



# Developing a Golf Facility - The Process

by Roger Jones



Developing a golf facility requires a multi-disciplinary approach to achieve the aims and objectives of its developer, and the demands of the target market.

Whatever the project and whoever the developer, the steps required to develop, establish and operate the facility are generally similar.

## Development Land

The first stage in any golf development is to assess and select an appropriate piece of land for the project. This may be land that prior to development is in public or private ownership. It may be land already in the ownership of the developer, or land that has to be acquired.

### Public Land

Public land used for the development of public golf facilities is commonplace in many countries. These are generally daily fee golf courses and provided as facilities that are easily accessible by the population. Publicly-owned golf facilities may be standalone, or the golf facilities may be integrated into other sporting, leisure or recreational facilities, such as multi-activity sports complexes or parks.

### Brownfield Sites

Golf development can offer a positive solution to the reclamation and regeneration of 'brownfield sites'. These can range from exhausted quarries or opencast mines, to disused airfields or large commercial sites, to landfill sites, and even contaminated land.

A brownfield site is a viable consideration for the development of a golf facility because;

- A golf course is revenue generating unlike many other forms of open space.
- Brownfield sites are very often situated in areas of higher population density than greenfield sites.

There can be economies to the golf developer if bulk earthworks and reinstatement are part of the operations necessary to terminate and close the brownfield site e.g. capping of landfill sites and filling of voids left after opencast mining.

*The author of this publication designed an 18-hole golf course on the site of an old opencast coal mine in Wales. Part of the original mining permission agreement was that once the coal reserves had been extracted the land had to be reinstated for alternative use. Prior to the mining works finishing, an agreement was reached between the local government authority and the mining company to convert the land into an 18-hole daily fee golf course.*



### Agricultural Land

Most new golf facilities are developed on land that was previously used for agriculture or horticulture of varying kinds, including forestry. In most cases the agricultural activity ceases when the land is purchased or leased [rented] by the golf developer, or developed by the landowner replacing the agricultural business with a new golf and leisure business.

In certain circumstances it may be possible to maintain some agricultural activity on areas around a golf course.

The nature of the agricultural crop, its harvesting and the amount of routine maintenance required will determine how close it can be retained to the in-play areas of a golf course. The main factors governing this are the danger to agricultural workers from stray golf balls, the noise from agricultural operations impacting on golf, and ensuring that the in-play areas of the golf course are sufficient and playable.

The cultivation and harvesting of a wide variety of fruit trees and vineyards could be compatible with the development and operation of golf facilities.





## Area

The amount of land required depends on the type of golf facility proposed together with associated and complementary facilities, if any.

The land required for a commercial golf range can be as little as 3.5 - 4.0 hectares [35,000 - 40,000m<sup>2</sup>], whereas the development of an international standard 18-hole course and associated golf facilities requires in excess of 60 hectares [600,000m<sup>2</sup>]. This assumes the useable area of land and does not allow for encumbrances, or land that cannot easily be made part of the playable golf area.

The table provided at the end of this guide provides an indication of the amount of land each type of golf facility requires. It should be noted that this is only a guide, and each individual site should be assessed for suitability of purpose by an experienced golf designer prior to acquisition.

## Shape

The shape of any proposed development site [as defined by the property boundaries] can influence how much of the land is really useable for golf.

The ideal shape is a square or near square rectangle. Sites with lots of zigzag boundaries, small corners or narrow protruding areas may mean that the land cannot be used efficiently in the golf design, and therefore the development will ultimately utilise a greater land area.

## Topography

Land for golf development can be both too flat and too steep. When it is too flat, the land will not drain very well which can increase maintenance costs. A very flat golf course is also uninteresting to play, and although re-shaping of the land can be done with extensive earthworks, this may unnecessarily increase development cost.

Land that is too steep is much more physically demanding, perhaps too demanding for aged players, and is not enjoyable to the majority of golfers of all ages. Earthmoving and land re-

shaping is always possible but this is expensive and can put the commercial viability of a development into question.

What is termed 'gently rolling', 'gently undulating' or 'gently sloping' land is best.

