



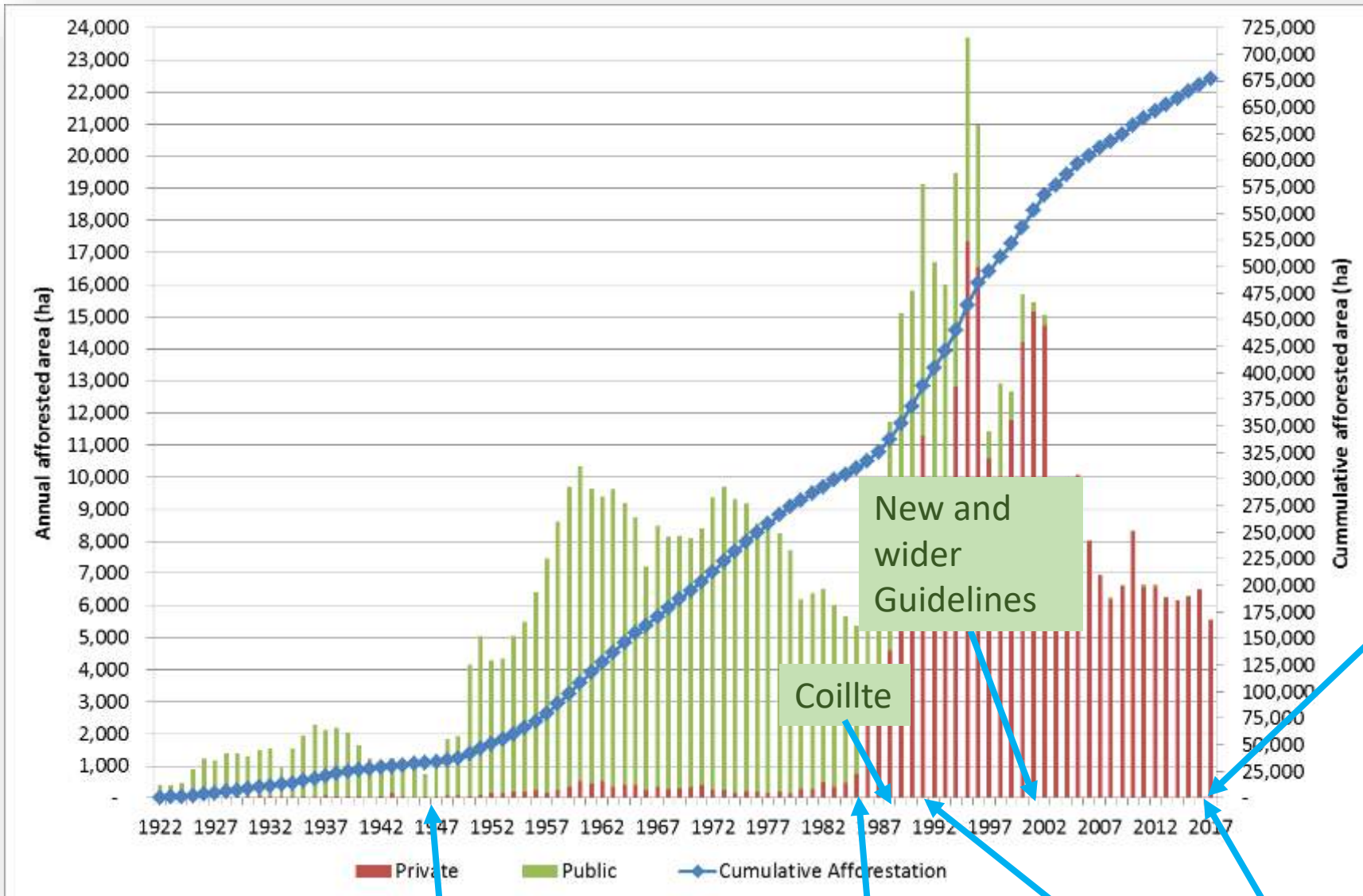
**An Roinn Talmhaíochta,
Bia agus Mara**
Department of Agriculture,
Food and the Marine

