# CHALLENGES AND OPPORTUNITIES IN MULTIFUNCTIONAL MANAGEMENT OF GRASSLANDS

## Ptuj, Slovenia 15th – 17th May 2019

## Farming for Conservation in the Burren, Ireland

**Brendan Dunford, Manager, Burren Programme**

Burren PROGRAMME

'The European Agricultural Fund for Rural Development: Europe investing in rural areas'.

Department of Agriculture, Food and the Marine
An Roinn Talmhaíochta, Bia agus Mara

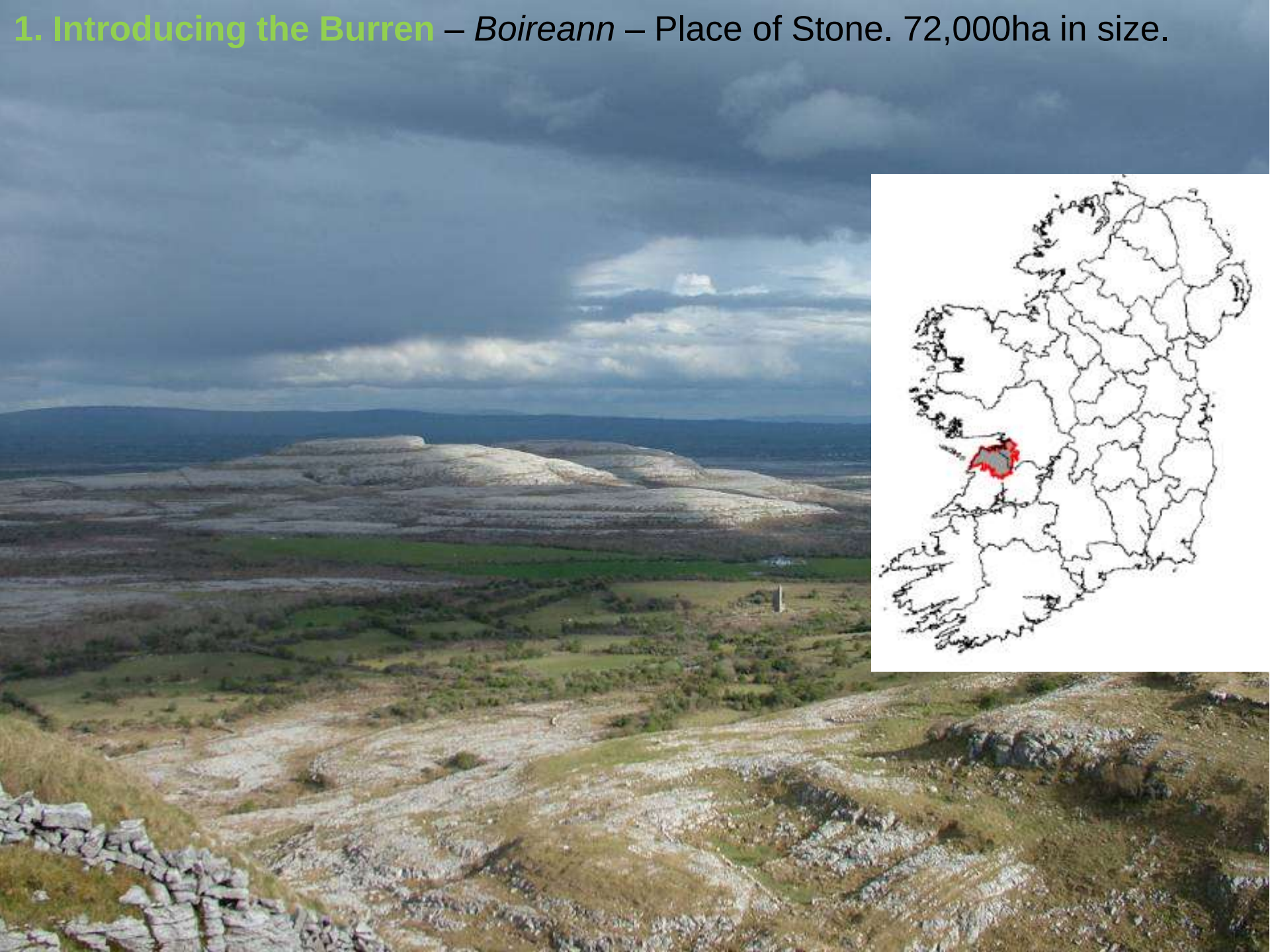
An Roinn Ealaíon, Oidhreachta, Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta
Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

# Presentation outline:

1. Introducing the Burren
2. Some problems and challenges
3. Testing solutions – BurrenLIFE
4. Scaling solutions – Burren Prog.
5. Key design principles
6. Encouraging farming for nature
7. Summary and conclusions

**A story involving many people and a lot of learning, over a long time**

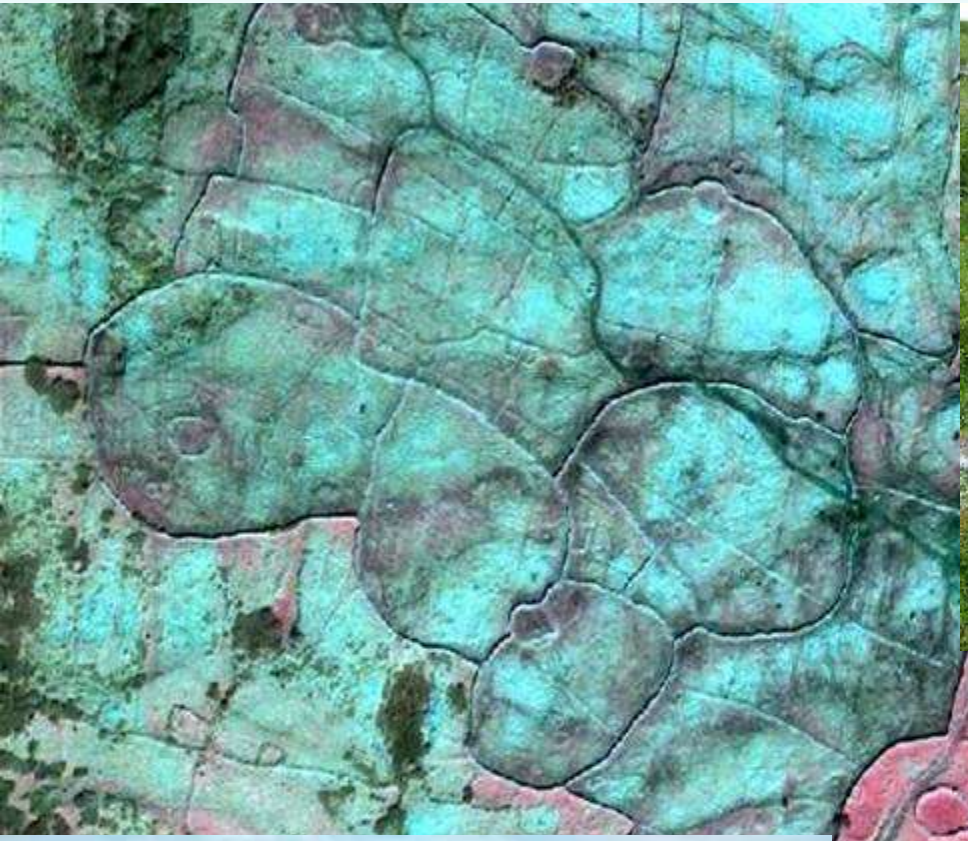
# 1. Introducing the Burren – *Boireann* – Place of Stone. 72,000ha in size.



