



## The Donald Ross Society's restoration guidelines

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The Donald Ross Society believes that all 418 courses designed by the Scottish-born golf architect are works-of-art that merit close care and meticulous preservation. We realise that in some cases renovation work is needed; but we emphasise, wherever possible, that the course should be returned to the approximate look, shape, and playing character of its original identity. We understand, in some cases, that accommodations are needed for the modern game, but we are also convinced that any such adjustments should be undertaken in concert with Ross's overall design intent.

Ross lived from 1872 to 1948. After his death, many of his courses were renovated badly by architects—some of these, by 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's distinctive design work. The Donald Ross Society applauds such efforts. In the following outline, we distil the wisdom of recent, successful restorations and provide a blueprint for clubs interested in recapturing their Donald Ross design integrity.

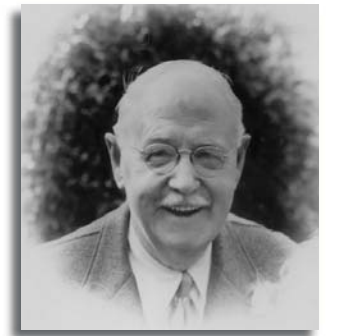
As part of any such effort, clubs should seriously consider the following steps. They are presented in an ideal sequence and are designed to help clubs achieve the highest quality restoration. While we are not in a position to endorse individual architects, we would urge clubs to work only with those designers who are comfortable with the basic strategies outlined in this essay.

### Archival research

At the outset, a vital process is uncovering historical documents and photographs that reveal exactly how the course looked and played shortly after construction. Any evidence that exposes the original design palette is a valuable resource. The following sources will greatly assist.

### *The Tufts Archives*

This is the Donald Ross repository at the Given Memorial Library in the village of Pinehurst, North Carolina, which houses more than 7,000 rare documents of more than 300 Ross courses. Archivist, Audrey Moriarty, catalogues a treasure-trove of artefacts, including Ross's original sketches of greens, routing plans, and field drawings.



Donald J. Ross captured in a light-hearted moment. (Photograph courtesy of the Donald Ross Society.)

OPPOSITE This 1928 Victor Dallin Aerial Survey depicts the inward nine at Forsyth Country Club in Winston-Salem, North Carolina, shortly after construction. A scattered arrangement of 'muscular' bunkers and raised fill pads highlight the image, which Forsyth adopted as its template for restoration in 2006. (Photograph courtesy of Forsyth Country Club.)



Please be aware that blueprints and other plans on paper did not always translate into how the course was actually built. So it's always a good policy to corroborate these drawings with photographs or other evidence in the field.

*Aerial photography*

Historic overhead photographs are indispensable. They are the best tools for exposing routings, bunker configurations, green shapes and sizes, tree patterns, and angles of play. Aerials can be uncovered at The United States Department of Agriculture, which operates natural resources, soil, and water conservation agencies in local counties throughout each state. These city/county government agencies stock collections of dated aerial photographs taken from extremely high vantage points that allow for a direct, downward view. Only ground contours are difficult to discern from these remote vantage points.

The Victor Dallin aerial survey collection comprises more than 13,000 overhead images of more than 135 golf courses, primarily north-east and Mid-Atlantic properties,

which are stored at the Hagley Museum in Wilmington, Delaware. Dallin aerials offer better views of ground contours, because they were shot at obscure angles from much lower perspectives.

The National Archives, based in Washington, DC, also houses overhead photos that were once taken of all properties in the 1930s for defense purposes.

*Topographical photography and club lore*

Historical societies may stock pictures of local 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.

*Literature*

Do your homework through some basic reading, via a number of sources, such as commercially available books, club histories, historical golf magazines, and newspaper accounts. Three highly illuminating books on the topic are: *Golf Has Never Failed Me: The Lost Commentaries of the Legendary Golf Architect, Donald Ross* (1996); *Discovering*

*Donald Ross: The Architect and His Courses* by Bradley S. Klein (2001); *Golf As It Was Meant To Be Played: A Celebration of Donald Ross' Vision of the Game* by Michael J. Fay (2002). Additionally, many fine examples of club histories exist. By visiting USGA Golf House you'll gain access to the following three important publications: *Golfdom*; *National Greenkeeper*; *American Golfer*. Newspaper accounts of Donald Ross and his courses can be checked at local city and university libraries for both contemporary and dated newspaper accounts on microfilm.