As stated previously, each individual site should be assessed for suitability of purpose by an experienced golf designer prior to acquisition.

## Soils and Land Quality

Healthy soils make for healthy golf courses, and generally those are categorised as being well drained, rich in organic matter, and supportive of whatever is growing in them. Sandy soils are best, and silty or clay soils are also acceptable. Rocky [high stone content] impoverished soil is not desirable, but soil amendment is not difficult to do if necessary.

Golf facilities can be even developed on land with little or no soil as long the construction specification allows for the importation of soil or sand, and the cost of such is taken into account.

## Environmental, Archaeological & Statutory Considerations

Every development site should be assessed, at least at a preliminary level, for issues such as environmental sensitivity, archaeological or historical sensitivity, restricted use or buffer zones, zoning and permitted use designations, before any site acquisition is finalised, or before design and detailed technical studies are commissioned.

## Utility Services

All golf facilities will require some or all of the available utility services. These include potable water, sewage, electricity, gas and telecommunications.



The more readily available that these services are, the lower the installation cost will be for the elements of the golf facility that require connection. During the land acquisition process, the developer should carry out research into the availability of such services by contacting the service suppliers, and or by validating information provided by landowners and or their agents.

### Site Maps

At the beginning of every project, developers should obtain as much detailed mapping of the development land as possible. Some of the required maps will already be in existence and others will require the developer to hire the services of land surveyors to prepare such with the required detail and accuracy.

As most design and consultancy professionals now use computerised design applications, all or most of the maps will need to be made available in digital format.

### Planning, Design & Construction

The design and construction of a golf facility requires a team of people usually led by the developer or a developer's representative. Depending on the size and scope of the project, the developer's representative may be a professional project manager, an architect, a golf course designer, or other person suitably experienced in the type of project being undertaken.

The design and construction of a golf facility also involves a series of phases, systematically going through the different stages necessary to realise the developer's aims and objectives, each phase building upon the earlier one. Missing a phase or not completing one before the next begins can cause problems, delays and sometimes mean work having to be revised unnecessarily.

The following information is indicative of a typical golf course development, but as stated previously all projects are different and may require different or additional disciplines at different times.

### Research & Analysis

As stated above there are different types of land that are suitable for the development of a golf facility. However, there are a number of factors that have to be considered and analysed to determine whether a site will be suitable for a particular project.

Before acquiring land, a developer, or the leader of the project team, together with chosen professionals, should carry out extensive research into the various land issues documented above. In addition there are other key issues that have to be assessed such as; the availability of irrigation water, existing land drainage patterns and water table level; whether the site is easily accessible from existing roads, or will potentially costly road links have to be built; are the necessary construction raw materials available within reasonable proximity and can they be purchased at rates that are commercially viable for the development.

The full extent of the research and analysis necessary, and the costs involved in getting it all done, will vary from project to project. Only when this research can conclude that the land is suitable for its intended development purpose should a developer conclude the land acquisition and proceed to the next phase in the development process.

If any issues are identified that will make development difficult or impossible to achieve, developers would be well advised to find alternative land either in a similar area or a different area.

*Concurrently, all developers should undertake feasibility studies to ensure that what they propose to develop can be commercially viable. This involves market research, documenting the same, analysing the implications of the findings on the project, and developing the project concept to get the maximum commercial benefit from the target markets.*

### Concept Design / Design Feasibility

At the start of this phase the planning team will review the chosen land in a design and site layout context.



Familiarisation with the land is not just important to the golf course designer and buildings architects, it is important that engineers, surveyors, hydrologists, and even project marketing professionals begin to understand the land and how it can be designed and developed to achieve the vision of the developer.

The initial considerations for the design team include;

- Access routes to and through the site
- Suitable locations for clubhouse and maintenance complex; hotels and other complementary facilities if applicable
- Parking areas
- Realistic time schedule for the project
- Potential development cost, or achievability of development objectives within stated budget

After this the golf course designer can begin planning the facility. This study will assess different routing options for the type of golf course required, and suggested locations for the golf range and any other practice facilities. It will also assess how the natural features can be incorporated into golf holes in the best way, and how the golf course can start and finish at points suitable for a proposed clubhouse location.