Glaciated karst landscape – UNESCO Geopark

**Ludlow (1651)** *'not water enough to drown a man, wood enough to hang one, nor earth enough to bury them … and yet their cattle are very fat'*

# A ‘Cultural Landscape’ (Tentative UNESCO World Heritage Site)



**High Nature Value: 70% of Ireland's native flora, 30,000ha designated under Natura 2000**

# 6820 Orchid rich Calcareous Grasslands and 6510 Hay meadows very significant

**But the Burren is also a <u>Farmed Landscape</u> with a unique pastoral tradition of Winter Grazing**

**Winterage** – reverse transhumance – an ancient adaptation to farming limits of the land.
**A key driver of Burren's biodiversity**.

*Farming and the Burren* Research Project (1998-2001) – Teagasc funded.

# 2. Some problems and challenges (intensification and abandonment)

| Code | Common name | 2019 Range | 2019 Area | 2019 Structure & Functions | 2019 Future Prospects | 2019 Overall status | 2019 Overall trend |
|---|---|---|---|---|---|---|---|
| 6130 | Calaminarian grasslands | Inadequate↓ | Inadequate↓ | Inadequate↓ | Inadequate | Inadequate↓ | ↓ |
| 6210 | Orchid-rich calcareous grassland* | Favourable= | Bad↓ | Inadequate= | Bad | Bad↓ | ↓ |
| 6230 | Species-rich nardus grassland* | Favourable= | Bad= | Bad= | Bad | Bad= | = |
| 6410 | Molinia meadows | Inadequate↓ | Bad↓ | Bad= | Bad | Bad↓ | ↓ |
| 6430 | Hydrophilous tall herb | Inadequate↓ | Inadequate↓ | Bad= | Bad | Bad↓ | ↓ |
| 6510 | Hay meadows | Bad↓ | Bad↓ | Bad↓ | Bad | Bad↓ | ↓ |

**Reduced grazing = more scrub = problems for biodiversity, archaeology, tourism, farming…**

# CHALLENGES FACING HNV FARMING IN THE BURREN

Poor economic outlook

Poor social structure

Land abandonment and intensification

Lack of integrated land use strategy

Over-regulation/ Bureaucracy

Apathy and Antipathy

## Our approach?

**Providing Burren farmers with targeted Financial, Technical and Social/Cultural support (‘*pocket, head and heart*’) to lead in the care of their own place**

# 3. Testing solutions *The BurrenLIFE Project (2005-2010) – a targeted local approach*

BurrenLIFE Objective:
To develop a new model for sustainable farming on the priority habitats of the Burren.

*8240 - Limestone Pavements*

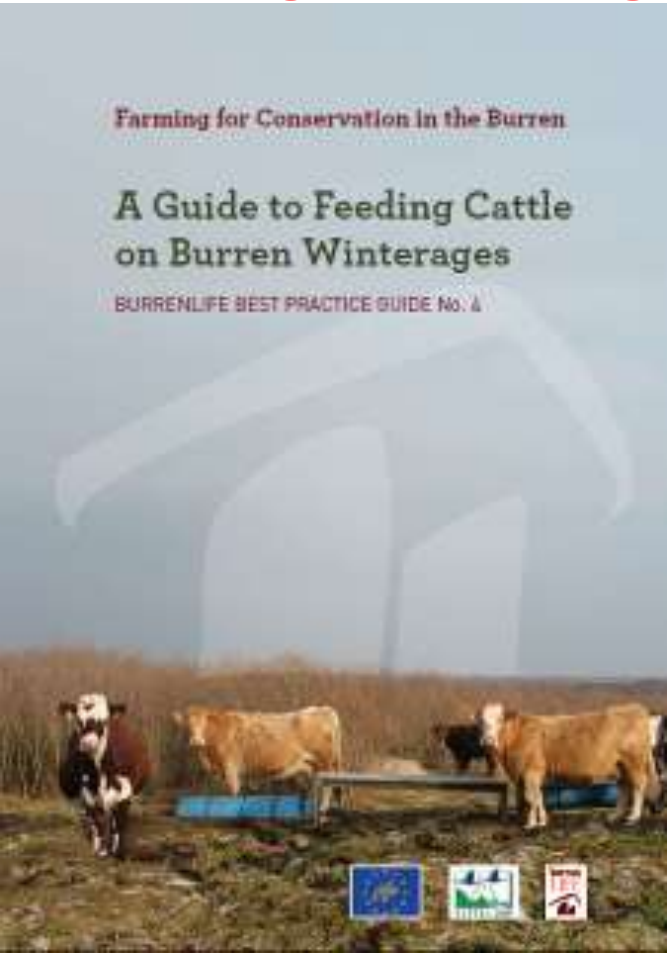
*3180 - Turloughs*

*6210 – Orchid Rich Grasslands*

# Identifying problems and solutions

**Sponsored by NPWS, co-funded by Teagasc, Burren IFA**

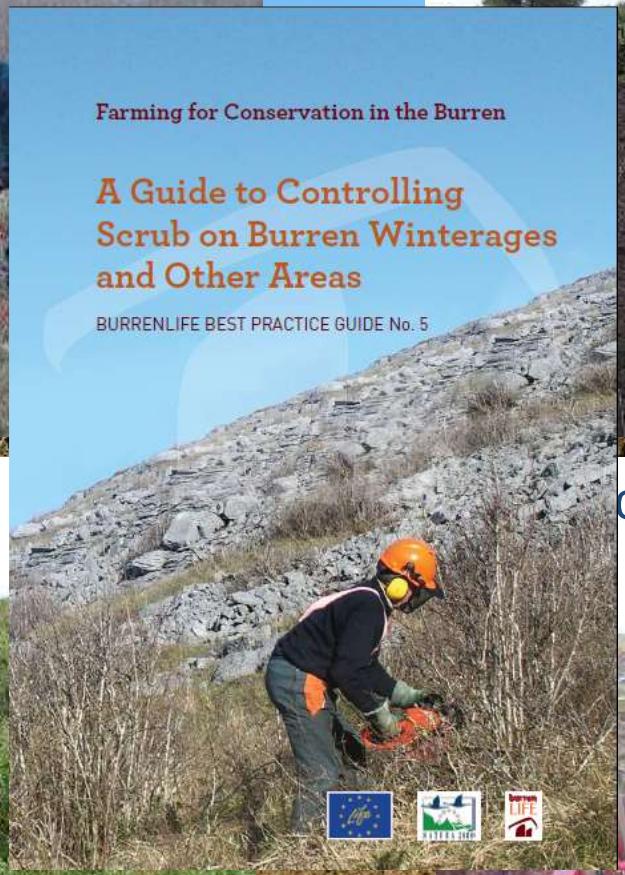
## Co-creating solutions: e.g.




