Golf Course Design, Project Management and Construction

Introduction

On Course is a results driven organisation

On Course focuses on optimising resource allocation and management within the professional services fields of golf course design and construction and golf estate development.

On Course management has a strong track record, demonstrated by its active engagement in all essential aspects, from design, assisting developers with viability/feasibility modeling, through to facilitating approvals and then on to construction and grow-in.

On Course is therefore well placed to offer a unique, full turnkey service.

With an established international network of companies and the most qualified people in the golf course construction industry, On Course is able to co-ordinate and manage project teams from start to finish in a seamless manner.

Our experience has enabled us to ensure that:
– We adhere to our critical path and construction timeframes
– Eradicate wasteful expenditure
– Maximise the use of available resources
– Provide the best on-site technical expertise and quality control in the industry
– Constantly monitor and report on cash flow, expenditure and progress.

With such specialist expertise, On Course is fully equipped to provide first class golf courses, which are of the highest quality.

On Course has the resources and expertise to ensure that a project is managed from inception to practical completion.

On Course’s core business is therefore focused on:
– Golf Course Design
– Golf Estate Feasibility/Viability Modelling
On Course has a wealth of experience gained over 20 years in the business. The two principals of the business, Tyrone Yates and Jon Bean started out in the construction and maintenance sectors before setting up a consultancy focused on design and project management. At the time of incorporation, there were no project managers in the golf course industry in South Africa that developers could turn to.

The net result was that developers would turn to designers for advice. The latter often advertised PM services as part of the “package of services”. Additionally, they would advise on for example agronomy “experts” to be used and indeed construction companies. This often led to a lack of competition and inflated contractor prices. Clearly this conflict of interest was skewed in the designers favour; they ended up with wonderful golf courses at the developer’s expense.

At the peak of golf estate development in South Africa, the above scenario resulted in courses being built which were costing in excess of US$16 million, which could conceivably have been built for half that with negligible loss of output quality.

Bearing the above in mind, On Course has defined a different model whereby; we work solely for the developer/client of the golf course/estate.

This guarantees the client that all options presented and decisions derived will be done in the client’s interest and with his authority.

DESIGN
In terms of design, we are confident that Tyrone offers the best value for money on offer. Tyrone is passionate about design not about legacy (His designs are after all his legacy). A great design will always stand the test of time.

Tyrone will work with you as the client and around budgetary constraints so that the design reflects optimisation of any budget. We have included a section on budgeting which illustrates factors which affect the golf course budget and thus also (where Tyrone is concerned) the design.

We will give you options with realistic costings that will ensure that you get a fantastic product that maximises your return on your spend and is conceptualised and executed around your specific and identified requirements. It is this important fact which makes your selection of designer and PM a difficult one as comparing “apples with apples” where golf courses are concerned is never easy, this is exemplified by “Big Name Designers”; the design fees can be deemed excessive (reflecting marketing opportunity/benefits rather than design benefits). Additionally, the rigidity of the attending construction specifications of the latter, generally ensure that the courses cost at least 30% more.

You will see from our resume that we have worked with many of the internationally recognised “Big Name Designers”. Every golf development project is different and the selection of the golf course architect needs to reflect the development requirements.

PROJECT MANAGEMENT
From a PM perspective, we offer numerous options depending on client needs. In terms of construction we have fulfilled a number of different roles from identifying capable contractors and going to tender (Including all tender documentation for fixed cost, cost + and measured contracts), through to sourcing staff, equipment, materials etc for clients who prefer to construct their golf courses “in house”.
From the brief summation above, I think it is clear that before we quote on any job, we prefer to give a menu of options available and tailor-make a solution which best fits with overall project requirements, as it is clearly not a case of: “One size fits all”.

I trust that you find our company profile of interest. Should you require any further information, please do not hesitate to contact us.

Regards,
Tyrone Yates and Jon Bean
Tyrone Yates

Tyrone started his career in Course maintenance at the Drakensig Air-force base in Hoedspruit during his Compulsory military service. After completing service he began at The River Club in Sandton as assistant course superintendent and after a short period became head superintendent. Whilst at The River Club Tyrone completed all turf grass management studies available at The Pretoria Technicon and completed further turf grass studies at Michigan State in America. After several years at the club he was fortunate enough to be given the opportunity to re-design and build new greens, tees and numerous other features in conjunction with Rob O'Friel. During this period he spent time at Augusta National with Marsh Benson investigating and learning about the sub surface aeration techniques Marsh had developed called Advanced Air. Tyrone installed the first system at The River Club and soon became the authority in South Africa on sub surface aeration. During his final years at the River Club, Tyrone started his professional teaching and club management career as an apprentice under master professional Roy Yates.