A professional golf course designer will also take safety into account at every step in the design process, and will take account of local or national legislation that may affect the proximity of golf to land boundaries or roads, or other features. The golf course designer will also take

environmental considerations into account. This may involve not designing any part of the golf course in sensitive areas, or ensuring that other habitats are protected or enhanced, or that any existing waterways are not negatively affected.

During this golf design process, buildings architects and engineers will work on planning entrance roads, entrance features, parking and buildings. Engineers will be similarly involved in the planning of infrastructural elements.

A number of conceptual designs may be prepared for any project before the one that makes efficient use of the land, and provides the golf requirements of the development, is agreed by the developer and the other members of the project team.

*Concurrently, project concept information, and technical information, can be input to the feasibility study, together with the preliminary indicative estimates for the cost of the development.*

#### Design Development / Master Plan

This phase is where scaled details such as greens, teeing areas, bunkers and other features start to get added to the conceptual design. Buildings architects and engineers will do likewise for roads, buildings and infrastructural elements, and ultimately all of these features come together as a coherent and carefully considered 'Master Plan'.

Phases of typical Golf Facility Development		
Phase	Title	Activity
1	Land Research & Analysis	Identify site and carry out as much research as possible into the land in relation to boundaries, topography, soils, water, drainage, land use, accessibility, landscape, locally-available raw materials.
2	Concept Design / Design Feasibility	Preliminary routing plans and site layouts to determine the potential of the site in design terms and the potential to achieve the vision, aims and objectives of the developer.
3	Design Development / Master Plan	Develop the preliminary concepts - integrating with other projects elements, statutory requirements and technical issues to achieve Master Plan.
4	Statutory Permissions	Master Plan is presented, together with all relevant supporting documentation to obtain the permissions and permits necessary. [the amount of information varies by country and by statutory authority]  Master Plan may also be used for obtaining development funding and preliminary marketing and promotions.
5	Detailed Design	Detailed drawings for all site works and golf course features.
6	Construction Drawings & Construction Documents	Construction drawings, specifications, bills of quantity and documents for tender, negotiated contract or other form of agreement with contractors and sub-contractors.
7	Construction	The actual construction of the golf course, associated golf facilities and related works.
8	Establishment & Pre-Opening	Grow-in of the grass to a stage where it is mature enough to be opened for play. Installing signage, fixtures and fittings for opening.
9	Opening & Operations	Day to day management and operation of the golf business in accordance with the developer's business strategy.

These plans are usually produced in colour so that they are the first easily understood graphical representation of the proposed development. The plans can then be used for a wide variety of



purposes including informing community or government officials, presenting to investors or financial institutions, and many other applications.

The completion of the Master Plan usually also enables cost estimators [quantity surveyors] to produce more detailed and accurate cost estimates, which in turn can be used to update commercial feasibility studies, and or enable developers to secure the necessary finance or investment to carry out the proposed development.

Depending on the scope of the project, marketing and public relations activities may also begin upon completion of the Master Plan in order to start creating public awareness of the forthcoming development.

### Statutory Permissions

With the design and technical information prepared, applications can be made to obtain the necessary statutory permissions to carry out the development. Generally, this involves a variety of site plans together with a number of other documents that are relevant to the proposed development, and in accordance with local statutory requirements.

Most developers and project teams will have probably had a number of meetings with officials of statutory authorities during the earlier phases. They will therefore have obtained a lot of hopefully clear and concise information on the precise requirements of the statutory authority

so that they can prepare and submit all of the correct documents in order to avoid unnecessary delays, delays which are invariably costly to the developer and the project.

The amount, and precise nature, of information varies nationally and regionally.

### Detailed Design & Construction Documents

Detailed design and construction documents include detailed drawings for all site works and golf course features, construction specifications, bills of quantity and construction documents for tender, negotiated contract or other form of agreement with contractors and sub-contractors.