# Removal of encroaching scrub (c.80ha scrub) and opening access (30km paths)

## Cutting with chainsaw

## Pulling




## Herbicide wiping

## cutter

# Calculating the unit cost of conservation measures…

**Burren Programme Intervention 2 (I-2) Reference Costs** (revised Dec. 2018)

**A. Walling, Fencing, Gates**

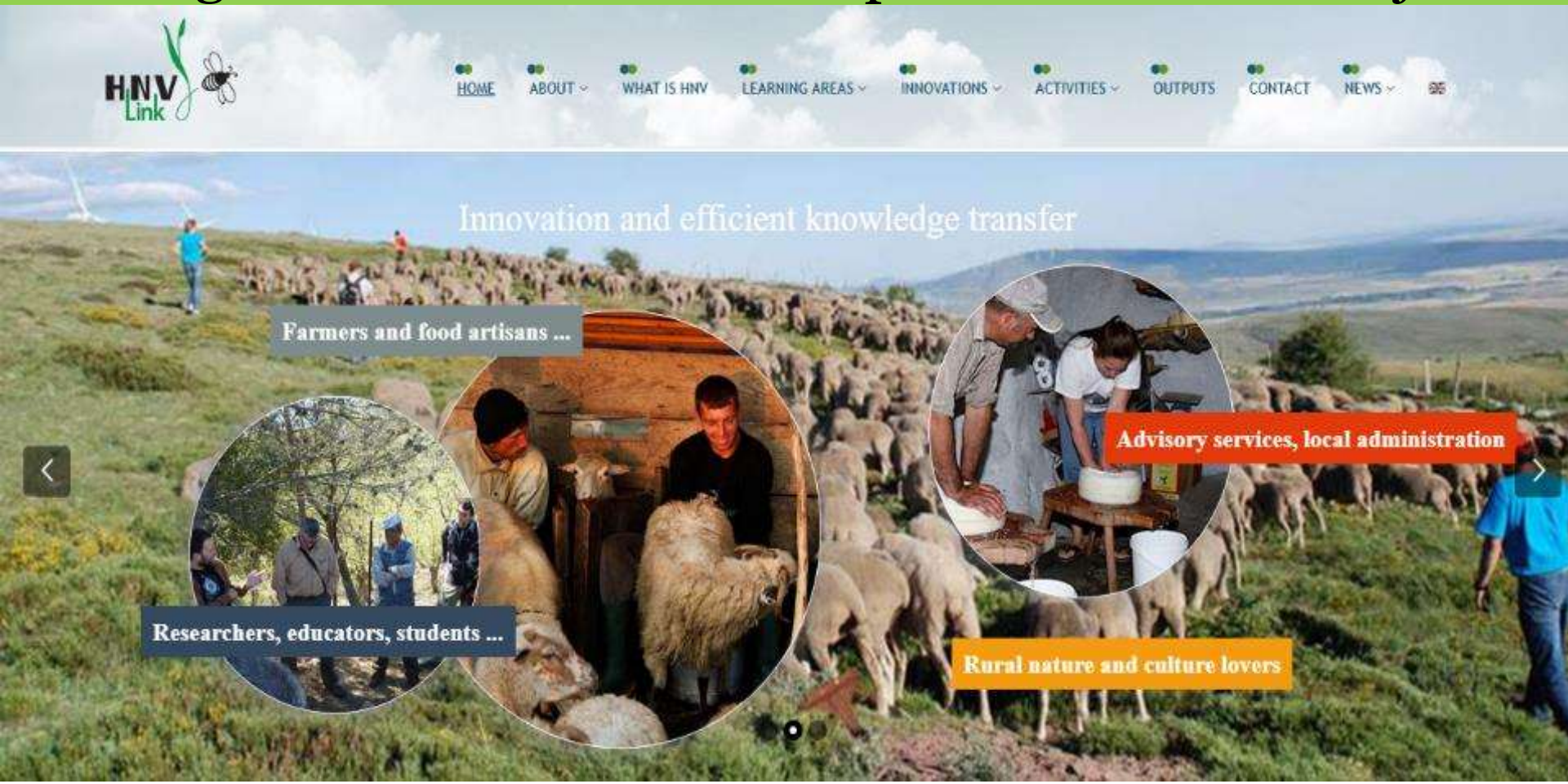
| Stone wall repair | Unit | Detail | Actual € | Funding rate | Funded € | Receipt | D2 | Basis of Estimate | Additional Note |
|---|---|---|---|---|---|---|---|---|---|
| Wall repair: internal | Per metre | Internal Boundary Walls | 4.00 | 75% | 3.00 | No | No | BurrenLIFE Research Project Findings | Walls requiring mechanical intervention may require additional (pre-approved) allowance |
| Wall repair: external | Per metre | External Boundary Walls | 4.00 | 50% | 2.00 | No | No | BurrenLIFE Research Project Findings | As above |
| Drawing stone | Per hour | Tractor, trailer/box and labour | 35.40 | 50% | 17.70 | No | No | Standard machinery Rate (TAMS II) | Time required estimated by advisor, pre-approved by BP team. D2 not required. |
| **Post and Wire Fencing** | **Unit** | **Detail** | **Actual €** | **Funding rate** | **Funded €** | **Receipt** | **D2** | **Basis of Estimate** | **Additional Note** |
| Post, single strand electric plus sheep-wire | Per metre | Incl. Materials and labour | 6.30 | 50% | 3.15 | Proof | No | Farm Relief Service rates | Where work is done by professional fencing contractor, a higher (pre-approved) estimate ma |
| Post and single strand electric wire | Per metre | Incl. Materials and labour | 1.85 | 50% | 0.93 | Proof | No | Farm Relief Service rates | As above |
| Metal Stakes & Tape | Per metre | Incl. Materials and labour | 0.50 | 50% | 0.25 | Proof | No | BFCP (2010-16) rate | Receipt needed for proof of purchase as this is mobile equipment and may not be present on |
| **Fence Units** | **Unit** | **Detail** | **Actual €** | **Funding rate** | **Funded €** | **Receipt** | **D2** | **Basis of Estimate** | **Additional Note** |
| Solar fencer 12V | Per fencer | High power (40-60 acre span) | 491.90 | 50% | 245.99 | Yes | No | Three local supplier quotes | Receipt needed to validate price, 50% funded up to, but not exceeding, a value of €400 + |
| Solar fencer 12V | Per fencer | Regular (15 acre span) | 269.82 | 50% | 134.91 | Yes | No | Three local supplier quotes | Receipt needed to validate price, 50% funded up to, but not exceeding, a value of €257 + |
| Electric fencer | Per fencer | High power (e.g. 40km span) | 203.80 | 50% | 101.90 | Yes | No | Three local supplier quotes | Receipt needed to validate price, 50% funded up to, but not exceeding, a value of €191 + |
| Electric fencer | Per fencer | Regular (e.g. 850) | 134.31 | 50% | 67.26 | Yes | No | Three local supplier quotes | Receipt needed to validate price, 50% funded up to, but not exceeding, a value of €122 + |
| Fencer - other | Per fencer | To be specified in I-2 plan | 780 | 50% | 780 | Yes | No | Farmer/advisor to provide quote in I-2 | This menu option is for fencers the specifications of which do not accord with the above prices. |
| **Gates** | **Unit** | **Detail** | **Actual €** | **Funding rate** | **Funded €** | **Receipt** | **D2** | **Basis of Estimate** | **Additional Note** |
| Burren Gate & Posts | Per gate | All sizes of metal gate | 453.20 | 75% | 339.90 | Proof | No | Two local supplier quotes | Rate remains the same for all gate sizes. Posts may vary from standard. Receipt needed to v |
| Burren gate - retrofit | Per gate | All sizes of metal gate | 276.00 | 75% | 207.60 | Proof | No | Two local supplier quotes | Rate remains the same for all gate sizes. Receipt needed to validate purchase. |
| Burren gatepost - fit | Per post | All sizes of metal gate | 99.20 | 75% | 74.40 | Proof | No | Two local supplier quotes | Posts may vary from standard but must be sturdy and long-lasting. |
| Field Gate & RSJ posts | Per gate | All sizes of metal gate | 277.53 | 50% | 138.77 | Proof | No | Three local supplier quotes | Rate remains the same for all gate sizes. Posts may vary from standard. Receipt needed to v |
| Field gate - retrofit | Per gate | All sizes of metal gate | 95.79 | 50% | 47.90 | Proof | No | Three local supplier quotes | Rate remains the same for all gate sizes. Receipt needed to validate purchase. |
| Field gatepost - retrofit | Per post | All sizes of metal gate | 86.20 | 50% | 43.10 | Proof | No | Three local supplier quotes | Posts may vary from standard but must be sturdy and long-lasting. |
| **B. Water Provision** | | | | | | | | | |
| **Water collection and storage** | **Unit** | **Capacity** | **Actual €** | **Funding rate** | **Funded €** | **Receipt** | **D2** | **Basis of Estimate** | **Additional Note** |
| Plastic Storage tanks | Per tank | 9000 L (1980 gal) | 1208.80 | 50% | 604.40 | Proof | No | BFCP Allowance | Receipt needed to validate purchase. Labour estimate 2 hours for tractor incl. laying chip bas |
| Plastic Storage tanks | Per tank | 6000 L (1320 gal) | 1086.80 | 50% | 543.40 | Proof | No | BFCP Allowance | Receipt needed to validate purchase. Labour estimate 2 hours for tractor incl. laying chip bas |
| Plastic Storage tanks | Per tank | 3000 L (660 gal) | 598.80 | 50% | 299.40 | Proof | No | BFCP Allowance | Receipt needed to validate purchase. Labour estimate 2 hours for tractor incl. laying chip bas |

