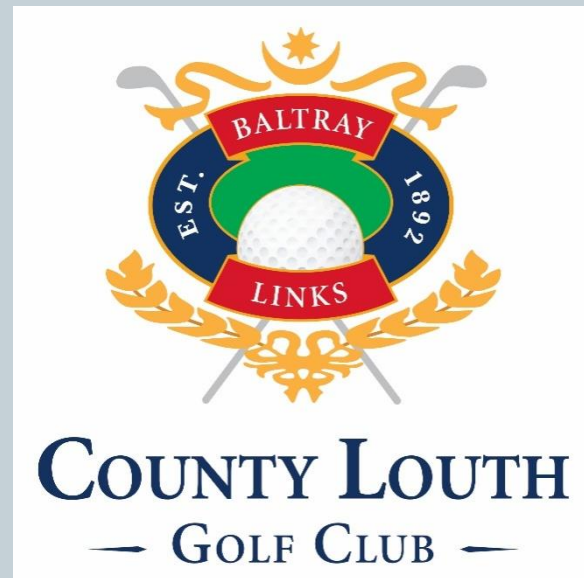


County Louth Golf Club Members' Information Meeting – Irrigation System



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17TH APRIL 2019

Focus Points



1. The History of Irrigation
2. Our Current System
3. Challenges We Face With Our System
4. Agronomic Impact of our Failing Irrigation System
5. Long Term Positive Impact of a New Irrigation System
6. Preserving The Club's Legacy

1. The History of Irrigation



What is Irrigation?

*The artificial and **controlled** application of water to the land to assist in the production and maintenance of crops, plants and grasses*



1. The History of Irrigation



- When applying irrigation we need to be in control of water volumes used and when we use it
- This simple philosophy pre-dates Ancient Egypt
- Irrigation for Agricultural land supplied by the River Nile
- Uncertainty with Water levels in the Nile resulted in no control of irrigation quantities or timings
- Small reservoirs and canals were constructed
- Irrigation then applied in a controlled manner

2. Our Current System



- Current system – Installation completed in 1992
- Currently operating on borrowed time (20 year lifespan approx.)
- Installation of a new irrigation system is inevitable – no upgrade option available
- No control on the amount of water we can apply at a given time
- Poor and out of date sprinkler configuration
- No real scope for small upgrades or additions to already failing pipe network

2. Our Current System



Failing Pipe Network



2. Our Current System



Poor Sprinkler Configuration On All Surfaces



2. Our Current System



- Pump system is out of date and not fit for purpose
- Control system temperamental, unreliable and out of date
- Alarminglly growing maintenance bill each year
- Heavily leaking pipe network and not fit for purpose
- Most of the 620 sprinklers are either out of date, not operating efficiently or not operating at all

2. Our Current System



Poor Sprinkler Set-up



2. Our Current System



Sprinklers Not Operating



2. Our Current System



- No water storage facility (increases pressure on pumps)
- Reliance on expensive and labour intensive hand watering
- R&A and STRI strongly recommend full system replacement
- Personal Recommendation: Full system replacement necessary

3. Challenges We Face With Our Current System



- Ability to wash in top-dressing hampered
- Wetting agent programmes are been under utilised
- Considerable reduction in positive Impact of Over-seeding
- No control over the amount of water needed post over-seeding programmes (Summer 2018 & Spring 2019)

3. Challenges We Face With Our Current System



Spring 2019 – Double Vredo on all Fairways



3. Challenges We Face With Our Current System



Seed lines that need regular irrigation in order for seed to germinate



3. Challenges We Face With Our Current System



- Great difficulty in managing soil moisture content on putting surfaces (impacts surface quality)
- Keeping the system operational on a week to week basis – consistently causes problems
- Minimising disruption to members and guests
- Not Overwatering surfaces is a huge challenge because of the poor sprinkler configuration

3. Challenges We Face With Our Current System



Contrasting Sprinkler Set-up



3. Challenges We Face With Our Current System



- Trying to keep rising maintenance bills to a minimum
- Current system set-up - negatively impacts the possibility of increasing the amounts of fescue in putting surfaces due to over watering - Gives annual meadow grass a competitive edge
- Irrigating in windy/gusty conditions is impossible due to poor sprinkler configuration and weak system pressure

4. Agronomic Impact Of Our Failing Irrigation System



- Quality of all playing surfaces will ultimately decline during dry periods
- Sward density on Tee Boxes and Fairways will weaken (weed infestation)
- Fescue dominant surfaces will suffer – weeds and annual meadow grass will invade (6th Fairway)
- It will become increasingly difficult to encourage finer grasses into playing surfaces (hydrophobic conditions)

4. Agronomic Impact Of Our Failing Irrigation System



Quality of playing surfaces will reduce –
Hydrophobic Turf



4. Agronomic Impact Of Our Failing Irrigation System



Our 6th fairway – Severe drought damage



4. Agronomic Impact Of Our Failing Irrigation System



4. Agronomic Impact Of Our Failing Irrigation System



- Unwanted grasses and weeds will become competitive and dominant on playing surfaces
- Hydrophobic conditions across all playing surfaces will be unavoidable (current situation)
- Seeding programmes will become wasteful
- Affects of wetting agent programmes will reduce