They describe in great detail exactly how the golf facility and other elements should be built, and the standards of materials and workmanship that are expected of the contractor[s]. Design professionals will produce separate drawings and specifications for their parts of the projects. In most cases these are co-ordinated and collated by the lead person, who in turn will pass them to contractors as part of a formal tender process, or for a detailed quotation.

In some cases, developers will commission their design and technical team members to produce all of the detailed drawings and other documents whilst the statutory permission is awaited [if they are confident that a positive response is expected]. This can enable them to start construction work at the earliest possible opportunity, thereby reducing the overall development period and reducing overall development cost. Others prefer to wait until the necessary permissions are granted to avoid the possibility of having to pay for abortive work being done.

### Construction

This is the period when the golf course is built according to the drawings, specifications and other construction documents. A typical 18-hole golf course construction takes in the region of 12 months. Courses built on land where the amount of earthworks is small may take a lesser amount of time, and conversely can take longer than 12 months if there are large volumes of earthworks involved, or if the project is affected by inclement weather at any time.



The finance necessary for the construction needs to be in place prior to commencement because it is a time of rapid spending with no income. Most contractors and other suppliers will require interim payments monthly, based on the agreed amount of carried out, or supplies delivered to site, during the particular month.

There are different methods of construction contract that can be employed to build a golf course and the following are three such examples;

- **Tendered Contract** - A select list of contractors with the relevant experience and expertise are invited to tender for the construction work. The golf course construction contract is monitored by the golf course designer and project manager throughout the works to ensure compliance with design, specification, and terms and conditions.
- **Negotiated Contract** - A negotiated contract can be appropriate where there is limited availability of golf construction expertise in a region or country, or in circumstances where a particular contractor is considered to be the best for the project. The golf course construction contract is similarly monitored by the golf course designer and project manager throughout the works to ensure compliance with design, specification, and terms and conditions. This type of contract can be perfectly acceptable provided all of the necessary development conditions are met, and that the contracts are equitable to both parties.
- **Direct Labour** - In regions or countries with a new or maturing golf market, the most efficient, and cost-effective, construction approach can be to contract experienced overseas specialists to manage the construction and undertake/supervise the specialist work.  
These would generally include a construction manager, one or more 'shapers' [the person with bulldozer who interprets the design drawings and creates the golf course shapes and features] and specialists in 'finishing work' [cultivations and seeding].  
Local companies, operators and labour can then be hired to provide all other general work and services under supervision and direction.

The construction of clubhouses, maintenance complexes and golf range buildings may start at the same time as the construction of the actual golf course or later, but will be timed to be

completed prior to the start of the establishment phase in the case of maintenance complexes, and approximately 2 - 3 months ahead of the golf facility opening in the case of clubhouses. This allows for final fitting-out, stocking and staff training.

### Establishment & Pre-Opening

This is the period that extends from the time that the golf course has been seeded and construction substantially completed, up to the time that it is ready to be opened for play. Typically, this will be a period of approximately 4 - 6 months in warm climates when a great deal of watering, fertilising, mowing and pest control must be done to allow the new grass to establish and mature. There are projects that have, by choice, allowed the establishment period to be 12 months or more, but the number of developers who can afford such an amount of time are few.

The cost of this phase must be accounted for in determining the overall development cost of any golf facility development.

Closer to opening, a number of other tasks have to be carried to get the golf course ready for golfers. These are the golf course 'pre-opening' tasks and include items such as final course measuring [for production of course scorecards, hole information signage and distance markers], installation of all signage and other course furnishing. These are not onerous tasks but are all needed and all too easily left until too late if not properly planned and monitored.

The similar pre-opening phase for clubhouses and other buildings is very much more intensive, and preparation needs to begin much sooner than it does for the golf course.

### Opening & Operations

At the operational stage of a golf facility the work of the design and technical project team is essentially complete, and responsibility is in the hands of the developer's management team, a team that will have been assembled separately a long time before.



The following table provides a summary of the different types of golf facility, land requirement and other relevant commercial and technical data. The table is an indicative guide and every golf facility will have different requirements at all stages of development and operation.