**Cultivating membership support**

*Educating your membership*

Because golf courses evolve naturally, memberships need to develop a better understanding of the detrimental impact that green committees and nature have had on their golf course. It's difficult to notice the damage in any one season, but over the course of eighty or so years, many classical golf courses have lost much of their original design character. Being able to visualise this transgression through time is a real eye-opener to the average club member.

For example, club officials could align historical aerial photographs in a chronological sequence (by decade) for comparison or arrange a series of aerial overlays that reveals the overall course evolution, namely with tree plantings and cross-bunker abandonment. They could also offer an historical account of all hole modifications (by human intervention) by colour-highlighting and captioning every design feature, distinguishing those that were original from those that had been added, adjusted, or removed through the years. They could also reveal the natural deterioration and transformation of specific Ross features, like bunkers and greens, by offering "before and after" photos for comparison.

*Finishing club politics*

Architects, consultants and other guest speakers are better positioned to give PowerPoint presentations before the entire membership in a Town Hall setting. These third-party experts are normally more persuasive, because memberships tend to trust those who don't have a personal interest or agenda in club politics. In contrast, club officials are better off talking individually to important



constituents of the membership, slowly developing a backing throughout the ranks.

*Accentuating agronomics*

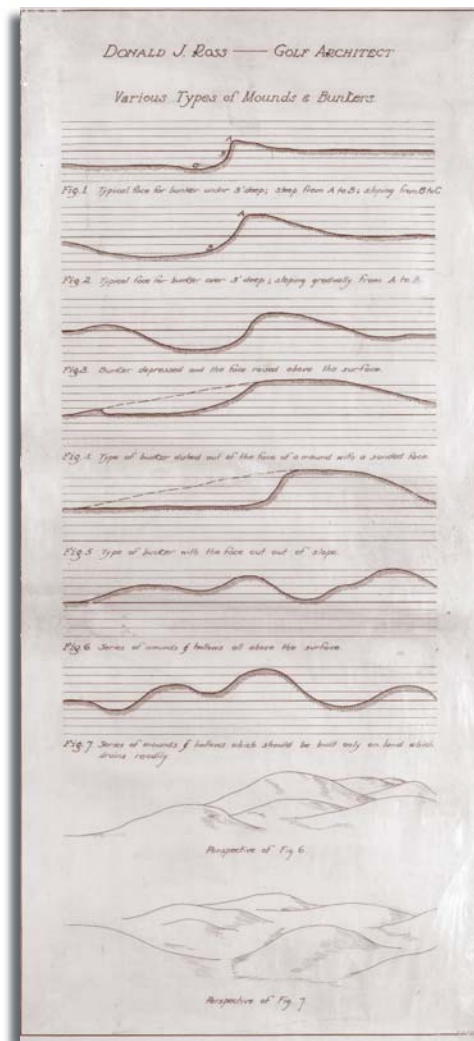
Because club members are always concerned with course conditioning, it would be smart politics to approach restoration plans with the emphasis on producing quality turf grass.

**Promoting your architectural legacy**

Preparation of historical visual displays and décor stimulates a greater sense of pride and appreciation for your architectural heritage. Clubs should designate a prominent location to hang Ross memorabilia, including field

The Donald Ross Society Logo was designed with a 'Ross Summer Tartan' crest bearing a geometric representation of the short third hole at Ross's Wannamoisett Country Club, Rhode Island, USA. (Graphic courtesy of The Donald Ross Society.)

OPPOSITE Donald Ross poses with a hickory stick in hand, and displays immaculate golfing attire for the era. (Photograph courtesy of Tufts Archives.)



drawings, green sketches, newspaper articles, and dated black-and-white images. Should a debate ever arise over Ross' intentions, members need only to consult their clubroom walls. Some clubs have converted revealing aerial photographs or original routing plans into informal placemats for all members to examine before meals or after rounds. Other clubs have commissioned a portrait of Donald Ross or oil renderings of his famous holes throughout the country to hang in their club library. Still others have created a historical page in their monthly bulletin for narratives and perspectives of yesteryear—all as a means of shoring-up their design legacy.