4. Agronomic Impact Of Our Failing Irrigation System



Trying to wash in Wetting Agent



4. Agronomic Impact Of Our Failing Irrigation System



Poor seeding results due to hydrophobic turf



4. Agronomic Impact Of Our Failing Irrigation System



- Without adequate irrigation high volumes of foot traffic will continue to have a negative impact on turf quality
- Trueness, smoothness, firmness and green speed figures will all be negatively affected in the long term
- Composition of turf will weaken long term – this will result in the turf becoming susceptible to disease especially during extreme weather conditions

5. Long Term Positive Impact Of A New Irrigation System



The Five Pillars Of Successful Grass Retention On Fairways

- Fescue dominant sward
- Robust wetting agent programme
- Regular sand top dressing programme
- Fully functional and accurate irrigation system
- Sufficient supply of water to fuel the irrigation system

5. Long Term Positive Impact Of A New Irrigation System



Fescue Dominant Sward



5. Long Term Positive Impact Of A New Irrigation System



Robust Wetting Agent Programme



5. Long Term Positive Impact Of A New Irrigation System



Regular Sand Top Dressing Programme



5. Long Term Positive Impact Of A New Irrigation System



Fully Functional Irrigation System



5. Long Term Positive Impact Of A New Irrigation System



Sufficient Supply of Water



5. Long Term Positive Impact Of A New Irrigation System



Our Results

2/5

40%

5. Long Term Positive Impact Of A New Irrigation System



- *We will be in control* of the amount of water we apply and when we apply it
- Quality and standard of all playing surfaces will improve
- Management of moisture content will not be an issue
- Encouraging finer grass species will become easier
- Fairway Top-dressing programme can be introduced

5. Long Term Positive Impact Of A New Irrigation System



- Impact of over-seeding programmes will be maximised
- Fescue dominant surfaces will become a reality
- Impact of wetting agent programmes will be maximised
- Top-dressing can easily be washed into the surface resulting in true, smooth, firm, fast putting surfaces
- Ability to water specific areas independently – increase uniformity
- Hydrophobic conditions will be kept to a minimum

5. Long Term Positive Impact Of A New Irrigation System



- A huge amount of man hours will be made available for other important projects on the links
- Yearly maintenance bill will be reduced
- Divot germination will increase
- Aesthetical value of the links will improve
- Playability of the course will improve – consistent surfaces
- General standard of the course will improve, necessary to maintain and improve our course ranking

5. Long Term Positive Impact Of A New Irrigation System



- Disruption to membership and guests will be minimal – improved infrastructure will result in shorter overnight irrigation programmes
- Financial Impact - As standards rise we will see a positive impact on improved visitor numbers
- Will allow us as a green-keeping team to work more efficiently
- We would be operating in a sustainable and responsible manner in terms of water usage

5. Long Term Positive Impact Of A New Irrigation System



- A new system would allow for future upgrades and additions – all can be completed in-house
- Allow for course improvement works – new tee-boxes, some grass walkways, improved greenside run-offs etc...
- Positive impact on the clubs chances of been G.E.O Certified (Golf Environment Organisation)
- Will cement the clubs reputation on a national and international level

5. Long Term Positive Impact Of A New Irrigation System



The Benchmark



5. Long Term Positive Impact Of A New Irrigation System



6. Preserving The Club's Legacy



Why Is This Important?

- We are the current custodians of the links
- Our responsibility to uphold the high standards set
- To leave the links in a stronger position for the future generations
- To make decisions in the best interests of the links in relation to maintenance, investment and development
- To future proof the club's national and international status as one of the finest links in Ireland

6. Preserving The Club's Legacy



How Do We Achieve This?

- Goal Setting – What do we want to achieve as a club?
- Prioritise the links
- Continuous progression and investment
- To be reluctant to stand still regarding the development of our links
- Strive to be the best in our field
- Why not be the front runners in setting industry standards?
- Installation of a new irrigation system is a large component in us protecting the legacy of the club into the future

6. Preserving The Club's Legacy



Importance of Continuous Progression and Development

- To maintain our high standards on the links
- To ensure we hold our own as one of the finest links in the country
- To ensure we hold our status and continue to compete with other top links courses
- To continue to be consistently ranked in the top 10 in Ireland
- To allow us build a links for future generations to enjoy

6. Preserving The Club's Legacy



Our Nearest Competitors In The Rankings

Royal County Down – Irrigation Upgrade

Portrush – Modern System

Portmarnock – New Irrigation System (2017)

Lahinch – Irrigation Upgrade

Tralee – Large Scale On Course Investment

Ballybunion – Irrigation Upgrade

Co Sligo – System Replacement

Ballyliffin – Modern System

Adare – New Irrigation System

Waterville – Modern System

6. Preserving The Club's Legacy



Summary

- Continue to move forward as a club
- Optimise the playing experience for our current membership and also future generations of members
- Strive to continuously improve and progress
- Ensure we are not overtaken by our nearest competitors
- Protect and preserve the clubs reputation and status for future generations

Conclusion



Thank you for listening