Facility Type	Characteristics	Associated Facilities	Market Appeal	Technical	Additional Comments
<b>Daily Fee Golf Courses</b>	<p>Open to visitors upon payment of appropriate round/daily fee.</p> <p>Usually lower cost than other types of full size golf courses.</p> <p>Can be 9 or 18 holes.</p>	<p>Clubhouse with changing rooms, golf shop, administration, food &amp; beverage. <i>[functional standard]</i></p> <p>Golf cart/trolley storage.</p> <p>Golf Range &amp; Practice Putting Green.</p> <p>Golf course maintenance complex.</p> <p>Car parking</p>	<p><b>Targets</b> Learner Golfers* Regular Golfers* Experienced Golfers* *resident or tourist <i>[quality of course will determine level of desirability to experienced players and tourists]</i></p> <p><b>Opportunities</b> Golf School Open Competitions Low-cost entry to golf</p>	<p>9 hole - c. 30 hectares 18 hole - c. 60 hectares <i>[proximity to roads, properties and on-site encumbrances affects amount of land required]</i></p> <p>Irrigation System</p> <p>Topographically - can be all terrains - more slopes and hills require more earthworks during construction. Very flat terrain needs shaping to create interest and for drainage.</p>	<p>Best located close to towns and cities. [within 30-40 minutes]</p> <p>Aesthetic value of land and surroundings less important.</p> <p>May have an affiliated 'Members Club' that uses the course but would not have any executive powers.</p>
<b>Semi-Private Golf Courses</b>	<p>Usually privately-owned or owned by the Club members.</p> <p>9 holes, 18 holes, or more.</p> <p>Open to members, member's guests, and non-member visitors upon payment of appropriate round/daily fee. <i>[visitors may be subject to time restrictions]</i></p> <p>Members pay an annual subscription. Members may also pay an initial entrance fee or for a preference share to become a member.</p>	<p>Clubhouse with changing rooms, golf shop, administration, food &amp; beverage. <i>[standard, service and styling in accordance with pricing structure]</i></p> <p>Golf cart/trolley storage.</p> <p>Golf Range &amp; Practice Putting Green.</p> <p>Golf course maintenance complex.</p> <p>Car parking</p>	<p><b>Targets</b> Prospective Members <i>[may be newcomers to golf or regular players]</i> Property purchasers</p> <p>Visitor Golfers* *resident or tourist <i>[quality of course and accessibility will determine level of desirability to tourists and experienced players]</i></p> <p><b>Opportunities</b> Golf School Member Competitions Open Competitions Corporate Golf Days</p>	<p>18 hole - 60 hectares plus [Up to 100 ha. if other facilities to be included]. <i>[proximity to roads, properties and on-site encumbrances affects amount of land required]</i></p> <p>Irrigation System</p> <p>Extensive and or high impact landscaping where appropriate.</p> <p>Topographically - can be all terrains - more slopes and hills require more earthworks during construction. Very flat terrain needs shaping to create interest and for drainage.</p>	<p>Could have real estate and other sports and leisure facilities included in the development.</p> <p>Premium on real estate with views of golf course.</p> <p>Best located within 30-40 minutes of towns and cities where business emphasis is on domestic market.</p> <p>Location may determine desirability and market positioning [better locations may derive higher fees]</p> <p>To maximise potential tourism business needs to be part of a cluster of min 3 and up to 6 golf courses.</p>
<b>Private Golf Courses</b>	<p>Almost always privately-owned but could be member-owned.</p> <p>18 holes or more</p> <p>Usually restricted to members and member's guests.</p> <p>Members pay high cost entrance fee/shareholding, and high annual subscription.</p>	<p>Clubhouse with changing rooms, golf shop, administration, food &amp; beverage. <i>[may be more luxurious with higher level of service and facilities commensurate with level of fees charged]</i></p> <p>Golf cart/trolley storage/members club storage.</p> <p>Golf Range &amp; Practice Putting Green.</p> <p>Golf course maintenance complex.</p>	<p><b>Targets</b> Prospective members <i>[usually wealthy individuals]</i></p> <p><b>Opportunities</b> Usually only interested in services and events for members.</p>	<p>18 hole - 60 hectares plus [Up to 100 ha. if other facilities to be included]. <i>[proximity to roads, properties and on-site encumbrances affects amount of land required]</i></p> <p>Irrigation System</p> <p>Extensive and or high impact landscaping where appropriate.</p> <p>Topographically - can be all terrains - more slopes and hills require more</p>	<p>Could have real estate and other sports and leisure facilities included in the development - all facilities being for the use of members and member's guests only.</p> <p>Premium on real estate with views of golf course.</p> <p>Best located reasonably adjacent to wealthier residential areas of towns and cities.</p>



