

INGREDIENTS
IRELAND

Teagasc/Glanbia (GII) Monitor Farm Walk

*Financial and Infrastructure Planning
on Expanding Farms*

Friday, 15th April | 11am

**Donal O'Reilly, Bishops Island,
Watergrasshill, Co. Cork**

Topics for discussion include:

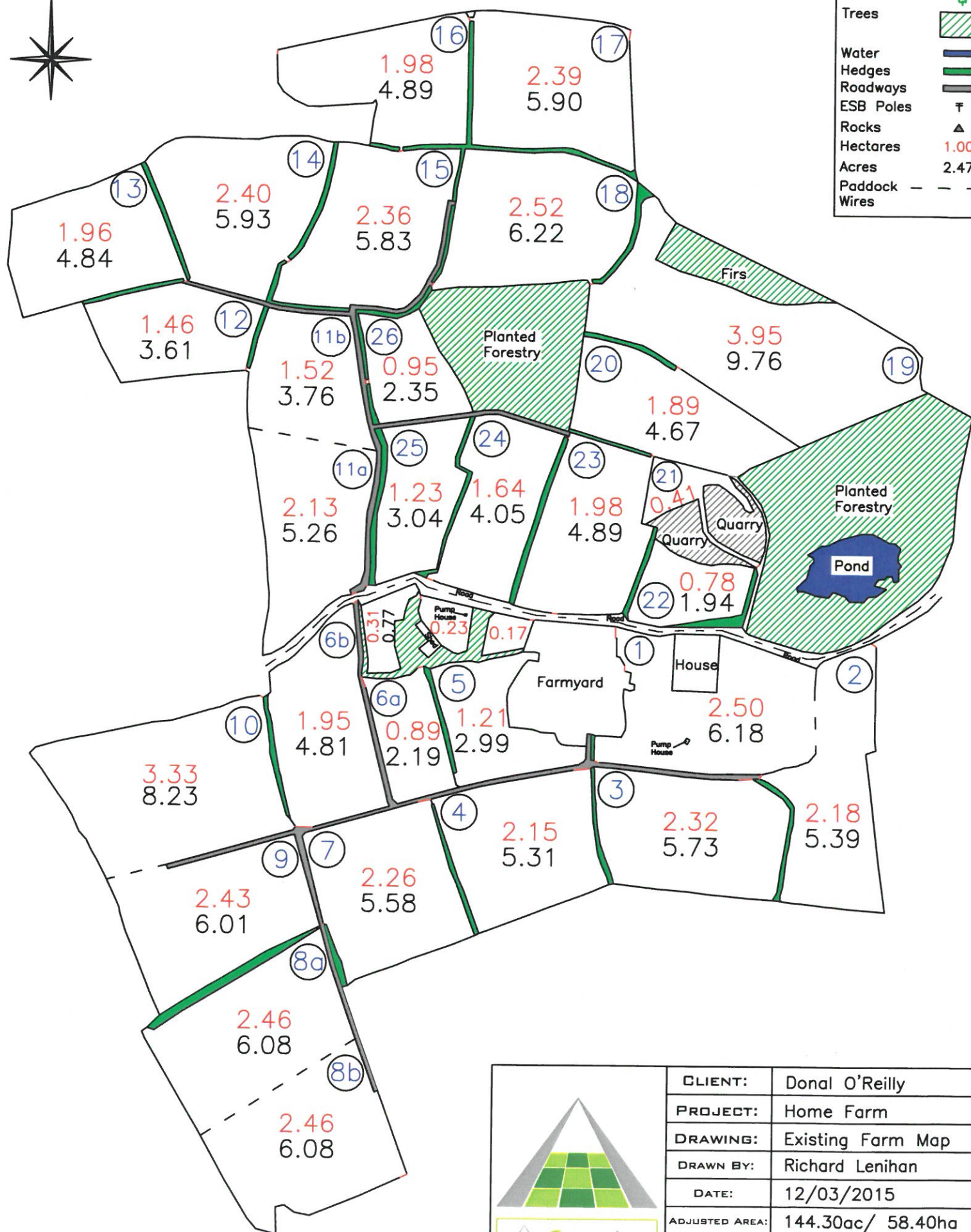
- Long term planning
- Current cashflow management
- Planning good farm infrastructure
- Improving submission rate

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LEGEND	
Trees	
Water	
Hedges	
Roadways	
ESB Poles	
Rocks	
Hectares	1.00
Acres	2.47
Paddock	- - -
Wires	- - -



CLIENT:	Donal O'Reilly
PROJECT:	Home Farm
DRAWING:	Existing Farm Map
DRAWN BY:	Richard Lenihan
DATE:	12/03/2015
ADJUSTED AREA:	144.30ac/ 58.40ha
Kilpatrick, Ballyclough, Mallow, Co Cork, Ireland.	
Tel: +353 22 27610 E-mail: info@grasstec.ie Web: www.grasstec.ie	

