing for light, air movement and proper drying?
 3. Aesthetic Landscaping: How are trees situated to enhance or screen potential perspectives and views?
 4. Safety: How are trees positioned to protect golfers from errant shots?
 5. Health: How are the trees themselves doing in terms of disease, growth patterns and overall structure?
- C. Recapture Intended Landing Areas: Additional length offsets technologies growing impact on the game. Today, golf balls are traveling greater distances than ever before. Innovative golf equipment demands that certain aging holes should be lengthened in order to bring their intended shot values and landing areas back into play. New back tees will recapture strategic bunkers or reclaim distinct ground features in the original landing zone.
1. Lengthen holes by making new tees available. Greens should not be moved in order to create distance.
 2. Lengthen the longer holes. The character of short par 4's and reachable par 5's should not be sacrificed in the pursuit of additional yardage.
- D. Reclaim Lost Cross-Bunkers: cross-bunkers and carry-bunkers exemplify the Donald Ross style. Ross used landforms as an opportunity to place bunkers. Cross-bunkers positioned in diagonal alignments were typically used to expose the movement of the terrain. Although these bunkers were ordinarily well short of play, they added balance and flow to the hole as golfers utilized their visual impact to orient and shape suggested shots in conjunction with the prevailing landforms. Reclaiming his original bunker patterns will help revive the intrigue of thoughtful shot making.
- E. Restore Existing Bunkers: existing bunkers have typically lost much of their Ross character due to years of sand build-up, spray, and erosion and the use of mechanical rakes on their edges. Bunker sizes diminish; bunker floors lose their intended depth; their shoulders lose original contours and muscle; and their sand/grass lines lose their edges. Existing bunkers should be renovated to re-instate the sand/grass lines to their proper size, shape and depth by scraping away the excess.
- F. Reinstate Natural Fescue Areas: peripheral locations throughout the course would benefit from cultivating varieties of native grasses, such as big and little bluestem, broom sedge, and fine fescues, that seed-out and turn wispy and brown, promoting the classical look, feel, and texture of an early-American Ross design.
- G. Renovate Present Tee Complexes: old tee surfaces typically need to be expanded, re-aligned, laser-leveled, and squared-off at the corners.
- H. Select Appropriate Golf Course Accessories: The process of selecting appropriate golf course accessories is an integral part of the restoration process. Old-fashioned accessories frequently enhance the presentation of your classical Ross design. Vintage wooden flagsticks, cast iron cups, custom-made tee markers, and other hand-made reproductions evoke an antiquated sensibility.
- I. Cart Path Plan: clubs should seriously study re-routing cart paths throughout the course – using them sparingly and re-locating them in inconspicuous locations.
- V. Maintenance Guidelines: A maintenance handbook should be established that defines the necessary protocol and procedures to preserve the restoration. Here, design and maintenance should be coordinated to enhance the classical style of play.
- A. Re-establish Firm, Fast Conditions through the Green: reviving the ground game influence.
1. Innovative Turfgrass Conversion: reinstate firm and fast conditions by converting fairways to one of the new hybrid turfgrasses, the genetic make-up of which allows a much lower cut, so that the ball can run and roll on the ground much like Ross envisioned.

2. Irrigation Update: The many benefits of good agronomy – including firm and fast surfaces and closely cropped turf – cannot endure in soggy, moisture-laden conditions. Therefore, it is imperative to have the ability to control water distributions with modern irrigation systems, which delivers water only to areas where it is most needed, thereby reducing the risk of over-watering other areas of the grounds.
 3. Top-dressing: modify the actual soil composition by aerifying and topdressing through the approaches and out into the fairways.
 4. Fertility Management: control fertility to minimize excessive growth and thatch build-up in closely mown areas.
- B. Restoration Equipment:
1. Walking Mowers: help maintain the size, shapes, and dimensions of reconstructed tees and greens.
 2. Hand Rakes: help maintain the size, shapes and dimensions of reconstructed bunkers; rather than reliance upon mechanized rakes.
 3. Fairway Aerifiers: help maintain firm fast surfaces.
 4. Sprayers: helps control dense undergrowth in natural fescue areas and thatch build-up in fairways.
- C. Alter Mowing Patterns:
1. Fairway lines should be extended further away from the perimeter of greens to provide options inherent to closely-cut chipping areas.
 2. Fairways should also be expanded to recapture their lost width.
 3. All fairways should be cut much tighter to the inside edge of bunker features. Bunker should not be protected or buffered by a ribbon of rough – the point, after all, is to let the ball roll into them rather than protecting them from incoming golf balls.
 4. Cultivate walking paths, one swath in width that leads straight from tees to fairways, to encourage walking.
- C. Mowing Heights: are usually tailored to the specific site conditions and turfgrass variety of each course. Different heights and rates are typically designated for greens, collars, fairways, roughs, and natural fescue locations.
- D. Green Nursery: establish a turf nursery using the plugs from aerification to create sufficient complementary turfgrass to aid in potential green expansion.
- E. Tree Care Plan: an inventory of tree care and conditioning is essential following tree management. Superior trees must be groomed and protected.