		Car parking		earthworks during construction. Very flat terrain needs shaping to create interest and for drainage.	
<b>Resort/Estate Golf Courses</b>	<p>Usually privately-owned. Development companies or individuals. Private or publicly listed companies</p> <p>18 holes or more [<i>depending on land available</i>].</p> <p>Open to members, member's guests, and non-member visitors upon payment of appropriate round/daily fee.</p> <p>Members usually pay an annual subscription.</p> <p>Hotel or other residents may have guaranteed start times allocated each day.</p>	<p>Clubhouse with changing rooms, golf shop, administration, food &amp; beverage. [<i>could be attached to, or integral part of hotel</i>]</p> <p>Golf cart/trolley storage/bag storage.</p> <p>Golf Range &amp; Practice Putting Green.</p> <p>Golf course maintenance complex.</p> <p>Hotel</p> <p>Other sports and leisure facilities</p> <p>Other commercial/service facilities</p> <p>Spa &amp; Wellness Centre</p> <p>Car parking.</p>	<p><b>Targets</b> Prospective members Property purchasers Visitor Golfers* <i>*resident or tourist</i></p> <p><b>Opportunities</b> Links with tour/travel companies Golf School Member Competitions Open Competitions Corporate Golf Competitions</p>	<p>18 hole course plus real estate plus other facilities - min. 80 hectares - better 100 hectares</p> <p>Irrigation System</p> <p>Extensive and or high impact landscaping where appropriate.</p> <p>Topographically - can be all terrains - more slopes and hills require more earthworks during construction. Very flat terrain needs shaping to create interest and for drainage.</p>	<p>More emphasis on integration of golf course and other facilities, particularly hotels and real estate.</p> <p>Premium on real estate with views of golf course.</p> <p>Locations that attach to sea and beaches particularly desirable, or close to existing tourist centres.</p> <p>Located ideally within 60 minutes of nearest airport.</p> <p>Some international resorts extend up to 1000ha in size and contain 3 or 4 golf courses. Effectively towns in themselves with a town centre and numerous local centres.</p> <p>To maximise potential tourism business needs to be part of a cluster of min 3 and up to 6 golf courses.</p>
<b>Executive Golf Courses</b> <i>[otherwise referred to as Academy Courses]</i>	<p>Open to golfers and non-golfers upon payment of appropriate round/daily fee.</p> <p>Usually lower cost than full size golf courses.</p> <p>Can be 9 or 18 holes.</p> <p>Can be all par 3 holes or a combination of par 3 and par 4. Usually max. 1800m 9 holes, and 3600m 18 holes.</p> <p>Could be a second golf course to a facility with a full size 18-hole course.</p>	<p>Clubhouse with changing rooms, golf shop, administration, food &amp; beverage. [<i>functional standard</i>]</p> <p>Golf cart/trolley storage.</p> <p>Practice Putting Green.</p> <p>Golf course maintenance complex.</p> <p>Car parking.</p>	<p><b>Targets</b> Learner Golfers* Regular Golfers* Experienced Golfers* <i>*resident or tourist</i> [<i>quality of course will determine level of desirability to experienced players and tourists</i>]</p> <p><b>Opportunities</b> Open Competitions Low-cost entry to golf</p>	<p>9 hole - c.15-25 hectares 18 hole - c.30-40 hectares <i>[proximity to roads, properties and on-site encumbrances affects amount of land required]</i></p> <p>Irrigation System.</p> <p>Teeing areas grass or synthetic.</p> <p>Topographically - can be all terrains - more slopes and hills require more earthworks during construction. Very flat terrain needs shaping to create interest and for drainage.</p>	<p>If stand alone facility, best located close to towns and cities. [within 30-40 minutes]</p> <p>Could be an add-on facility to existing sports complex, or hotel, or residential community.</p> <p>Location dependant on whether stand-alone facility or part of complex with other golf facilities.</p>
<b>Golf Ranges</b> <i>[otherwise referred to as Driving Ranges or Practice Ranges]</i>	<p>A grassed and maintained area designated for hitting practice balls.</p> <p>One can buy a basket or bucket of balls to hit without having to pick them up.</p> <p>Play usually from synthetic grass mats [more durable than natural grass]</p> <p>Modern golf ranges include shaped</p>	<p><i>The extent of associated facilities will depend on whether the golf range is a stand-alone facility or part of an inclusive facility with golf course.</i></p> <p>If stand alone the following will always be required; Reception area, golf shop incl. confectionery and beverages, male and female toilets, administration, maintenance equipment storage</p>	<p><b>Targets</b> Non-golfers* Learner Golfers* Regular Golfers* Experienced Golfers* <i>*resident or tourist</i></p> <p><b>Opportunities</b> Golf School</p>	<p>In total in the region of 4 hectares.</p> <p>Ideal size 300m long x 100m wide - facing between north and east.</p> <p>Irrigation system</p> <p>Additional space required for car parking and other facilities if included.</p> <p>Topographically - can be all terrains</p>	<p>If stand alone facility, best located close to towns and cities. [within 20-30 minutes]</p> <p>Aesthetic value of land and surroundings less important.</p> <p>In many countries some or all of the hitting bays are undercover to provide shelter against weather, and floodlit for night time use.</p>