His expertise in the golf industry then saw him enter into a Golf and Country club consultancy for many clubs including Hans Merensky and finally taking on the position of head teaching professional at Leopard Creek in the Mpumalanga area, before going into full course design and estate project management.

Tyrone then developed the exclusive Millvale at Morningside farm, near Rustenberg as well as Glen Lyon Safari lodge in The Kalahari. He successfully completed these projects for Richard Charter and Patrick
Quirk respectively.

Thereafter, Tyrone was appointed as project manager for Blair Atholl Golf Estate near Lanseria. He was also tasked with building the now golf course on the estate. Since then Tyrone has designed and project managed many other golf courses throughout Africa and is currently working on the Addis Ababa golf club in Ethiopia, Rust de Winter (with Retief Goosen), north of Pretoria and St Michaels near Dullstroom. In addition, he consults for many courses on both maintenance and tournament preparation.

Tyrone is honored to have had the opportunity to work with golfing greats like Gary Player, Lee Westwood and Retief Goosen gaining invaluable insights, which has lead to him having great experience as well as variety in design, project management, construction and maintenance on all his projects.

Jon Bean

Having always had a passion for golf, Jon started his career in the retail side of the industry before moving into the role of golf professional and then golf director.

Jon then moved out of the golf arena to pursue a career in investment banking with Royal Bank of Scotland in Edinburgh. This was followed by a career as a management consultant with IMR (Institute of Management Resources), based out of California but working on projects in Europe and Australasia.

Whilst on sabbatical in Canada, Jon was asked to look at and then consulted to the developers of a new golf estate project in the Okanagan Valley, British Columbia.

Following on from this Jon took on the position of Operations Director for Matkovich and Hayes, a design and construction company in South Africa. Whilst with them, he successfully completed 5 golf course projects.

Following a successful three years in this role, Jon joined forces with Mike Wallington. Together they
started “On Course Project Consulting” and “Wallington Sports Turf”, a Project Management and Maintenance Company respectively. After three years, Mike and Jon went their amicable separate ways. Jon focused on the PM and consulting roles, whilst Mike focused on the maintenance side of the business.

Associate Partnership

Tyrone and Jon amalgamated their business interests in 2008 to widen and strengthen the depth of their offering and to offer a design element in Yates Design
Design

Tyrone Yates as the designer; centres himself in all aspects of the design and construction phase of a new or redesigned golf course.

Special attention is given to the routing of the golf course so that the course will provide a variety of hole lengths, shot values and par sequence within the confines of the natural topography of the site. This ensures that the golf course will take on a natural appearance as if formed by the forces of nature. Strategic placement of tees, greens and hazards to confront and challenge the low handicapper while not unduly frustrating the player of lesser skill is given the utmost attention during design. Specific attention is also given to environmental considerations.

The development of golf courses attracts the attention of most environmentalists who are concerned over the possible negative impact not only the construction of the golf course will have, but the overall affect it causes on the immediate environmental surrounding. The truth of the matter is, if built to international environmental standards, certain flora and terrestrial fauna benefit immensely. By utilising indigenous grasses tee to green; water usage (1,000,000 litres/day as opposed to 1.5 mil litres/day), fertiliser or chemical controls are minimal. In using indigenous grasses all areas adjacent to the playing areas can be enhanced in terms of reptile, amphibian, bird, mammal and terrestrial invertebrates’ habitats. On Course maintain a strict eye on the Environmental Management Plan and control the construction phase with environmental strategies that eliminate these negative impacts or alternatively keep them to a minimum through awareness and rehabilitation strategies.

Design Services include but are not limited to the following:

- Site Appraisal and Surveys
- Preliminary routing plans and site layouts
- Feasibility Studies
- Costing & Financial Feasibility
• Golf Course Design
• Design Co-ordination
• Course Staking
• Tree Staking
• Driving Range/Practice Facility Design
• Planning & Other Statutory Permissions
• Landscaping and Ecological Issues
• Construction Drawings
• Bill of Quantities & Contract Documentation
Estate Project Management

On Course has developed a model for co-ordinating a project seamlessly from inception through to completion.

The planning phase is essential to the success of any development. Any "rushed" planning will inevitably lead to changes to the critical path of the project with attendant cost overrun implications. To this end On Course will ensure a tried and tested professional team is appointed, with all members able to deliver the right results in a timeous manner.

On Course Project Consulting appoint and coordinate the professional team and liaise with the client group. We set out the program for approvals and the appropriate start of the project. On Course project consulting oversees all the professional team submissions and approvals. On Course also manages the tender process, approvals and appointments.