# Calculating the unit cost of scrub control…

| Field No. | Area ID (e.g. SA1) | | Area (hectare) | Estimated % Scrub Cover | Area of scrub to be Removed (ha) | Method *(drop down menu)* | Cost/ha for method | Cost of Job | BP funding @ 75% | Indicative Area per Day | Time for Job (days)* | Approx. Time for Job (hrs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | SA3 | | 1.07290 | 17 | 0.1824 | Chainsaw. Cut only. | €12,069 | €2,201.30 | €1,650.98 | 0.0290 | 6.3 | 50.32 |
| 5 | SA3 | | 1.07290 | 17 | 0.1824 | Chainsaw. Incl. stump treatment | €15,434 | €2,815.05 | €2,111.29 | 0.0230 | 7.9 | 63.44 |
| 5 | SA4 | | 0.66560 | 15 | 0.0998 | Chainsaw. Cut only. | €12,069 | €1,204.97 | €903.73 | 0.0290 | 3.4 | 27.54 |
| 5 | SA4 | | 0.66560 | 10 | 0.0666 | Chainsaw. Incl. stump treatment | €15,434 | €1,027.29 | €770.47 | 0.0230 | 2.9 | 23.15 |
| 5 | SA5 | | 0.37850 | 5 | 0.0189 | Wiping small bushes | €6,598 | €124.86 | €93.64 | 0.0265 | 0.7 | 5.71 |
| 5 | SA5 | | 0.37850 | 5 | 0.0189 | Wiping regrowth | €2,380 | €45.04 | €33.78 | 0.0735 | 0.3 | 2.06 |

**Result:** A tested, costed blueprint for farming for conservation in the Burren

# Sharing innovations across Europe – HNV-LINK Project




# HNV-LINK - High Nature Value Farming: Learning, Innovation and Knowledge

THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT NO. 696391

www.hnvlink.eu

# 4. Scaling solutions - *The Burren Programme (2010 - present)*

Burren PROGRAMME

## The after-LIFE!

**So, how did we get into the afterLIFE?**

*Proven results, fully costed, 100% farmer support, high profile = low risk, high gain, proposition*

'The European Agricultural Fund for Rural Development: Europe investing in rural areas'.

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Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

# Burren PROGRAMME

## How is it funded?

**Funding Mechanism:**

Initially (2010-15) CAP Pillar 1, Art 68

Now (2016-2022) CAP Pillar 2, Art 28 of Reg 1305/2013 (AEC). Up to €15m available.

'The European Agricultural Fund for Rural Development: Europe investing in rural areas'.

Department of Agriculture, Food and the Marine
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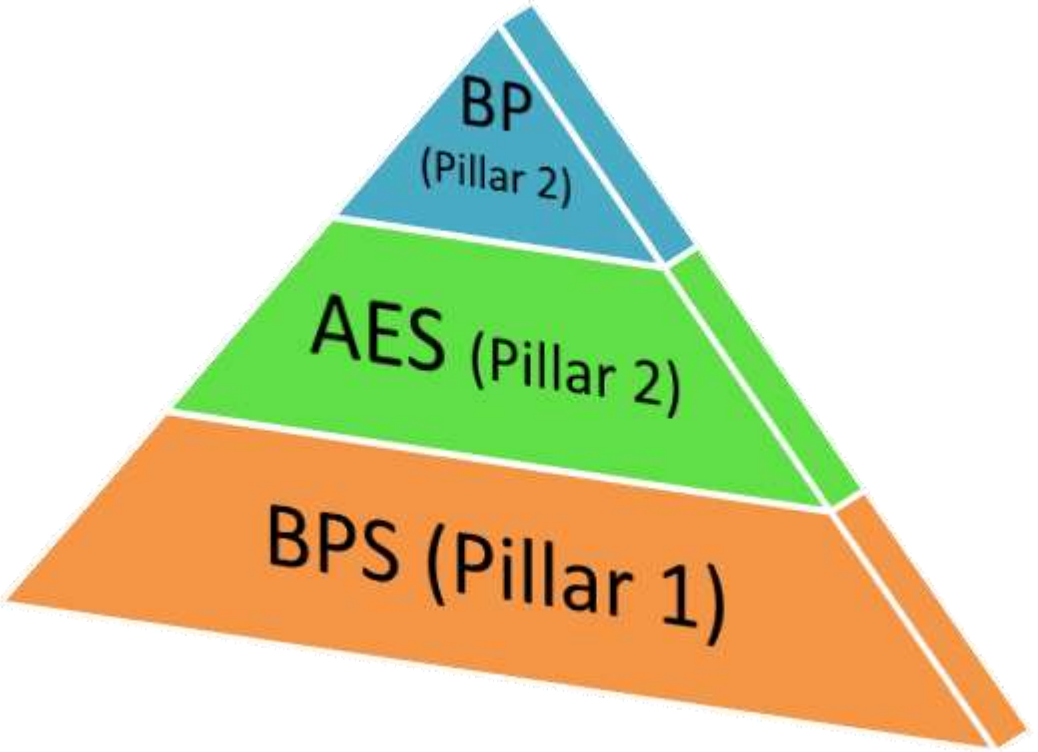
An Roinn Ealaíon, Oidhreachta, Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta
Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs



# Burren Programme **Objectives**

**1.** To ensure the sustainable agricultural management of high **nature** value farmland in the Burren

**2**. To contribute to the positive management of the Burren landscape and the **cultural** heritage of the Burren

**3.** To contribute to improvements in **water** quality & water usage efficiency in the Burren

**To ensure continued funding, BP must**:
- Improve the Burren's environment
- Ensure good value for money
- Provide data to show that it works

# Burren PROGRAMME

## How does it work?

**Management:** grazing , feed …

**I-1:** Payment for site condition

**I-2:** Payment for work done

**Works:** scrub, water, walls…

## Two Annual Payments

# Intervention 1: Paying for results (ecosystem services)




Well managed, 'result' payment (€180/ha)

*RDP-funded through Dept. of Agriculture, Food & the Marine & Dept. of Arts, Heritage and the Gaeltacht (NPWS)*


**Simple scoring system**








Immature scrub

**10 criteria**

Bracken or ‘ferns’

Winterage: Ecological Integrity

Burren lowland grassland: Conservation Value

Purple moor-grass

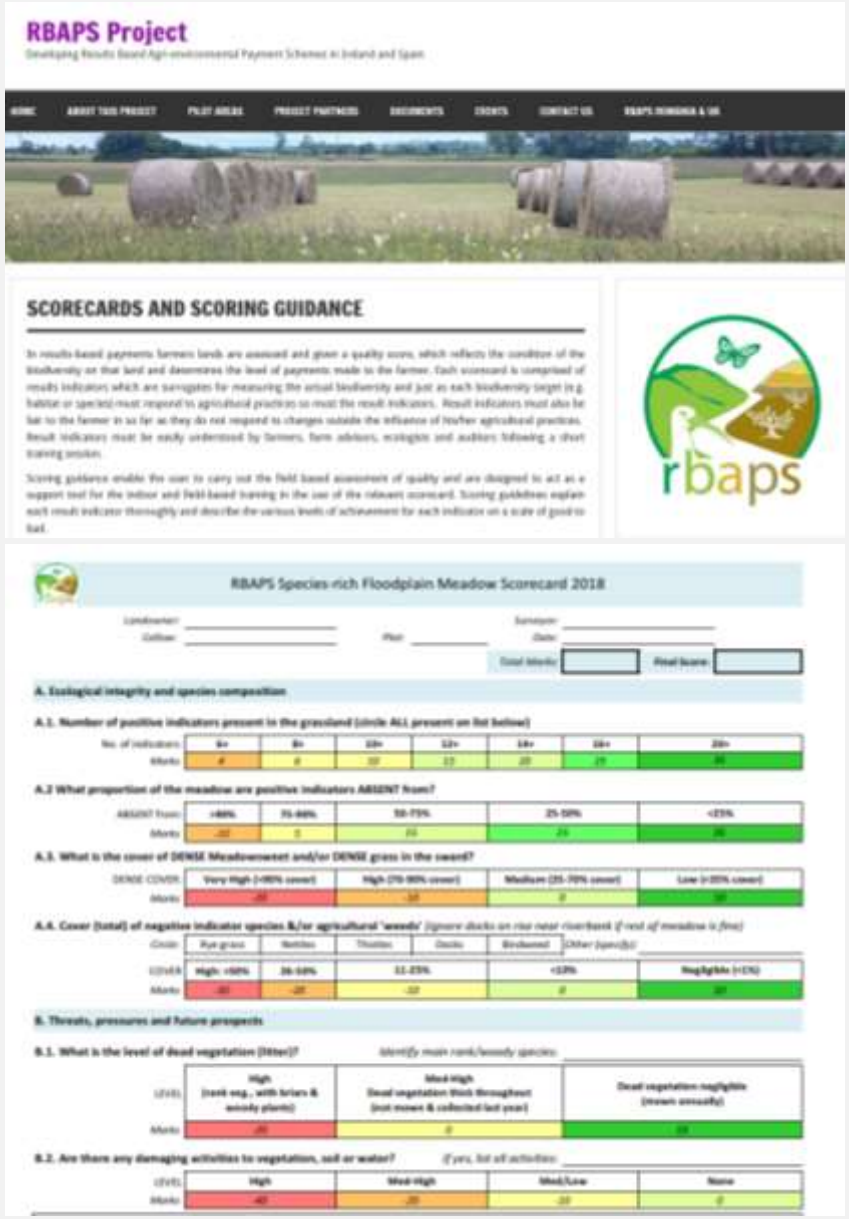
Weeds

**Existing & Emerging Problems**

| | 2016 (Y1) |
|---|---|
| A1 Grazing level | 9 |
| A2 Litter level | 14 |
| A3 Feed site & water troughs | 15 |
| A4 Natural water sources | 15 |
| A5 Bare soil/erosion | 5 |
| B1 Scrub | 7 |
| B2 Bracken | 1 |
| B3 PMG | 5 |
| B4 Weeds/agric-favoured | 6 |
| C1 Ecological integrity | 5 |
| **Field Total:** | **82** |
| Percentage Health Rating: | 74.5 |
| **Field Score** | **8** |

**Higher score = higher payment**

**Different habitats with different challenges will require different scoring systems…**
**See www.RBAPS.eu for examples**



# Simple, annual Score Sheet compiled by Advisor, checked by local team

Payment for Results (I-1)