	<p>target greens to emulate golf course features and distances.</p> <p>Large golf ranges can be two-storey where demand requires.</p>	<p>incl. ball collecting machinery, ball washing and dispensing.</p>		<p>- more slopes and hills require greater earthworks during construction.</p>	<p>A putting green and an area for the practicing of 'short game' shots is desirable to provide a more inclusive facility.</p> <p>May need fencing if located near to existing properties or roads.</p>
<b>Putting Courses</b>	<p>Can be 9 or 18-hole.</p> <p>Natural grass or synthetic.</p> <p>Effectively golf courses in miniature with associated landscaping.</p> <p>Regulation sized golf holes.</p>	<p><i>The extent of associated facilities will depend on whether the putting course is a stand-alone facility or part of an inclusive facility with golf course.</i></p> <p>If stand alone the following will always be required; Reception area incl. confectionery and beverages, male and female toilets, administration, maintenance equipment storage.</p>	<p><b>Targets</b> Non-golfers* Learner Golfers* Regular Golfers* Experienced Golfers* *resident or tourist</p>	<p>Can be any size over 1000m2 for 9 holes. Larger area offers greater scope and more interest. Also offers more landscape opportunities.</p> <p>Irrigation system if grass.</p> <p>Topographically - more level terrain is preferable.</p>	<p>Could be an add-on facility to existing sports complex, or hotel, or residential community.</p> <p>Location dependant on whether stand-alone facility or part of complex with other golf facilities.</p> <p>When made synthetic can become a completely 'public' facility as an 'adventure golf putting course'</p> <p>Use by all sectors of population.</p>
<b>Putting Greens</b>	<p>Not really suitable as a standalone facility.</p> <p>Natural grass or synthetic.</p> <p>Associated landscaping.</p> <p>Regulation sized golf holes</p>		<p><b>Target</b> Non-golfers* Learner Golfers* Regular Golfers* Experienced Golfers* *resident or tourist</p>	<p>Can be any size over 500m2. Larger area offers more interest. Also offers more landscape opportunity.</p> <p>Irrigation system if grass.</p> <p>Topographically - more level terrain is preferable.</p>	<p>Considered by some in the golf industry to be the very best way of introducing people to golf.</p> <p>Capable of use by all sectors of population</p>

Source: Roger Jones Golf Design



## The Author

**Roger Jones** was born in Shropshire, UK in February 1963 and has spent his entire working career involved in the golf and leisure industry.