#### Restorations—fortifying your brand name

Donald Ross is a brand name of great reverence. The secret to his longevity is simple. Ross left behind an impressive legacy of 418 courses, where 100+ USGA national championships have been played. Certainly, a Ross course is an attraction, but its authenticity makes it one of the most powerful marketing tools available for clubs today. Clubs should nurture their Ross traditions for many rea-

sons. For one, restorations tend to launch Ross courses in the national rankings. Today, twenty-five Ross thoroughbreds are ranked in *Golfweek's* "Top 100 Classic Courses", many of which gained their fanfare following a thoughtful restoration. Ross restorations also enable clubs to raise initiation fees and enjoy a full membership. This phenomenon has been well documented at countless venues just on the promise of new Ross beginnings. Other clubs that once faced uncertain futures have been able to cap their membership levels and build waiting lists shortly after a Ross restoration.

#### Renovations—diluting your brand name

We caution that there have been numerous examples where drastic modernisations have had the opposite impact on Ross courses. Membership levels often shrink and course rankings often plunge. This can only lead to the conclusion that tradition still has its dominance and relevance in the modern-day marketplace. It's no small wonder clubs are buying into classical golf course restorations and fortifying the brand names of that genre.

#### Hiring a golf-course architect

##### Design philosophy

The successful candidate should show a genuine respect, care, and concern for the course and its design history; he/she will seek to identify, strengthen, and recover the Donald Ross character, rather than undermine it.

##### Candidate/Superintendent rapport

Determine whether the candidate interacts well with your superintendent. Superintendents should be involved in the restoration process from the outset so that design and maintenance can be co-ordinated. If the architect and the superintendent are of one accord, the restoration process will run smoothly. If they are not, trouble looms.

##### Background references

Restoration specialists, inevitably, develop their own unique styles when recreating Ross, so take field visits to other restored courses to inspect the candidate's craftsmanship and their interpretation of Ross's design features. Though restoration experience is a good indicator, it is not a requirement. (Please note, too, that numerous architects—without any prior

Ross restoration experience—have performed sound restorations.) Talk to superintendents and club officials at other restored courses where candidates have worked.

Determine whether short-listed candidates will be readily available, so examine the architects' upcoming workload.

There is a theory that the closer the candidate is located, the more on-site time can be devoted to the restoration project. This theory does not always hold true in practice.

#### Developing a long-range restoration Masterplan

This is the process of co-ordinating a timeframe and a construction sequence within a workable budget. This will take responsibility for design decisions out of the hands of rotating green chairmen and committee members and place them firmly into the hands of a capable visionary, who, along with your superintendent, can integrate modern agronomy and construction techniques with classical Ross principles of architecture. In any thorough restoration project, if it's to be successful, the following line/items, typically, should be considered.

#### Green restoration

This involves 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 shifted at slight angles to define strategic lines of play. Today, Ross's greens are much smaller manifestations of their originals—too many 'rounded-off' corners have surfaced. Plus, they have been raised by decades of topdressing, which no longer ties in with their lost perimeters.

#### Tree management

Because of secondary tree plantings and overgrowth, many Ross courses today are dramatically overdone with vegetation. Therefore, architects and superintendents must constantly evaluate trees and shrubs for removal. It all depends on the type of tree, its size and structure, and its relationship to critical golf course features, such as tees, fairways, bunkers, and greens. Ultimately, tree management is the process of evaluating how various species interact with their surroundings in the following contexts:

OPPOSITE These 'Various Types of Mounds & Bunkers' drawings by Walter Irving Johnson, Ross's design associate, profile a cross-section of bunker-styles and mounds 'in-vogue' in the early 1920s. (Drawing courtesy of Tufts Archives.)

OPPOSITE This 1925 Routing Plan for Roaring Gap Club in Roaring Gap, North Carolina, USA, yields many discoveries of Ross's original design intent. A full-blown duplicate hangs in its golf shop, for all members to examine. (Image courtesy of Tufts Archives.)