**Golf Estate Feasibility/Viability Modeling**
The most crucial part of a proposed golf estate is the planning phase. This involves the appointment of the full professional team.

From the information supplied by the team and tender documents generated, On Course will build a model for the timing, expenditure, cash flow and revenue streams to ensure a viable and ultimately successful project.

Below is a brief rundown of the typical make-up of the professional team together with a short precis of their respective responsibilities.
Legal Team  Land availability / purchase agreement / Option to purchase. Land Claims investigations if applicable. Determining and setting up organisational structures (Homeowners Rules, etc). Tender documentation review. Surveyors  Sourcing general plans, title deeds, cadastral info. Sourcing air survey, topo maps, existing contour info. Converting existing mapping to digital. Preparing development general plan.

Town Planners

Geotechnical/Consultant Engineers
Initial desktop geotechnical assessment. Site visit and landform inspection. Preparation of Development Application geotech report.

Environmental

Architectural
Preparation of initial architectural theme and code. Preparation of sketches and typical structure styles. Urban design concept report. Gatehouse and clubhouse design.

Consultant Engineers

Golf Course Architect (On Course Project Consulting)
Initial layout design. Initial budget and costing. Overlay with town planner to ensure safety zone from golf course. Master Layout and design co-ordination during construction.

Market Research/Sales

On Course Project Consulting/Project Manager
Coordinate professional team and liaise with client group.

Security
Identify a complete security solution for the estate.
Golf Course Project Management

PM Services Offered

Provide a channel for Client and Architect communication.
Detailed Monthly Reports on Progress and all aspects of construction.
Site Management of the day to day construction of the development, including:

- Appointment of Site Supervisor
- Layout of Golf Course.
- Tree and Works Protection
- Bulk Earthworks (Earth Movement) Management.
- Appointment of Shaper (Usually 10-12 months – Not included in fees)
- Appointment of Irrigation Supervisor (Not included in fees)
- Drainage Installation oversight.
- Management & Training of feature construction (Tees, Greens and Bunker Installation).
- Monitoring/Training of the finishing and grassing of the golf course.
- Assistance with Clubhouse design & location
- Coordinating the installation of all utilities and infrastructure construction
- Provide grow-in and on going maintenance services program.
- Supervision, management and review of logistics, requirements and construction costs
- Co-ordination of Construction Schedule
- Grow-In/Establishment and Programming
- Progress monitoring
- Prepare, evaluate and ultimately advise on maintenance machinery required.
- Advice on operational structure for course maintenance and club operational expenses.
Technical Services Offered

- Agronomy
- Drainage System Design
- Construction Specifications
- Sourcing & Sampling Raw Materials
- Irrigation Requirements
- Establishment & Maintenance Programming
- Landscape Design
- Tree & Shrub Planting & Management
- Ecology
Setting Golf Course Budgets

We have added this rundown to give you an idea of the complexities involved in setting a budget for the construction of a golf course. All too often a client has a budget in mind, which does not take cognizance of the specific site factors at hand.

The question of setting a golf course budget is one, which inevitably arises. A firm of quantity surveyors may well take into account historical data in order to “Bench Mark” a golf course. Whilst there is some value to this exercise, there are a great number of variables and specifics to each site, which are ultimately responsible for setting a budget. For the purpose of clarity, I have listed a few of the common variables, which affect the course construction and budget.

Golf Course Design

The choice of designer will impact heavily on whether a course leans towards a high, intermediate or low budget. Most golf course architects “sell” their design with corresponding golf course specifications. Some also insist on using their own agronomists and their recommendations. The degree of flexibility with the design and specifications can impact heavily on overall costs. For example, drainage specifications such as “Cut off drains every 30 metres” can increase drainage costs substantially without necessarily improving the drainage plan. A rocky outcrop not picked up in a geo-technical investigation, may have to be blasted out at great cost or may be incorporated as a feature depending on the rigidity of the design and designer in question. The design fees themselves also entail a huge differential, where overall design fees may vary from US$200,000- to US$2,000,000-

Construction Variables

There are a number of reasons for highly variable golf course budgets:

1. Site Specific
   1.1 Soil Conditions
   A Geo-Technical investigation will reveal whether a site has good or bad topsoil and/or subsoil. This in turn will be analysed to see whether the “in-situ” material is sufficient to be stockpiled and spread or whether material will need to be imported.
   1.2 Rock
   From the Geo-Technical one can deduce to an extent how much blasting may be required. At
approximately US$30- per m³, this can have a massive impact on overall costs.

