



IRRIGATION PROJECT

Frequently Asked Questions

1. Why do we need an irrigation system in the first place?

The main use for irrigation is to keep grass alive. Irrigation is also necessary to protect the golf course from dry spells, to ensure that we get maximum benefit from our fertilizing, wetting agent, top-dressing, and seeding programmes, and to be able to present the golf course to a standard that keeps Baltray amongst the top ten courses in Ireland.

2. What is wrong with the current irrigation system?

The current system is 30 years old and failing. The PVC pipework is leaking as are many of the sprinklers. The system is also inadequate in terms of control over moisture management, coverage, and effectiveness as we have seen during the drought in 2018.

3. Can we not repair / maintain the existing system?

We have been doing that now for several years. However, we cannot deal with the continuing leakage issue and replacing defective sprinklers does not address the coverage limitations of the current system. The cost of maintenance will drop substantially when we have a new system.

4. Are we doing this just for green fees / visitors?

Absolutely not. Whether we are a member's club or a visitor's club, we need to address this matter and as current custodians of the links, we have an obligation to pass it on to the next generation of golfers in at least the same condition as we received it.

5. Who did the design, how was he selected and what other work has he done?

The design and specification were carried out by Adrian Mortram, Adrian Mortram Associates Ltd., Norwich UK (AMA). Adrian was recommended to us by our STRI Consultant Ian McClements. STRI are the leading authority on the maintenance of golf course turf and agronomy. They have been consulting with CLGC for over 20 years. Adrian has carried out similar projects in Ireland for The Island, Portmarnock, Ballybunion, Ballyliffin, Royal Portrush and Co. Down. All these projects were completed on time and within financial budget. In the UK Adrian has worked on all but one of the open rota courses and he is currently working in Royal Troon in advance of The Open returning there in 2024.

6. Are we getting what we need or what we want?

The brief given to Adrian Mortram was to give us a design typical of those produced by him for similar venues with the same standing in world golf as County Louth. That design was to provide adequate irrigation for all putting surfaces and immediate surrounds, approaches to greens, fairway playing areas, tee playing areas, walkways and carries.

An upgrade to the water supply was also specified to include new pumping equipment and a water tank. All materials were to have a 25 year + lifespan and all tenderers had to show, by way of reference projects, their ability to carry out the project to the quality and standards expected on a world class course.

7. What is the likely cost of the new system and are there savings to be made on this figure?

The best price offered for the main contract was €974,950 excluding VAT and contingency. This price follows detailed discussions with the proposed contractor Aquaturf Ltd. who previously quoted €1,310,388 in December 2019. The current offer now includes a 24-month service contract, extended warranties on labour and materials but it is contingent on carrying out the contract this coming winter and spring.

We believe that all potential savings have been incorporated into this price without any compromise to the scope or design of the project.

8. What is the final estimated project cost?

The final estimated cost is € made up as follows:

Main contract as Q7 above:	€ 974,950
Contingency:	€ 100,000
Design & Supervision Fees:	€ 30,000
Geophysical Survey (2022):	€ <u>20,000</u>
Total net price:	€ 1,124,950
VAT @ 13.5%:	€ <u>151,868</u>
Total project cost:	€ 1,276,818

9. How can you be sure that there will not be significant cost overruns?

A fully detailed and comprehensive bill of quantities with layout plans was prepared by AMA for the whole project to include all materials such as piping, sprinklers, valves, cabling, pump house, water tank and control system. This detailed bill of quantities reduces considerably the risk of cost overruns.

However, we cannot guarantee that there will not be some cost increases as a consequence of the current price rises in commodities and building materials. For this reason, we are making a provision of €100,000 contingency in the budget, double what would normally be included. We consider it prudent to allow for this amount given current circumstances.

From our discussions with other clubs who have used AMA and the same contractor, there has been no negative feedback with respect to cost overruns and the contingency has seldom been fully used.

10. Are there any other add on costs that we should provide for?

We think it prudent to carry out a geophysical survey and to have a second well capable of delivering sufficient water for the irrigation system in case our original well fails. The cost of this is estimated to be €20,000. The survey would be done during the driest time of the year so would most likely be carried out in the summer of 2022.

We also need to allow for the contract supervision costs and fees for AMA which are budgeted at €30,000.

11. Do we have to do it all in one go?

The project will effectively be done in two phases, namely Sept to Dec 2021 and Jan to Mar 2022. We could look at doing it across two winter/spring periods, but this would involve increased costs as the contractor would have to mobilise twice and there would most likely be wage and material price inflation in the interim. Also, the current price offered reflects the fact that there is no other similar size irrigation project available on the island of Ireland this coming winter/spring.