- How tree growth impacts the strategic playability of golf holes
- How tree foliage affects surrounding turf quality in terms of allowing for adequate light, air movement and proper drying
- How trees are situated to screen perimeter structures, and how can they be removed to enhance interior views and perspectives
- How trees are positioned to protect golfers from errant shots
- How woodland undergrowth is groomed to permit recovery-play options

*Recapturing intended landing-areas*

Additional length offsets technology's growing impact on the game. Today, golf balls are travelling greater distances than ever before. Innovative golf equipment demands that certain ageing 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. As a rule of thumb, try to avoid moving greens to create distance. Also try to lengthen the longer holes. The charm of too many short par-4s and reachable par-5s has

too often been sacrificed in the pursuit of additional yardage.

*Reclaiming lost cross-bunkers*

Cross-bunkers and carry-bunkers exemplify the Donald Ross style. Ross used landforms as an opportunity to position bunkers. Cross-bunkers positioned in diagonal alignments were, typically, used to expose the movement of the terrain. Although these bunkers were usually well short of play, they added balance and flow to the hole as golfers utilised 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 shotmaking.

*Restoring existing bunkers*

Existing bunkers, typically, lose much of their Ross character due to years of excessive sand build-up, spray, erosion, and the use of mechanical rakes. Bunker sizes diminish, bunker floors lose their intended depth, and their shoulders lose their original contours and muscle. Existing bunkers should be cleaned of their excessive sand and spray build-up, and expanded to their outer clay

shells—recapturing original floor depths, shoulder contours, and their intended grass-line edges.

*Renovating tee complexes*

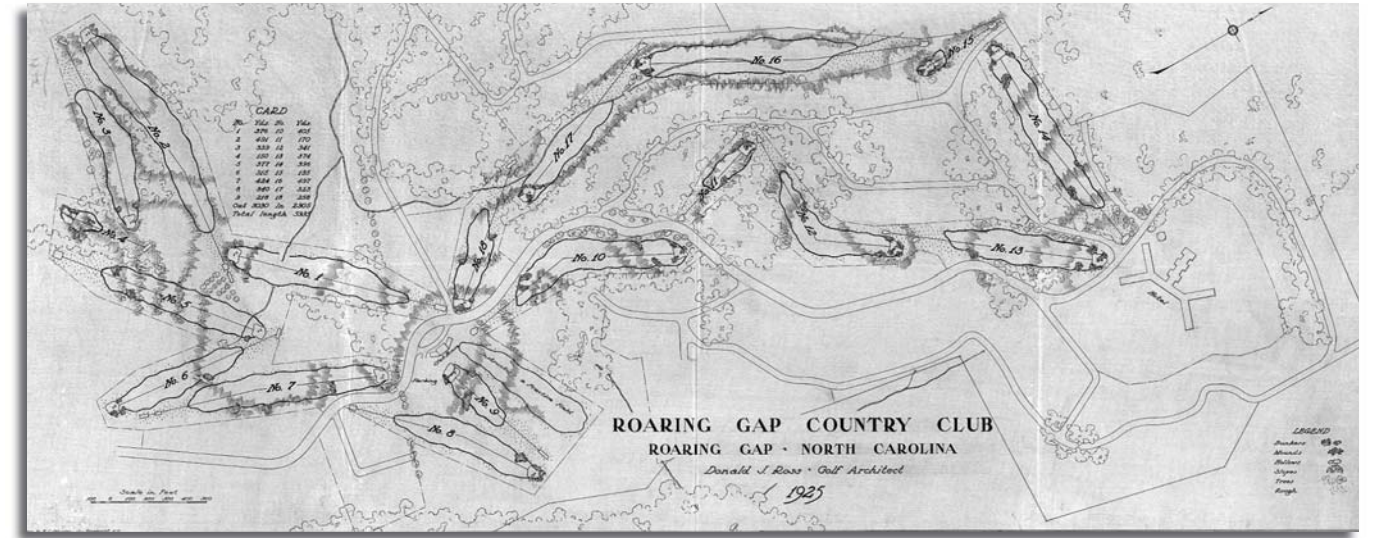
Old tee surfaces need to be expanded, realigned, laser-levelled, and squared-off at the corners.

*Innovative turf-grass conversion*

Reinstate firm-and-fast conditions by converting fairways to one of the new hybrid turf grasses; such genetic make-up allows a much lower cut, so that the golf ball can run and roll on the ground much like Ross envisioned.