1.3 Extent of Bulk Earthworks
Following on from the point above, one could probably average out bulk earthworks on a standard golf course at approximately three hundred thousand cubic metres. That said, some sites may require substantially more, going up to eight hundred thousand cubic metres. Averaged out at US$6- per m³, one can see how this component can severely increase overall costs.

1.4 Shaping
The choice of a shaper will also influence both costs and quality. With top shapers charging up to US$18000- per month and in general contracts lasting 8-12 months, the use of a local secondary shaper with previous golf course experience may reduce these costs, however, this may often lead to short term savings at the expense of long term problems such as drainage.

1.5 Capping
To cap fairways (Importing topsoil due to the lack of suitable in situ material) can cost between US$600,000- and US$1,500,000- depending on the location of the course and availability of suitable material as well as the latter's proximity to the site.

1.6 Drainage
Once again, drainage is a key factor in golf course construction. A shaper can substantially reduce drainage costs by using subtle swales and mounds to channel water along the surface, thus reducing the necessity for piping (at far greater expense). The underlying material may in itself also reduce drainage costs, with sandy soils draining well of their own accord. Continued playability due to good drainage will ensure a continuous revenue stream. Drier climates obviously may not require the same level of drainage as wetter climates, further factors influencing the setting of a budget.

2. Greens
2.1 Size makes all the difference here. Average greens of around 5-700m² are the norm, should they be larger, the costs increase exponentially.

2.2 USGA Spec Greens are one option available. The layering required and availability of silica sand which meets the stringent specifications for USGA greens, may entail selecting California Spec greens when a new golf course is located a great distance from a silica sand site and transport costs for the sand make USGA an expensive option. Availability of local materials and equally important, consistency thereof, all affect the greens type.

2.3 California Spec Greens do not involve laying the 100mm stone layer or 50mm “Choker layer”. Additionally the silica sand/growing medium has a more flexible specification allowing for sourcing in a more immediate vicinity, making this the greens spec of choice on most low/moderate budget courses.

2.4 Sub-Air Systems – This is an option for top level specification golf courses which allow a course superintendent far greater control during maintenance.

3. Tees
3.1 Capping, if required can add a couple of hundred thousand dollars to a budget but has the positive of allowing for consistency of material through 18 holes, with no “Hard Tees”.

3.2 Levelling – Laser levelling is a marginal extra cost, though this method of levelling tees is now pretty much the norm on all courses regardless of budget.

4. Grass Varietals & Grow-In
4.1 The choice of grass has a large impact on costs. Seeding and/or sprigging should there be such an option also varies across the grass varietals. Kikuyu/Cool Season Grass’ for example can be either seeded or sprigged, whilst paspalum can only be sprigged or sodded. In the latter instance, working of 25Ha, the material alone will cost over one hundred and fifty thousand dollars as opposed to seeding/sprigging with kikuyu, which would cost less than half that.

4.2 The Grow-In also varies enormously, Cynodons and Kikuyu will generally get full coverage with less inputs (fertilisers and herbicides) and in far less time than for example Paspalum. That said, climate may
dictate the latter and result in maintenance savings down the line.

4.3 The availability/appropriation of land for use as a nursery can reduce grassing and sod costs, substantially reducing overall outlays in the long run. The added benefit occurs during grow-in where sod reduces the hazards of rain/storm damage so prevalent in thunderstorm areas.

5. Irrigation

Irrigation is a component of construction that can vary from US$400,000- to US$2,500,000- depending on the system used and the site (Hilly sites may require booster pumps/rocky sites may require substantial hard rock excavation costs as well as import of bedding material). The more expensive systems are generally in use where water supply is less plentiful and where the maintenance team are looking for greater control over the supply of water.

6. Cart Paths

Cart Paths may be continuous/green to tee or somewhere between the two. Both the type (Concrete/paving, etc) and the in-situ material affect pricing as well as diameter (1.8m being the absolute minimum). Should suitable material such as G5 sub base need to be imported to the site, this will impact substantially on costs.

7. Bridges and Engineering Structures

Dams, Bridges and other engineering structures impact substantially on costs. In the case of dams, should there be a deficiency of clay on site for sealing, either plastic or bentonite sealing will raise costs by approximately US$150,000- depending on size. Bridges at dam and river crossings will also impact substantially on costs.

8. Landscaping

Again, this is site specific. A course on previous undeveloped land may require very little due to the generous nature of indigenous material, whilst courses on for example prior sugar cane fields, will entail having large budgets to re-establish indigenous forests and plants. Others on previous mine dumps, require extensive budgets to establish the park layout (with a difference) from scratch.