12. How does it compare with similar projects carried out in Ireland / UK in recent years?

We have surveyed several clubs who have up graded or put in similar systems in recent years. These include Portmarnock, Royal Portrush, The Island, Ballyliffin, Ballybunion and Woodbrook. The project we are proposing compares very well on specification and cost with what those clubs have done. This survey has also given us very good information on how these projects were funded and provided references for the contractor that we are proposing to use.

13. It is often said that our record in managing the cost of projects to date is bad. Is that correct?

Our record in managing projects is actually quite good.

In 2017, members were advised at an Information Meeting of a budget of € 280,000 for the overflow and visitors car park and € 100,000 for the short game practice area. Both projects were managed by the club and brought in on budget as evidenced by the capitalised costs in the 2019 accounts, namely € 246,315 and € 94,770, respectively.

14. How are we going to manage this irrigation project and who will actually do that on behalf of the club?

There will be a detailed programme of execution from the contractor agreed before any works commences. The contractor will be supervised as to progress versus plan by our Course Manager Wayne who will in turn report to our General Manager Liam who will have overall responsibility for the management of the project. Liam and Wayne will be further assisted by regular visits from the designer Adrian with oversight and assistance also from the Irrigation Subcommittee Project Team, led by Patrick Joy and including John Bayly and Chairman Jack Gogarty both of whom have considerable experience in managing capital projects elsewhere.

15. How long will it take, and will it interfere with golf during construction?

Subject to availability of material and in particular the PE pipework, the project can be done in one phase commencing mid September 2021, finishing end March 2022.

In the event of a shortage of PE pipe material, there is a possibility of the project completion date slipping out to end April / mid May 2021. However, the contractor has said that working together with our course manager, disruption will be kept to a minimum with only one hole closed at any one time and then for no more than a couple of days maximum.

16. Can we limit it to the holes that suffer, 4th, 6th, 12th, and 13th and leave the rest as they are?

The existing system can only operate at a pressure of 6 bar / 90 psi due to the estimated 1000+ leaks and its age. The new system will operate at 9 bar / 135 psi. Connecting the two into the same water supply will mean that, at 6 bar the new system will not perform as designed and the old system will continue to leak whilst if we try to operate the old system at 9 bar / 135 psi the leakage problem will be exacerbated and lead to regular catastrophic failures.

17. How is the project going to be financed?

It is proposed to fund the project from a combination of ring-fenced funds and bank borrowings. Full details of Management Committee proposals will be outlined at the Information Webinar on 24th June.

18. Will this project lead to an increase in the annual subscription?

There is no proposal to increase subscriptions now. The funding proposal for the new irrigation system will include a level of borrowing that the Management Committee is confident can be repaid from operating surpluses.

As indicated at last year's AGM a proposal regarding future subscriptions will be presented for discussion and approval of members at the 2022 AGM.

19. Where is the specification / design on a scale of 1 to 10, i.e. Is it a minimum standard system or a Rolls Royce?

The system proposed is by no means a "Rolls Royce", but neither is it a minimum standard. Sprinklers, pipework, and cable are all top of the range, selected to give a 25+ year life. The control system allows for the most efficient and economic use of water, seed and fertilizers without any expensive add-ons such as automatic moisture sensor equipment, bespoke designed sprinklers, distance markers etc. The design is specific to the golf course and except for the green in the practice area, does not include new irrigation to practice areas or grass growing nurseries.

20. Why are we replacing gravel walkways with grass that needs to be irrigated?

Some gravel paths that were difficult to maintain, easily pot holed and had become untidy were taken out and replaced with much wider and cheaper to maintain grass paths. This is part of the ongoing maintenance and up grading of the golf course.

By way of example, the one-off cost to replace gravel with grass at the 7th tee path was € 300 for 4 sprinklers and 50 meters of pipe. We estimate that we currently spend € 5,000 + each year on gravel and labour maintaining these paths.

21. Can we reduce / leave out some of the scope to reduce the cost to a more affordable level?

We have not reduced the scope or standard of the AMA design as to do so would compromise the integrity of the overall system. However, in getting to the final price for the project, we have agreed to provide the contractor with our green keeping staff as required to assist in the reconstitution of the ground (tamping down and sanding as necessary) as the new irrigation pipes are being laid.

22. Is possible to leave out sections such as fairway carries and walkways, tee boxes, approaches, green surrounds etc

Walkways could be left until later but fairways, carries, tee boxes, green surrounds and approaches are intrinsic to the course and the design. However, the savings from leaving out walkways would be minimal in the overall context of the project.

23. Do we really need a water tank? We did without for 125 years so why now?

The water tank will provide us with up to 3 days water for greens and tees in the event of a drop in well water level or the pump station going down. It will also protect the aquifer, allowing us to pump at a much lower rate over a longer period which is especially important given the increased water extraction in the local area and rising sea water levels. Also, having a storage tank will increase the life of the pumps and the water transfer equipment as the water will now be gravity fed rather than being pumped directly from the aquifer to irrigation system.

