

ELEMENTS OF GOLF COURSE LAYOUT AND DESIGN

Excerpts from the Golf Development Council's newly published booklet. Available from the Secretary, The Golf Development Council. Price 2s. 6d. Plentiful illustrations and details of course equipment and running costs make this booklet a useful addition to the greenkeeper's library.

GREENS

Greens should be visible from the approach shot especially at short holes and have a prepared putting area of between 450 and 850 square yards depending on the internal design derived from the situation, the strategy of the hole, the length and type of approach shot and the degree of use expected. The long axis of the green will generally favour approach from one particular area of the fairway. Slopes in any direction, hollows and undulations may be introduced but like the general outline should be related to the scheme of play. They should never be so extensive that there are insufficient fairly level areas to cut holes and distribute wear, nor so acute that special problems of maintaining an even turf could arise and the progress of a putt become unpredictable. In practice, the more slopes contained in a green the larger its surface. There should be at least one special target area to present the problems of the hole at their best.

The construction and maintenance of the greens are next in importance to the general design of the course, and no money should be spared in providing proper sub-soil conditions and drainage, 10-inch depth of fertile top-soil of suitable texture and reaction, the appropriate fertilisers and the correct strains of grass seed. Good turf is rarely obtainable and the cost seldom justified. The Sports Turf Research Institute, Bingley, Yorkshire, will advise on these matters.

TEES

Tees should not be more than 60 yards from the preceding green but contour or boundaries sometimes override this consideration. They are normally elevated, rectangular and level. External slopes should be gradual to

minimise formality and maintenance. Tees should be of adequate area and number to distribute wear, especially at short holes, and to suit the length of the hole to conditions (e.g. shorter in winter) and type of use (e.g. championship ladies'). Tees of random shape are made but, though logical, are not immediately popular. There should be at least 250-350 square yards of teeing ground at long holes and 350-450 square yards at short holes but tee mats will still be needed on public courses in winter. Long single tees are feasible on reasonably flat sites and reduce mowing time but, on long courses, may waste space between the extreme backs and the forward areas suitable for everyday use. In strongly undulating country, several single tees may be inevitable to overcome problems of visibility and avoid expensive earth-moving.

BUNKERS

Well-sited bunkers cause thought before a shot is played—those punishing only a bad shot, though necessary for the control of play, contribute little to interest. They should not noticeably help judgment of line or distance, and size, shape and relative location should vary constantly. Wing bunkers guarding the green entrance are generally fundamental in the strategy of the hole. Strategy, broadly speaking, reduces the advantage of the safest line of play from the tee or second shot and rewards, by an easier approach to the green or the possibility of finishing closer to the hole, those who have earlier risked carrying or skirting one or more hazards. On these lines the player is stimulated to take stock of his ability and to play his best. Failure at any

(Continued on page 6)

(Continued from page 5)

hurdle should normally leave a chance, however remote, of redeeming error. Penal bunkers placed to catch the mistakes of the weak player may double the penalty. Bunkers should not be excessive where maintenance costs will have to be watched and shrubs, trees, water, hollows, mounds or slopes may all be used with discretion to add interest to play. The formation of the sand area should be carefully linked to surrounding land contours and direction of play. A natural "eroded" face with random outline should be aimed at and, on inland courses especially, related bunkers in a hole should form a coherent design both in play and in landscape effect. On seaside and exposed sites the size of the sand area and its surrounding contours should minimise the risk of scouring by the wind.

FAIRWAYS AND ROUGH

The width of fairways will generally vary between 30 and 45 yards with an irregular outline related to the scheme of play and merging not too obviously with the rough. Inner rough is kept short on most courses to avoid the delay of lost balls. Planting trees and shrubs in the outer rough and as a background to greens and tees will improve appearance and the safety of restricted sites but it should not be relied on unduly for the latter purpose. Separation of holes is desirable but thin avenues down each hole should be avoided. The objections to big leaves, the poisonous effect of pine needles, and the wide root range of certain species should be remembered. A basic mixture of Pine and Silver Birch, suitably relieved, commends itself on several scores. Most flowering or decorative trees and shrubs common in formal gardens are not appropriate in the golfing landscape.