Forestry and Water – From Pressures to Measures

Andrew Kirwan, Forestry Inspector (Environment), DAFM

October 2024





1946 Forestry Act

Western package

Guidelines introduced

New legislation

New and wider Guidelines

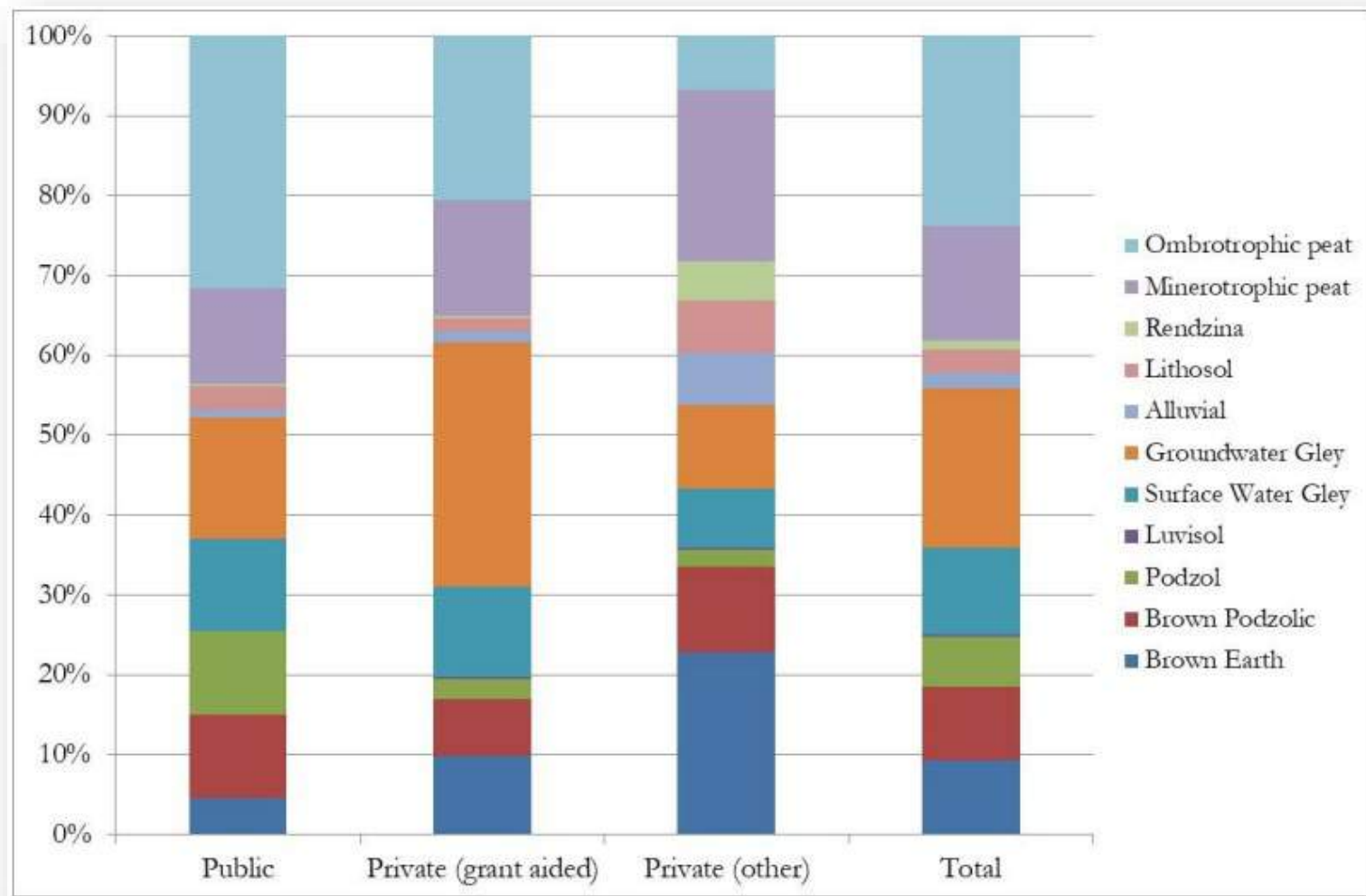
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New policies and Requirements

Forest Cover on Peat Soils



61.6% of forests nationally occur on mineral soils, with the remaining 38.4% on peats



Forests & water



A. Negative impacts on water can arise with inappropriately sited & poorly managed forests

B. However, appropriately sited, designed & managed woodlands & forests can:

- deliver key water-related ecosystem services
- play an important role in meeting the RBMP objectives



Eliminate 'A' and promote 'B'

- Third River Basin Management Plan for Ireland
- Action to be taken across 216 waterbodies where forestry is a significant pressure
- Forestry Division working with the EPA and LAWPRO
- Broader range of actions and greater data sharing