Maximum payment (If all fields score 10/10): €6,647.40

| Field no. | Field name | Pasture type (e.g strength) | Grazing | | Management recommendations | Digitised area (ha) | Assessable I-1 area (ha) (A) | Payment rate (€/ha) (see table below) (B) | BFCP 2015 score (0-10) | BP Year 1 score (0-10) - Baseline | Payment (€) (A x B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Winter | Late summer | | | | | | | |
| **Meadows** | | | | | | | | | | | |
| 7 | 7th Field | Meadow-like* | Yes | Yes | Delay grazing until late summer (late July onwards) then graze out well while taking care to avoid poaching. Do not apply any fertilizer. Control weeds. | 0.50 ha | 0.34 ha | €0 | 3 | 3 | €0.00 |
| 9 | Pump Field | Meadow-like* | Yes | Yes | Delay grazing until late summer (July onwards) if possible, then graze out as well as ground conditions allow (avoid excessive poaching). Control scrub, especially along fringes of rocky outcrops. Control weeds and improve water supply to prevent damage at water points. | 3.00 ha | 2.10 ha | €168 | 7 | 7 | €352.80 |
| **Winterage** | | | | | | | | | | | |
| 5 | 5th Field | Middling | Yes | Yes | Grazing system has improved, increasing field score. Graze well in late summer (August onwards) and early winter. Continue work to control encroaching scrub, as well as the high level of bracken and weeds found across the site. | 3.40 ha | 0.49 ha | €72 | 4 | 6 | €35.28 |
| 6 | 6th Field | Strong | Yes | Yes | Reduce level of summer grazing - graze in late summer (August onwards) and early winter. Avoid poaching. Control weeds. | 1.40 ha | 1.07 ha | €72 | 5 | 6 | €77.04 |
| 1 | 1st Field | Middling | Yes | Optional | Reasonably well grazed over winter, occasional light summer graze (August onwards) will help top-off stronger sections. Also, improve water facilities - this will help improve grazing and reduce pressure on water point. Treat regrowth from previous scrub work - failure to fully address regrowth has reduced score. | 13.95 ha | 11.16 ha | €84 | 8 | 7 | €937.44 |
| 2 | 2nd Field | Middling | Yes | Optional | Graze out well in winter. A light, late summer graze (August onwards) will help top-off stronger growth. Requires better water facilities for livestock, continued scrub removal (and regrowth) work, weed control and wall repair. | 10.65 ha | 8.30 ha | €96 | 8 | 8 | €796.80 |
| 4 | 4th Field | Middling | Yes | Yes | Increase grazing in winter and also graze the valley area in late summer (late July onwards). Control encroaching scrub (mainly low blackthorn), bracken and weeds (by entrance gate). | 5.25 ha | 4.85 ha | €96 | 8 | 8 | €465.60 |
| 3 | 3rd Field | Middling | Yes | Optional | Graze out well in winter. A light, late summer graze (August onwards) will help top-off stronger growth. Fix water trough overflow, control encroaching scrub and also control patches of weeds and bracken. | 7.20 ha | 6.79 ha | €135 | 9 | 9 | €916.65 |
| | | | | | Total: | 45.35 ha | 35.10 ha | Baseline average (by area): | | 7.68 | |

Total I-1 Payment Due: €3,581.61

Field by field score, payment and management recommendation.

Total payment and average farm score also shown

Total annual payments up to €10k (average €2,600)

# Payment Rates per hectare - Winterage


No payments for scores less than 5.

Bonus payments for scores of 9 & 10.

Payments of up to €315/ha for lowland grasslands (meadows)

# **Low scores? – Action needed!** Farmer is allocated an allowance within which **(s)he can nominate** (& co-fund) tasks to increase score

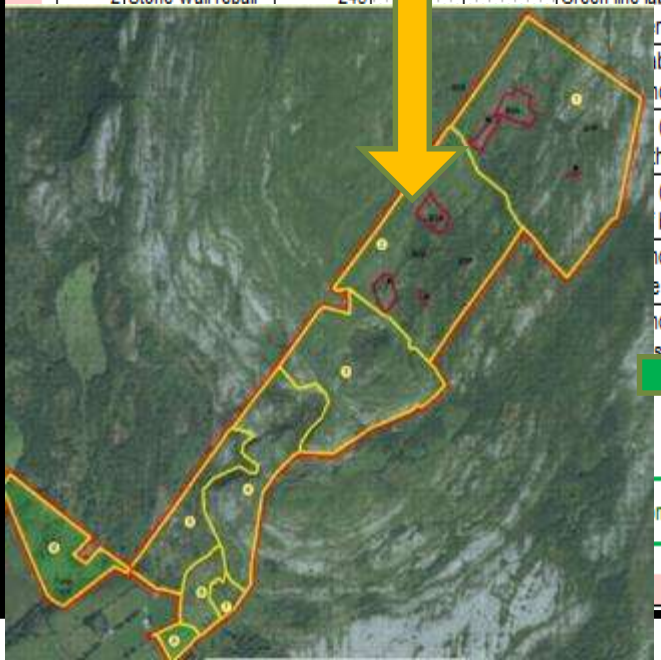
Payment for Actions (M2)

Payments are subject to completion of actions planned, obtaining all necessary permissions and complying with any conditions attached

Maximum allowance €7,000.00

*Please tick all tasks farmers agrees to do*

| Field no(s). | Work | Length (m) | Area (ha) | No. | Work description | Funding rate (%) | Paid per unit (€) | € Farmer receives | Agree to do? |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | ***For the following scrub tasks (S1A):*** *Cut using chainsaws and immediately treat stumps with herbicide. Cut Jan-Feb or Sept-Dec (outside the bird nesting season). Costings include piling, treating, herbicide & dye.* ***When using herbicides:*** *Roundup Biactive and Barclay Gallup Biograde are the only herbicides permitted* | | | | |
| 9 | Scrub control | | 0.0912 | | Area **S1A** : Cut and treat all briars, blackthorn, hazel and other scrub within and around the enclosure, and along the wall with the mothair but leave the mature scrub marked on the map. *All cut scrub must be removed from the enclosure and either piled in a suitable location for rotting or removal by tractor to a place where it can be burned.* Labour estimate of 4 days for 2 people, which includes additional time to allow for removing scrub from enclosure. As this is in and around a Recorded Monument the work was notified to NMS and permission received on 16 | 75% | *n/a* | 909.72 | ☐ |
| 3 | Stone wall repair | 214 | | | Green line labelled **A-B** on map. Repair the northern boundary wall to its original high standard using fallen and loose scattered stones. Do not take stones from other built structures. | 50% | 2.29 | 490.06 | ☐ |
| 2 | Stone wall repair | 245 | | | Green line labelled **C-D** on map. Repair the northern boundary wall to its original high standard using fallen and | 50% | 2.29 | 561.05 | ☐ |



Improved water ‘harvesting’