24. Do we really need to spend money on a hydrographic survey? We have plenty of water and we know where it is. Putting in another well seems like belt and braces.

This is a separate project, but it should be carried out regardless as it would be a mistake to invest in a new irrigation system without ensuring that we will always have sufficient water to fuel it.

We currently have one very good well with inadequate back up should that well fail or draw in salt water. Given the critical importance of the water supply, we consider it prudent to have a back up, akin to having an insurance policy. The cost of providing that (approx. € 20k) is very small compared to the overall cost of the project. It is also better to have such a well as in the future, drilling a new one may be problematic from a regulatory perspective.

25. What is the anticipated cost to maintain the system annually and will provision be made in the accounts for that?

We have been offered a 5-year warranty on workmanship and a 3-year warranty on all parts so the cost of maintenance will be significantly lower for at least the first years compared to current spending which is running at €12,000 to €15,000 per annum.

During the installation one of our staff will be trained as an irrigation technician. This will give us adequate on-site knowledge of the system and allow us to dispense with the need to hire in external contractors for maintenance which is currently costing us an average of € 5k per annum.

We will continue to provide for maintenance costs in our budgets but at lower levels than previous.

26. Will there be a need for rolling upgrades to the new irrigation system?

We do not anticipate that there be any rolling up grades required. If there are any changes made to the course this may involve the movement or addition of a small number of sprinklers at minimal cost, but this will be done in house by Wayne Murray Course Manager and his team.

27. What impact will the project have on sustainability, i.e., with the increased number of sprinklers, will we be using a lot more water and more energy to pump it?

Given the very large number of leaks in the current system, we anticipate that despite having an additional 400 sprinklers, the new system will use less water than previous with reduced pumping costs, lower energy usage and greater control over water usage. The water will be controlled and targeted so that it is used much more efficiently.

28. Will the new sprinkler system reduce the cost of maintenance (labour) and the cost of seed, fertilizer, wetting agent, and other chemicals?

We anticipate that the use of seed, chemicals and fertilizers will remain as previous but because of consistent and targeted irrigation we will be enhancing and maximising the impact of these products. The short-term impact on the course will be very noticeable and the long-term effect on the condition of the links will be immeasurable. There will be a much larger *bang for our buck* in terms of materials. The course will be delivered to the members in a much better condition, with lower labour and energy cost than previous.

29. Have we a plan in place to water the course if the old system fails completely and have we the funding to deal with that?

We do not have a plan in place for such an eventuality other than to continue to repair the leaks and burst pipes as they occur at cost. Unfortunately, the system will continue to leak, require additional maintenance every year and the standard and condition of the course will deteriorate.

This year alone there have been 2 separate mainline pipe failures, 3 lateral pipework failures and 16 sprinklers have been replaced. Material costs amounted to €3,800.

Also, there were 3 electrical failures (solenoid valves) on the course which required an external contractor to replace at a cost of €1,500.

In 2020, as well as repairs as described above, we had to replace a pressure vessel and flowmeter in the pump house. This type of situation will become more and more common without a replacement system.

30. Does the new system allow us to water tees and greens separately?

Yes - the new system will be programmed to allow for complete individual control of all sprinklers and the most efficient and economical use of the water.

31. Why will a single ring main solution design not work for Baltray like it does on other courses?

The current system that we have consists of 2 rings mains which was typical of the designs carried out at that time. The new system has been designed however to give equal and consistent pressure throughout, regardless of distance from the water source. It is more akin to a veined system rather than a ring main system. It also provides the option to isolate specific sections for repairs, maintenance, fault finding, testing etc. If our mainline goes down presently, we lose irrigation on nine golf holes.

32. Why do not we let the links burn up during the summer and play it in its natural state. Why are we trying to make it into a parkland course now?

In 1989, the members of CLGC decided that they wanted a course that would remain playable all year round, with a top-quality playing surface, free from the damage caused by drought and water shortages. There was no intention to turn the course into a parkland course then nor is there now. The irrigation system installed 30+ years ago has served us very well but has now reached the end of its life and needs to be replaced.

Without a functioning irrigation system, it is all but impossible to ensure that the course can remain in a playable condition all year round.

An irrigation system is now considered an integral part of the maintenance of a links golf course. Climate change may bring extra rainfall at times, but it also brings more drought and less effective rainfall overall. Water is critical to turf management as rainfall cannot be scheduled.

The new irrigation system will allow us to deliver better quality turf grass, enhance aesthetics and maintain our position as one of the top ranked courses in Ireland!

The golf course is our Number 1 asset, and this irrigation project will protect it for the next 30 years!