The use of existing planting to frame holes will form part of the initial planning and isolated trees may sometimes be used as potential hazards in play. On small, well-wooded sites it should be remembered that clearing adequate playing widths may destroy the landscape effect of the whole area unless

these are carefully aligned to conform with the general planting scheme. Similarly the value of existing belts of woodland or tree-groups must be carefully weighed against the additional length of holes which might be achieved if they were removed.

GENERAL

Shelters distributed round the course will encourage play in wet weather, and there must be adequate storage under cover for course equipment, machinery, fertilisers and the preparation of compost. A water supply to each green is essential for a high standard of maintenance. Fairway watering is still exceptional. Seats, drinking fountains, bright flags, freshly painted flag sticks and tee markers, tidy fences or hedges, adequate direction arrows and litter baskets all contribute to the general impression of the course. A practice ground and putting green should be provided near the clubhouse with tees for tuition, a practice bunker and distance markers. Practice nets under cover for use in wet weather will be equally useful.

The practice ground will occupy between 3-4 acres if of average dimensions. It will hold many more players if operated on the "driving range" principle. Factors which may be taken into account include a northerly direction of play, protection of teeing areas from wind, descending rather than ascending ground with visibility of the landing area either side of 200 yards, and target greens, posts or defined areas with marked lengths. Width rather than length governs potential use—70 yards by 250 yards would be an acceptable average.

OTHER FORMS OF FULL-SCALE LAYOUT

It is probable that the ultimate interest and challenge of the game of golf will always reside in the standard layout of 18 holes built on the lines described. The infinite variety of this formula, the duration of the round,

(Continued on page 8)

(Continued from page 6)

and the degree of physical effort involved all seem to fulfil what is expected from the game. There are nevertheless some 482 nine-hole golf courses in the British Isles and there is no doubt that nine holes are better than none at all.

A new scheme started on these lines should provide wherever possible for eventual extension to 18 holes. The potential membership of about 150-200 full-playing members is quickly reached and the congestion arising when those waiting to play have to be intercalated with those starting their second nine diminishes the enjoyment of the round and may drive players elsewhere.

The principles of layout, design, and relative area are identical for nine holes as for 18 with two par-3s, two par-5s and five par-4s, the normal framework to achieve 3,000 yards more or less. Greens and tees will be of equivalent standard and area though, if space permits, alternative tees to vary line and distance in the second round will increase interest.

The clubhouse will be scaled down but even so it will be proportionately more expensive, like the golf course itself, when valued on the basis of potential users.

In sparsely populated districts this formula may well be appropriate or where there is some doubt as to immediate support for 18 holes or where the budget is limited and the second phase could be financed out of income from the first nine.

Near urban areas the nine-hole course is of greatest use when attached to an 18-hole course thus greatly increasing capacity while spreading the cost of the clubhouse over a greater number of players. In these circumstances it is possible to reduce the length of the nine-hole course if space is limited. A layout of 2,000 yards with four of five par-3s will be perfectly acceptable as a relief course and useful for beginners, the elderly, or on summer evenings for anyone with no time for a full round. An addition of this type is also of the greatest value for a municipal course where the proportion of beginners is high and the problems of congestion acute. It need occupy no more than 25-35 acres.

One public course near London reports 40,000 rounds on its short nine-hole course and 60,000 on its 18-hole course though the rounds of members must be added to the second figure.

Where two 18-hole courses are provided it appears undesirable to lower the standard of one in order to benefit the other unless there are very cogent reasons. A full-scale layout cannot fall too far below the average without the risk of reproach and there is a strong case for equality of standard in two courses side by side in order to equalise the load. The natural desire to have one course of high standard will often override this recommendation when space is limited but the better course should not then be planned for a total length which will rarely be used.

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