0m 50m 100m

TEAGASC/GLANBIA MONITOR FARM WALK

Farmer	Donal O' Reilly	Date	
Adviser	Edmond Moakley		

Short Term Goals	Long Term Goals
Increase Kgs of milk solids sold	Simple system
Increase grass grown and utilized	Full time labour unit
Maintain fertility	

Farm Details		Stock Details		Today
Land owned (ha)	64	Dairy cows		140
Land farmed (ha)	74	Replacements 0-1yr		40
		Replacements 1-2 yr		39
Milking platform (ha)	50	Replacements 2 yr+		
Cows/milking platform ha	2.8	Other cattle 0-1yr		
Overall stocking rate	2.4	Other cattle 1-2yr		
		Other cattle 2yr+		
		Total LU		179
		Stocking rate (LU/ha)		2.42
		Organic N (kg/ha)		204

Costs & Profits 2015	c/l	Average	Breeding & Fertility	2016		
Average co-op milk price	31.6	31.2		Cows	Repl 9+	Repl 0 - 9
Total Dairy Output	33.96	32.09	No.	140	37	38
			EBI (€)	167	196	228
Feed	3.16	3.82	Milk SI (€)	47	47	72
Fertiliser	3.26	2.58	Fertility SI (€)	90	110	115
Vet	0.85	1.09				
AI	0.45	0.57				
Contractor	2.6	1.6	Calving start date	Cows	Heifers	
Other Variable Costs	2.48		Calving spread (weeks)	30-Jan	30-Jan	
Total Variable Costs	12.8	11.57	6 week calving rate (%)	10	6	
				90	100	
Machinery	0.53	1.32	Submission rate (%)			
Car, ESB, Phone	1.01	1.23	Empty rate (%)	90		
Depreciation	3.46	1.79		5		
Other Fixed Costs	3.1					
Total Fixed Costs	8.1	8.75	Bulls 2016	EBI (€)		
			FR2273,FR2053,FR2245,FR2274	339	107/181	
Total Costs	20.9	20.32	FR2275			
Net Profit	13.06	11.77	EUW,WLY,NPY,SEW			
Net Profit per cow €	728	646				

Current performance

Milk production	2015	Today		Grassland Management	Today	Target
Milk yield (litres/cow)	5572	26.7		Average farm cover (kgDM/ha)		
Milk protein %	3.67	4.28		Pre-grazing yield (kgDM/ha)		
Milk fat %	4.21	3.13		Rotation length (days)		
Milk solids/cow (kg/day)	450	2.03		Demand (kgDM/ha)		
SCC ,000 cells/ml	168	85		Fertiliser use (kgN/ha)		
Concentrates fed (kg/cow)	650	5				

Issues to be addressed at this meeting

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Financial Planning

	2015	2018	2021
Ha Farmed	74	74	74
Cow No.	122	150	150
S.R. (Overall/Platform)	2.28/2.4	2.6/3.0	2.6/3.0
Grass growth (kgdm/ha)	13.6	14.5	14.5
Six week calving rate%	88	90	90
MS/Cow kg (Fat/Protein %)	456 3.67/4.21	488 3.8/4.45	529 3.9/4.6
Milk Price c/l	31.6	32.4	33.5
Total Receipts	284,515	336,145	358,740
Total Payments	264,992	274,615	284,349
Net Cash Flow €	19,523	60,705	73,521

Cash Flow Estimate for 2016

	2015	Est. 2016	Change
Physical			2015-2016
Area farmed			
Dairy platform			
Cows milked			
Milk sales (litres)			
Milk price (c/litre)			
Cash sales			
Milk sales	€ -	€ -	
Stock sales			
Other sales			
Total sales	€ -	€ -	
Variable costs			
Feed			
Fertiliser			
Vet+AI			
Contractor			
Other var. costs			
Total VC	€ -	€ -	
Fixed costs			
Labour			
Machinery			
Interest			
Car/ESB/phone			
Repairs			
Other FC			
Total FC	€ -	€ -	
Cash surplus	€ -	€ -	

Grazing Infrastructure

- Proper designed road network essential
- Road location should be influenced by:
 - increasing access to paddocks
 - Cow flow to parlour
- Must consider future herd size
- And Location of Grazing platform



Width of Road

- Avoid 90 degree turns – it can cause bottlenecks
- Use swept bends where possible
- Create the widest section nearest the milking parlour
 - Herd size <80cows – 4-5m road width
 - Herd size <120 cows – 5m road width
 - Herd size 120-250cows – 5.5m road width
 - Herd size <250 cows – 6m road width
 - Roads too narrow – cows push in creating lameness
 - Keep fence 45cm from the edge of the road.