New pumped supplies
& delivery

Increased water storage

**Improvements in water quality and more efficient usage**

# Improvements in access to sites

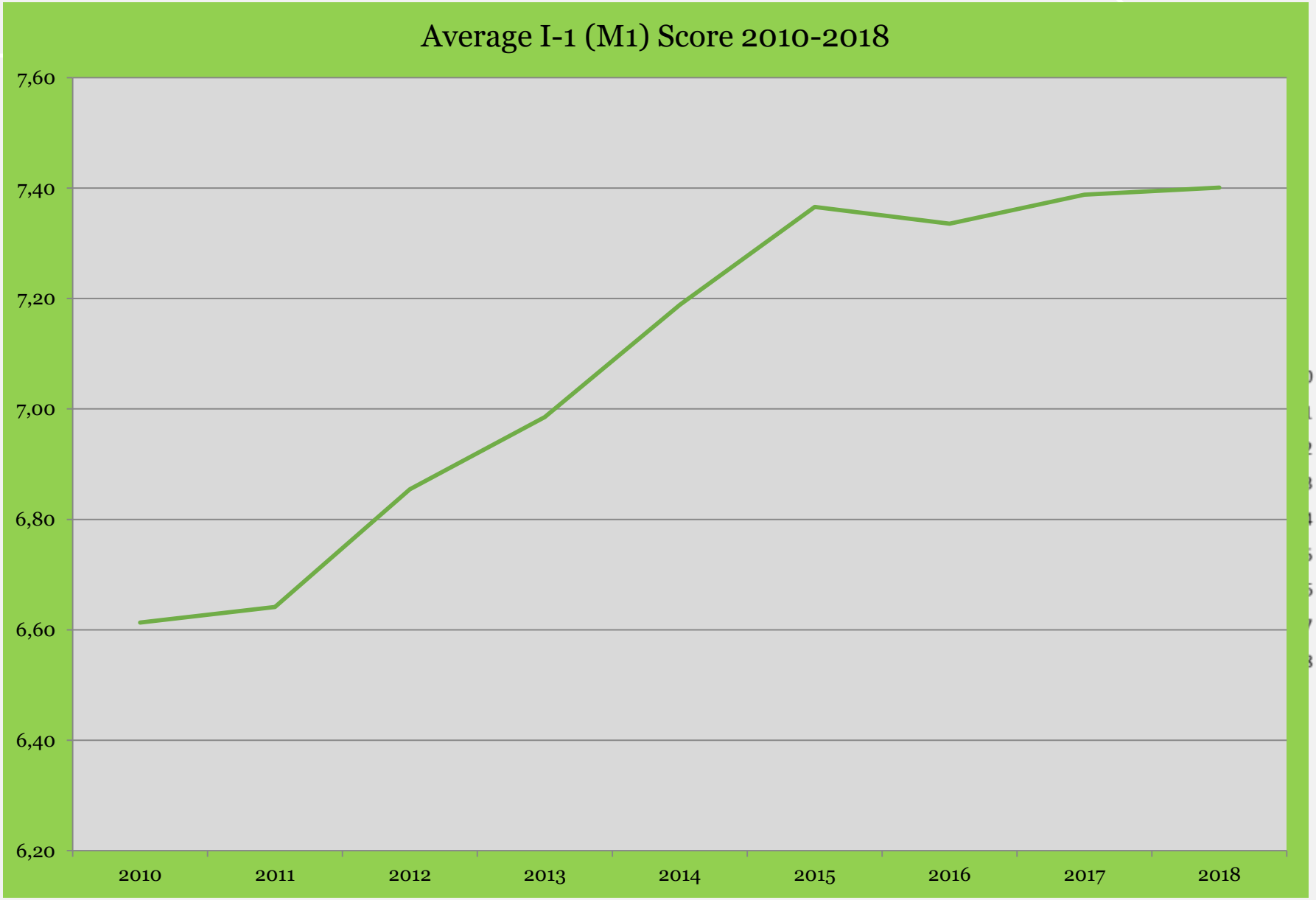
# + restoring/increasing grazing

Well managed with few or no problems:

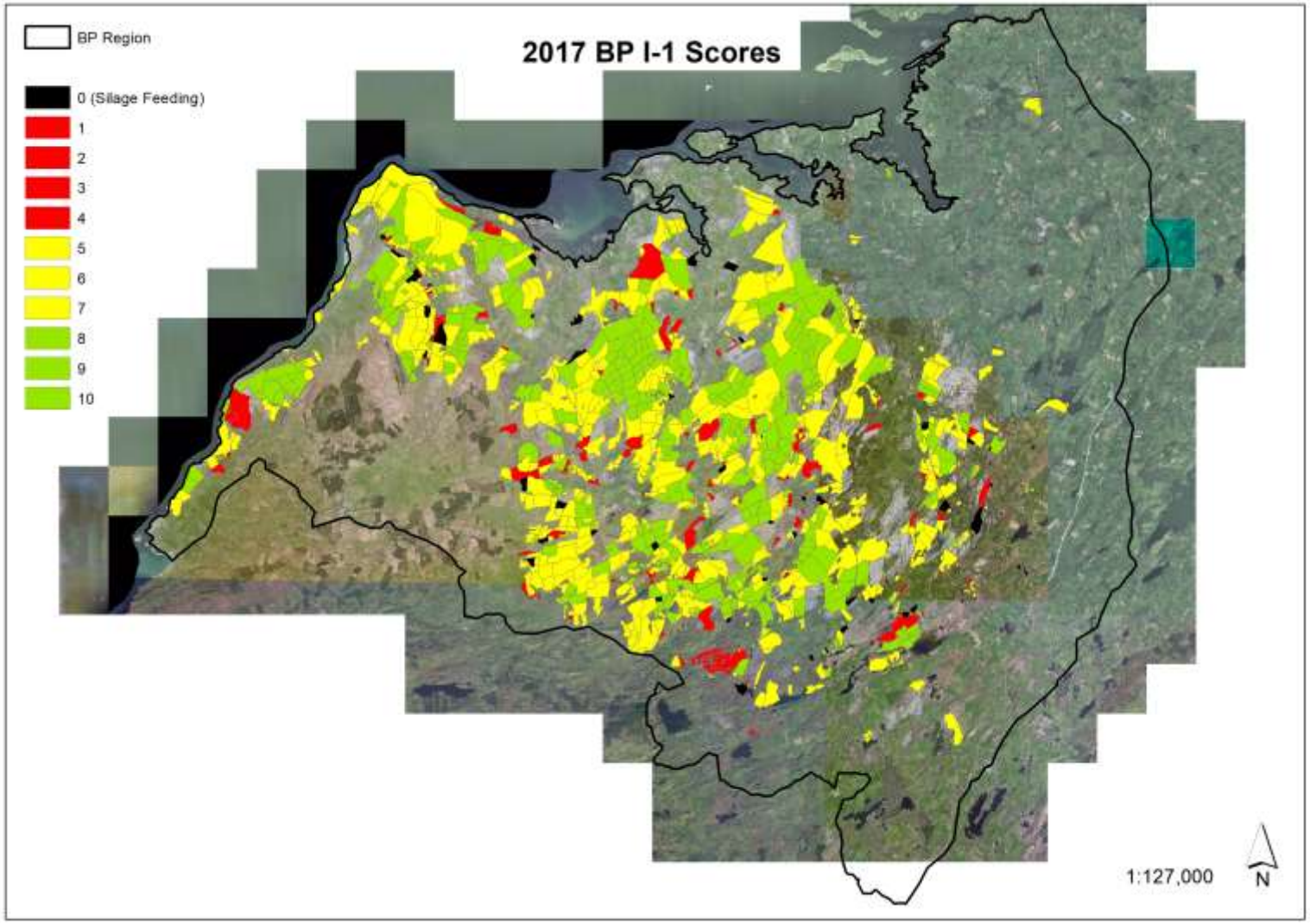
**Score 10/10 €180/ha**

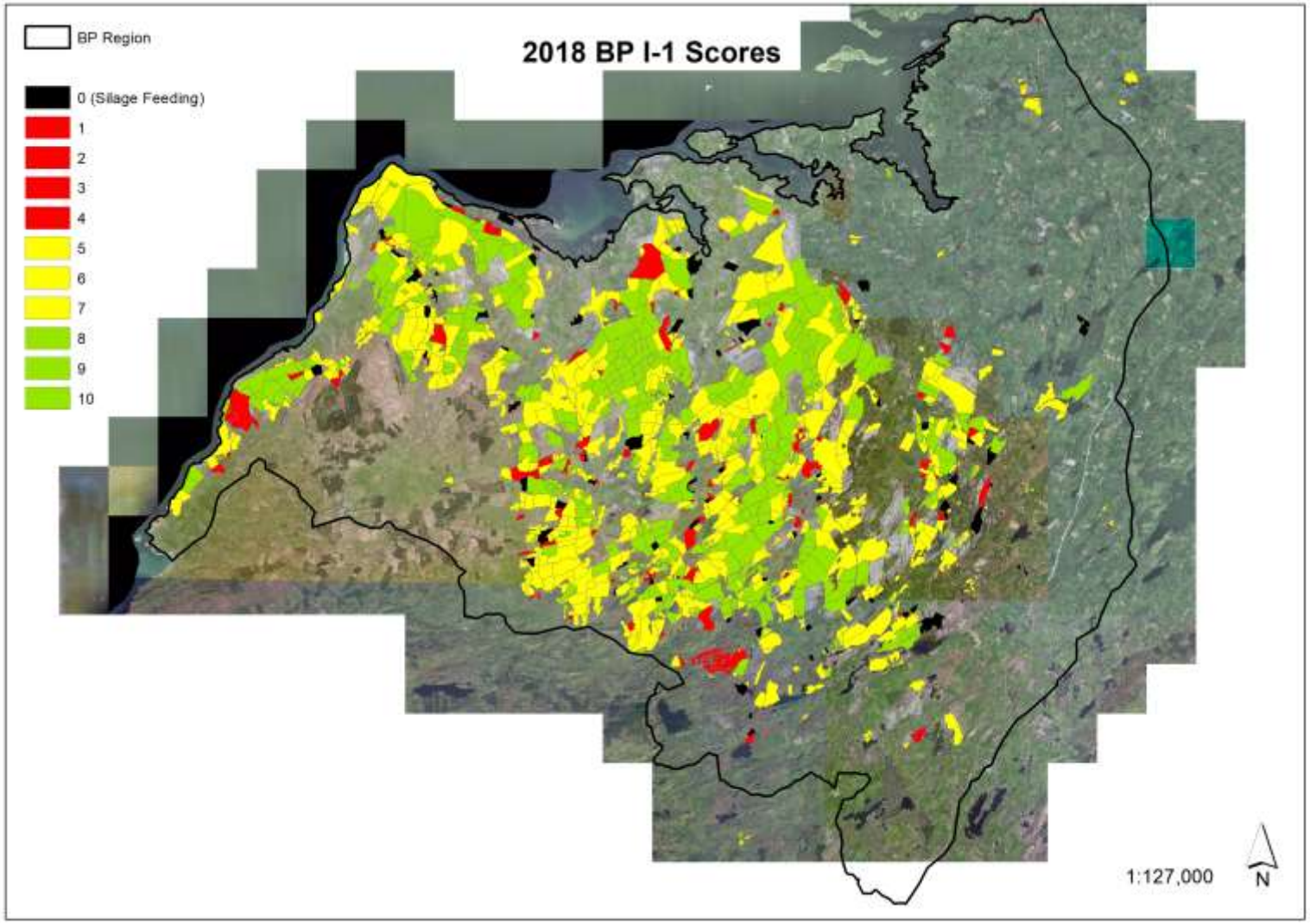
An additional, not an alternative, product

# Impact Monitoring




Percentage of I-1 (M1) area per I-1 (M1) Score, 2010 – 2018 (147 farms, c.7,000ha)


BP Region
2017 BP I-1 Scores
0 (Silage Feeding)
1
2
3
4
5
6
7
8
9
10
1:127,000
N




**Burren Programme 2019:** *- 328 farmers, 23,191ha of Annex I habitat*

*- Budget c.€12-15m (2016-2022)*

*- Average payment per farmer c. €6,500*

# New EIP Agri Locally led Schemes across Ireland

**(funded through *Article 35, managed by local teams under contract*)**

## EIP-AGRI OPERATIONAL GROUPS - IRELAND

The European Innovation Partnership for Agriculture Productivity and Sustainability (EIP-AGRI) was launched in 2012 to contribute to the EU's 'Europe 2020 Strategy' of smart, sustainable and inclusive growth. The Department of Agriculture, Food and the Marine have now selected 25 Irish EIP-AGRI projects following two competitive open call processes. These successful projects were developed by Operational Groups, which bring together actors such as farmers, researchers, advisors and agri-businesses to identify innovative solutions to particular challenges facing the agricultural, food and forestry sectors.

The EIP-AGRI Service Point Operational Group Project Database can be found here

# 1. Farmer-centered approach

Practical, local, relevant to farmer

Fair and transparent payment system

Minimal paperwork – e.g farm plan, permission for works etc

Positive (language, incentives)

Flexible – freedom to farm

Continuity of staff support

*Farmers are heavily invested in 'their' programme and its success, improving impact*

# 2. Locally led (targeted)

All research & design done locally, on farms, with local farmers

Management Office in the central Burren, 6 staff, all living locally

11 farm advisors, 4 of them local farmers responsible for >60% of Plans

Local Management Committee consisting of farmers, advisors and ministry

Local team work on a contract with Ministry, contract value <15% of project spend. Approx. 30% of time spent on 'admin', remainder on technical support for farmers and advisors, monitoring of field scores and farm works, securing permissions for works etc.

*Local approach allows better buy-in, more relevant actions, also better ability to address and resolve issues appropriately*

# 3. Results-based payments

Incentive: Better product, more money.

Meaningful: Clear aims & includes criteria the farmer can control or manage.

Flexible: Freedom to farm & adaptable to individual situations.

Value fo…oney.

Awaren…onal …ctional

Monito…nstrate

- Do good work, and you get paid
- You get paid for what you do
- You get rewarded for your work
- Because you get paid on what you do and don't get penalised on what you don't
- More work you do, more money you get
- Rewards effort
- Paid to improve your land more importantly your life & family
- Good structure & incentive to manage the Burren properly

**Do you think the BP payment system is fair?**

| No, I don't | Yes, I do | No opinion |
|---|---|---|
| 12% | 83% | 5% |

*Results-based system enables ongoing monitoring of impact & offers farmers maximum flexibility*

# 6. Encouraging farming for nature

'… the majority of local people **have not taken ownership of their own heritage**…is once more imposed 'from above' and 'from outside (O'Rourke, 2001).

Moving from Apathy to Empathy

# Community learning initiatives


# *Community wellbeing initiatives*

burrenbeotrust
connecting people and place

changeX

# *Celebrating high nature value farming and its contribution…*


# National Farming for Nature Awards 2018

Bord Bia
Irish Food Board


## 7. Summary and conclusions

Farm families are a conservation 'resource'. To use this resource we need to influence the farmer's *pocket, head and heart*:

- Clearly explain what it is we want farmers to deliver on their land and why.
- Reward and acknowledge farmers who deliver what we want to do so.
- Provide farmers with practical, relevant (local?) technical support.
- Do better at making farmers feel part of the solution - not the problem


www.burrenprogramme.com www.burrenbeo.com
www.farmingfornature.ie

Burren PROGRAMME

'The European Agricultural Fund for Rural Development: Europe investing in rural areas'.

Agriculture, Food and the Marine
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