Conclusion

The question of courses with “high” budgets is thus not a cut and dry one. Each site may demand a high expense component specific to it. Thus budgets are not necessarily set to be “High per se”, but rather the site will to a large extent dictate the budget required. Generous budgets are those where no compromise is expected to achieve the result. That said most courses involve compromises of one sort or another. It is worth noting that in essence a golf course could be looked at as a large landscaping operation which potentially produces an income. Expenditure of US$8 million amortised over a thousand stands results in a “landscaping budget of US$8K per stand”. Extensive feasibility/viability studies will generally dictate the allowable budget for a golf course, taking into account site specifics as mentioned above. As a general rule a “great site” could involve expenditure of US$5 million to achieve a fantastic result, such as Elements Private Golf Reserve. Others will involve expenditure of US$10 million plus to achieve a similar result.

Thus the question frequently posed, “Why a high budget is a draw card for the development” has no straightforward answer. The developer is often obliged to spend more due to site specifics. Equally, on the design side, the debate is still on as to the marketability of a “Big Name Design”.
Experience

DESIGN

- Rossmund Golf and Country Club (Swakopmund Namibia)
- Hans Merensky Country Club (Phalaborwa RSA)
- The River Club - redesign of greens (Sandton RSA)
- Morningside Farm Estate and Golf Club Northwest Province (RSA)
- St Micheils Estate (Dullstroom, RSA)
- Rock Cliff (Eastern Cape)
- Kidds Beach (Eastern Cape)
- Woodlands (Eastern Cape)
- Addis Ababa Golf Course (Addis Ababa, Ethiopia)
PROJECT MANAGEMENT

New Courses:

- Zebula Country Club (Complete)
- Elements Private Golf Reserve (Complete)
- Pinnacle Point Golf Estate (Complete)
- Cotswold Downs Golf Estate (Complete)
- Simbithi Eco-Estate (Complete)
- Ebotse Golf Estate (Complete)
- Fernkloof Golf Estate (Complete)
- Highland Gate Golf Estate (Complete)
- Blair Atholl Golf Estate (Complete)
- Eye of Africa Golf Estate (Complete)
- Metropolitan Golf Estate (Complete)
- St Michells International Leisure Estate (Pending)
- Aloe Falls Golf Estate (Pending)
- Rock Cliff Golf Estate (Pending)
- Royal Northlands (Pending)
- The Bay Golf Estate (Pending)
- Glen Lyon Kalahari Nature Reserve Northern Cape (RSA)

Renovations

- Monument Golf Course (Complete)
- Richards Bay Golf Course (Complete)
- Umhlali Golf Course (Complete)
Consultancy
• Lagoa Azul, Sao Tome
• Earth, Wind & Fire Courses, Dubai, UAE
• Amorim Development, Brazil
• Marau Golf Estate, Brazil

RESPONSIBILITIES:
• Viability & Detailed Costing, Rate Based and Projected.
• Setting of Internal Budgets, updates and analysis thereof.
• Capital Expenditure evaluation and sign-off.
• Tender Document Preparation.
• Tender Evaluation/Award.
• Client Liaison.
• Construction Consultancy.
• Certificates for Fixed Cost/Cost Plus & Measured Cost contracts.
• Programming for the entire golf course construction including sub-contractors.
• Monthly Progress Reports to Client (Forecast/Budget/Certificate/Actuals).
• Sourcing.
• Order and Accounts systems.
• Projected Financials of golf course (Operations/Maintenance Costs vs Income).
• Maintenance Costing and tender documents.

OTHER DESIGNER PROJECTS UNDERTAKEN:
• Greg Norman – Eye of Africa, Earth/Wind & Fire
• Ernie Els – Highland Gate, Nondela Golf Estate
• Gary Player – Blair Atholl, Morningside
• Peter Matkovich – Pinnacle Point, Cotswold Downs + 5 others.
• Mark Muller – Metropolitan Golf Club
• Retief Goosen – Rust de Winter & Ponte Malengane
Contact Us

Contact On Course Project Consulting
E-Mail: enquiries@oncourseprojects.com

Tyrone Yates
Mobile: +27 (0)82 9040709
E-Mail: tyrone@oncourseprojects.com
Fax: +27 (0)866 938833

Jon Bean
Mobile: +27 (0)83 2822797
E-Mail: jon@oncourseprojects.com
Fax: +27 (0)866 938833
Skype: jon.bean

Address: 302 Herald Place, Tamboerskloof Road, Tamboerskloof, Cape Town
17B Waldorf II, 6 Centre Road, Morningside, Johannesburg
P.O.Box 12367, Mill Street, Cape Town, 8010, Western Cape