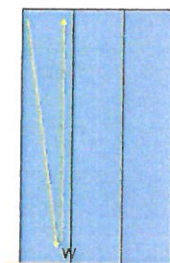


Paddock Layout

- Square paddocks work best - it minimises damage due to less walking
 - 1:2 ratio for width/length
 - Eg 150 m wide and 300m long
- Create multiple entries into paddock
- Centralise water in paddock.
- Create shallow paddock for early spring grazing



Paddock Layout



- Traditional
- Long narrow paddocks
- More damage due to increased walking
- Water usually at gap
- Limited access points



Paddock Layout



- Square paddock as best you can
- Centralise water
- Less walking – less damage
- Easier strip in Spring/Autumn
- Multiple access points possible



Paddock size

- Paddock size will vary with cow numbers
- For best cow performance use 36 hour paddocks for mid season grazing
- Small paddocks can impact on cow performance and grazing management.
- Most paddock systems on farms are designed for a smaller number of cows.



Paddock Size

- Number of cows x daily grass allowance x 1.5
Available pregrazing yield

- Eg: 120 cows on full grass
 $\frac{120 \times 18 \times 1.5}{1,300} = 2.49\text{Ha}$



Water

- Cow water intake
 - 10litres on cold wet days
 - Up to 90 litres on hot sunny days
 - Cow drinks up to 14 litres(3gallons) per minute, 30-50% within one hour of milking
 - Locate troughs centrally in paddocks
 - Looped system system will increase flow rate



Water



- **Calculating water flow rate**
- Assuming a daily demand of 80 litres per cow, almost 50% of which is consumed in a three hour period soon after evening milking, means that an hourly flow rate of 13 litres per cow per hour is required (i.e. $80 \times 50\% / 3 = 13$ litres/cow/hour.). Therefore, for a herd of 100 cows the flow rate needs to be about: 100 cows x 13 litres/hour = 1300 litres/hour or 22 litres per minute.



Water

- Allow 450mm (18 inches) drinking space per cow so that close to 10% of your herd to drink at the same time
- Troughs under wires can reduce feed space
- Allow 9l/cow (2 gallons) storage in the field
- Pipe Size critical to flow rate
 - Smaller pipes create more friction reducing flow rate



 eagasc <small>AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY</small>		<h2 style="text-align: center;">Breeding Plan 2016</h2> <p style="text-align: center;">Date: _____</p>				
			Target		Actual	
No. of cows and heifers to be served			Cows	Heifers		
No. of heifers required in 2019						
No. of dairy AI straws needed			5.5 straws/repl.			
Aids to heat detection to be used						
Planned start of calving, 2017						
Start of pre-service heat detection			3 weeks before start of AI			
Start of AI (maiden heifers)			1 week before cows			
Start of AI (cows)						
Submission rate – 3 weeks			90 %		%	
Cows served in Week 1 (%)			No.	30 %	No.	%
Cows served in Week 2 (%)			No.	30 %	No.	%
Cows served in Week 3 (%)			No.	30 %	No.	%
Examination of non-cycling cows			9 weeks after start of AI			
Change to beef AI/ beef stock bull			All dairy AI straws used			
End of breeding season			13 weeks after start			

Bulls to be Used				
	Target		Actual	
	AI Code	No. of straws	AI code	No. of straws
Bull 1				
Bull 2				
Bull 3				
Bull 4				
Bull 5				

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Bishops Island Dairies Ltd	Sample ID	0010323	Vaccination Status			
C/O Donal O'Reilly	Herd Number	D3870325				
Bishops Island	Farm Dev. Advisor	Donal Corkery	IBR	BVD	LEPTO	Salmonella
Watergrasshill	Vet	Finn's Veterinary Clinic	Yes	Yes	Yes	Yes
Co Cork						

Disease	Test Method	Date	26/03/16	Date	02/10/15	Date	19/06/15	Date	05/05/15
			Result Reading		Result Reading		Result Reading		Result Reading
			Grade		Grade		Grade		Grade
IBR gB (Non Vaccinating Herd)	ELISA (Antibody)								
IBR gE (Vaccinating Herd)	ELISA (Antibody)		0.464	1.444	NEG	0.690	POS	0.503	POS
Leptospirosis	ELISA (Antibody)		0.231	0.325	POS	0.460	POS	0.425	POS
BVD Antibody	ELISA (Antibody)		53.487	62.491	LPOS	42.168	HPOS	36.740	HPOS
Neospora	ELISA (Antibody)		0.005	0.063	NEG	0.016	NEG	0.041	NEG
Salmonella	PCR/ELISA (Antigen)			ELISA (Antigen)	NEG	ELISA (Antigen)	NEG	ELISA (Antigen)	NEG
Salmonella	ELISA (Antibody)		193.68						
Ostertagia (Stomach Worms)	ELISA (Antibody)		0.63915	0.86309	HPOS	0.29757	NEG	0.53211	LPOS
Fasciolosis (Liver Fluke)	ELISA (Antibody)		1.478	11.22	NEG	3.092	NEG	7.719	NEG

COMMENT: Where cows/herds are currently vaccinated for BVD, IBR, Lepto; results for these tests may be affected by vaccination. Results are representative of milking cows whose milk is in the bulk tank at the time of sampling and relate only to the portion of the sample tested. All results should be discussed with your Veterinary Practitioner. Antibody levels indicate previous exposure to disease and/or vaccine. Positive results on antigen tests indicate the presence of that infectious disease in the milk sample.