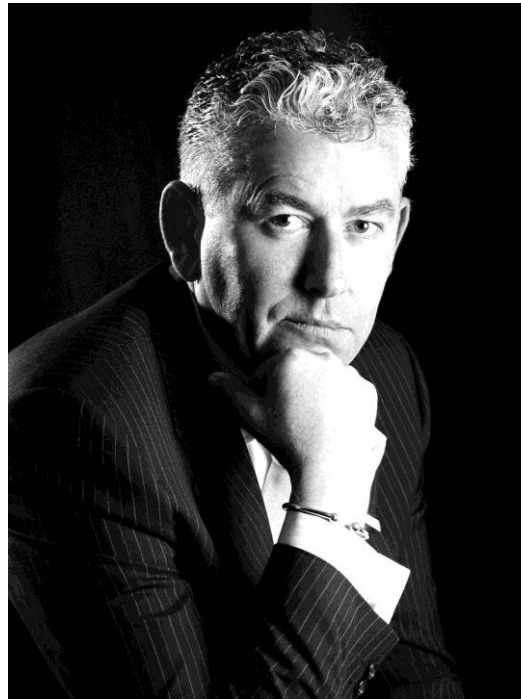
Having taken up golf aged 10, Roger soon fell in love with it. He won numerous club competitions, was Shropshire Junior Champion on two occasions, a Wales Junior International [1979 - 1981] and England Schoolboy International [1979 - 1980].

Roger turned professional in 1981 but after four enjoyable years it was evident that he was not going to reach the level required to be a successful tournament playing professional.

Staying in the world of golf, he established RJ Golf Consultancy in the UK, specialising in the marketing and management of corporate golf events. His contracts included managing an annual national golf championship for The Caravan Club, arranging managing golf holidays and golf schools for the Club's own travel company Touchstone Holidays, as well as golf days events for many UK based clients from blue chip plc's to local companies.

Roger was also contracted to assist in the establishment of a new golf facility near Paris, France - assisting the owner with the establishment of the golf business, and teaching the many newcomers to the game of golf. On his return from France he became a consultant to Petron Golf Equipment, a company specialising in the manufacture and marketing of tailor-made golf equipment, later becoming responsible for the setting up of a UK network of 'Custom Made Golf Club Fitting Centres'.

In 1990 he first became involved in golf course design and development consultancy in Wales. In 1991 a contract for the design of an executive golf course near Killarney brought him to Ireland and in 1992 he relocated there. Since 1992 Roger has been involved in the design and establishment of golf courses in Ireland, UK, USA and around Europe. Involvement in the development, pre-opening and operational phases of these developments has provided him with a broad knowledge of all aspects of the golf industry.



In 2001 Roger was contracted to design Garnant Park GC in Wales, an 18 hole golf course built on the site of an open-cast coal mine. When construction was completed Roger advised the local authority owners on the first management contract for the course. The club was awarded the honour of 'Best New Golf Club in Wales 2003'.

During 2007/2008 Roger carried out a re-design, renovation and upgrade for Balcarrick GC in Ireland. The course was successfully re-launched in June 2008, and in February 2009 Balcarrick GC was awarded an International Finalist place in the Renovation of the Year 2008, a global competition promoted by Golf Inc magazine in the US.

Roger has established a successful business which is currently concentrating its efforts on a number of different golf markets of the world, including India, Eastern Europe and Middle East. The company also provides a wide range of advisory services for golf development and operational management, and past assignments have included the preparation of a national golf development strategy for a country that has only two existing golf courses, but realises the benefits that golf and golf tourism can bring to its economy in the future.

In his years in business Roger has established solid and lasting relationships with many other specialists in the industry ranging from buildings architects to engineers, agronomists, ecologists, financial advisors, hotel consultants, construction companies, and many more. He has made presentations at a number of industry conferences and is a regular attendee at major industry events.

Roger is the owner and senior designer of Roger Jones Golf Design, and the owner of GreenScape Consulting. For all enquiries Roger can be contacted at any time by phone or email;

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