*Updating irrigation design and controls*

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 allocation throughout the course. By customising irrigation design in conjunction with architectural features, specifically, fairway/rough lines, green surfaces, bunker surrounds, and native areas, superintendents can manage water distribution to areas where it is most needed, reducing the risk of saturating areas that don't.



*Reinstating natural fescue areas*

Peripheral locations throughout the course would benefit from cultivating varieties of native grasses, such as 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 landscape. Native fescue grasses thrive when stressed; therefore, it is important to limit irrigation in these areas.

*Selecting 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 classic Ross design. Vintage wooden flagsticks, cast-iron cups, custom-made tee markers, and other hand-made reproductions evoke an antiquated sensibility.

*Cart-path plan*

Clubs should seriously study rerouting cart paths throughout the course—using them sparingly and relocating them in inconspicuous locations.

*Preserving the restoration*

Maintenance guidelines should be established to help preserve and complement the restoration: long after 'grow-in'. This,

naturally, leads to a little more work for the superintendent. Clubs, therefore, must be prepared to beef-up their maintenance budgets. Superintendents will not be able to handle the additional work required to preserve the restoration without supplemental funds and an adequate labour force.

#### *Aerification and top-dressing programs*

Modify the actual soil composition by aerifying and top-dressing the fairways and approaches with heavy sand applications at least once a year. This greatly assists in producing drier, firmer turf conditions.

#### *Fertility management programs*

By spraying growth regulators, as required, clubs can control fertility to minimise excessive growth and thatch build-up in closely mown areas. This also helps revive the influence of the 'ground game'.

#### *Restoration equipment*

Walking mowers help maintain the size, shapes, and dimensions of reconstructed tees and greens, while hand rakes help maintain the size, shapes, and dimensions of recon-

structed bunkers. Reliance upon mechanised rakes has its limitations. Fairway aerifiers and top-dressers help remove soil plugs and distribute sand to large fairway areas more evenly and efficiently, all the while promoting firmer and faster playing surfaces.

#### *Altering mowing patterns*

Fairway lines should be extended further away from the perimeter of greens to provide options inherent to closely cut chipping areas. Fairways should also be expanded to recapture their lost width. All fairways should be cut much tighter to the inside edge of bunker features. Bunkers 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 protect them from incoming shots. Cultivate walking paths one swathe in width that lead straight from tees to fairways. This does much to encourage walking.

#### *Mowing heights*

These are usually tailored to the specific site conditions, climate, and turf-grass varieties of each course. Different heights and rates are typically designated for greens, collars, fairways, roughs, and natural fescue locations.

### **On-site turf nurseries**

#### *Green nursery*

Green surfaces tend to shrink over time, so establish a green nursery using the plugs from aerification to create sufficient complementary turf grass to aid in potential green surface recovery.

#### *Fescue nursery*

As bunker sand tends to 'flash', establish a fescue nursery to create sufficient complementary turf to preserve sand/grass-line demarcations around bunkers.

### **Tree-care plan**

An inventory of tree care and conditioning is essential following tree management. A certified arborist should be hired to groom and protect the trees that the architect determines are crucial to the strategic playability of the golf course.

Dead wooding involves the removal of dead, diseased and decaying wood and other hazardous branches. This especially applies to older trees. Hanging limbs can pose imminent safety dangers.

Crown thinning involves highlighting the

primary pillar branches in the tree by removing excessive secondary branching, which filters light and air circulation.

Crown reduction involves controlling the overall size of the canopy. Here, 'heading' is a method of cutting the primary branches back to stubs—usually done in situations where the tree has outgrown its welcome, or in congested areas where canopies merge and awkwardly compete for sunlight, air, and water.

Tree diagnostics that includes root pruning, deep-root fertilising, large spray operations, and even tree injections can protect important trees from disease.

The dual considerations of lightning protection and cable-wire suspensions can be affixed to tree appendages to reduce the potential safety hazards caused by wind and hazardous weather.

Adherence to the guidelines in this article will help maintain the integrity of your Donald Ross golf course, so all, for many years to come, can rejoice in the masterful works of this Scottish-born golf architect.



An image of Pinehurst's immaculate, beautifully designed clubhouse. [Photograph courtesy of the Tufts Archives.]