An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage



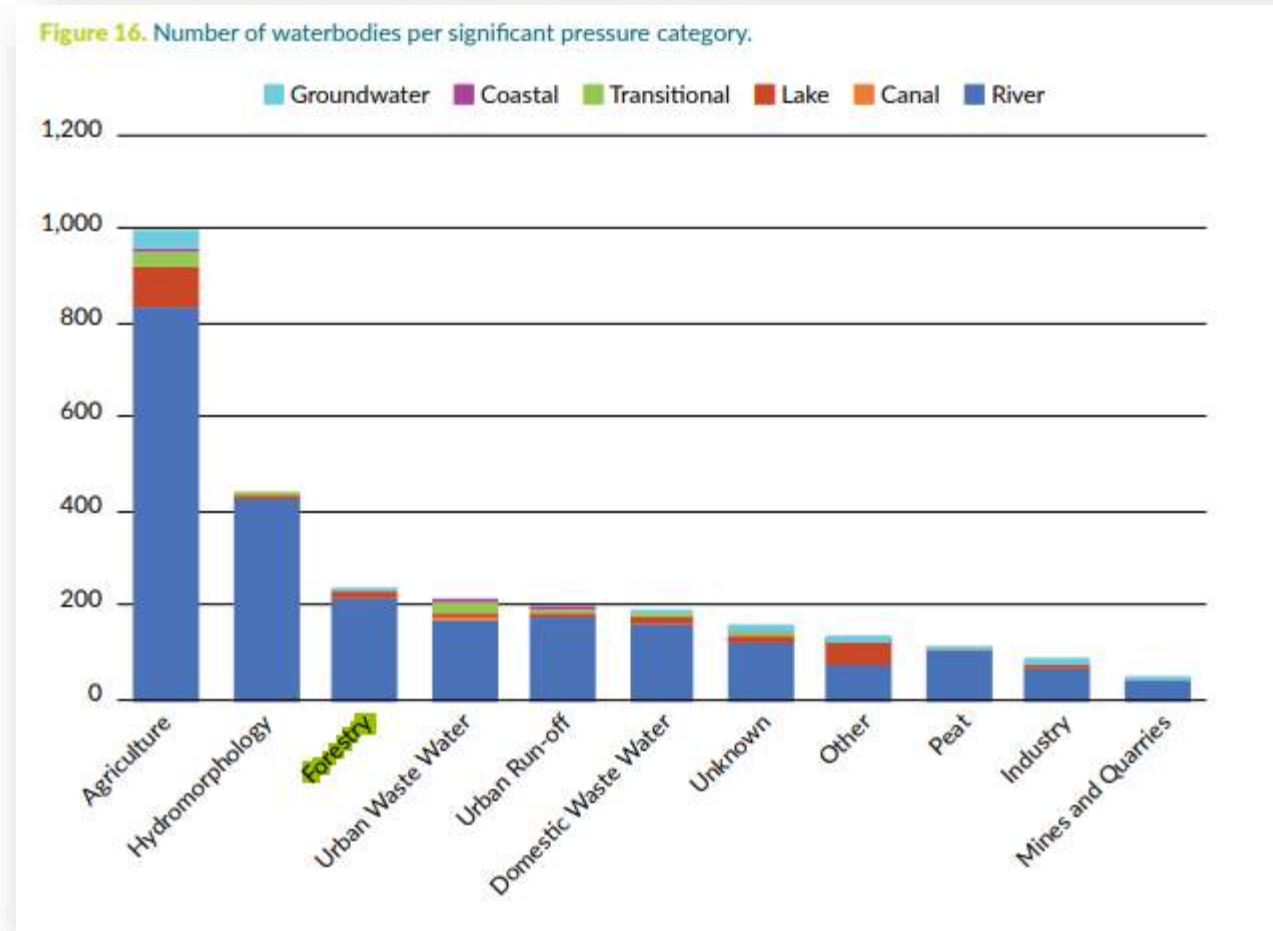
Water Action Plan 2024

A River Basin Management Plan for Ireland

Prepared by the Department of
Housing, Local Government and Heritage
gov.ie



Forestry as a pressure in third cycle (Draft RBMP 2022 – 2027)





Significant pressure category	Waterbody Type						Total	Previous assessment***
	River	Canal	Lake	Transitional	Coastal	Ground-water		
Agriculture	843	0	85	40	7	48	1,023	1,000
Hydromorphology	428	0	15	5	0	0	448	442
Forestry	192	0	14	0	0	10	216	233
Urban Waste Water	161	0	10	22	4	0	197	208
Unknown*	151	0	26	4	6	25	212	164
Urban Run-off	177	0	3	10	4	0	194	196
Domestic Waste Water	117	0	9	6	3	13	148	188
Other**	69	0	50	2	0	15	136	139
Peat	103	0	2	0	0	1	106	106
Industry	61	0	1	0	0	17	79	89
Mines and Quarries	38	0	0	0	0	2	40	45

Forestry Actions Under the Plan



- Forestry 3: DAFM to increase the area of forests with appropriate water setbacks through the ongoing restructuring of existing forest stands at clearfell / reforestation stage (Timescale: Ongoing).
- Forestry 6: DAFM to encourage the uptake of Forest Type 3 under the Afforestation Scheme, aimed at funding native woodland creation on public land, specifically to deliver woodland-based solutions for the protection of drinking water sources and water in general
- Forestry 7: DAFM to launch the new Forests for Water option (Forest Type 2) under the Afforestation Scheme, which offers added incentives to farmers and other landowners to promote the creation of new native forests specifically to provide water services, including improvements to water quality, drinking water source protection, natural water retention, the improvement of aquatic and riparian habitats, and the expansion of alluvial woodland.

Forestry Actions Under the Plan

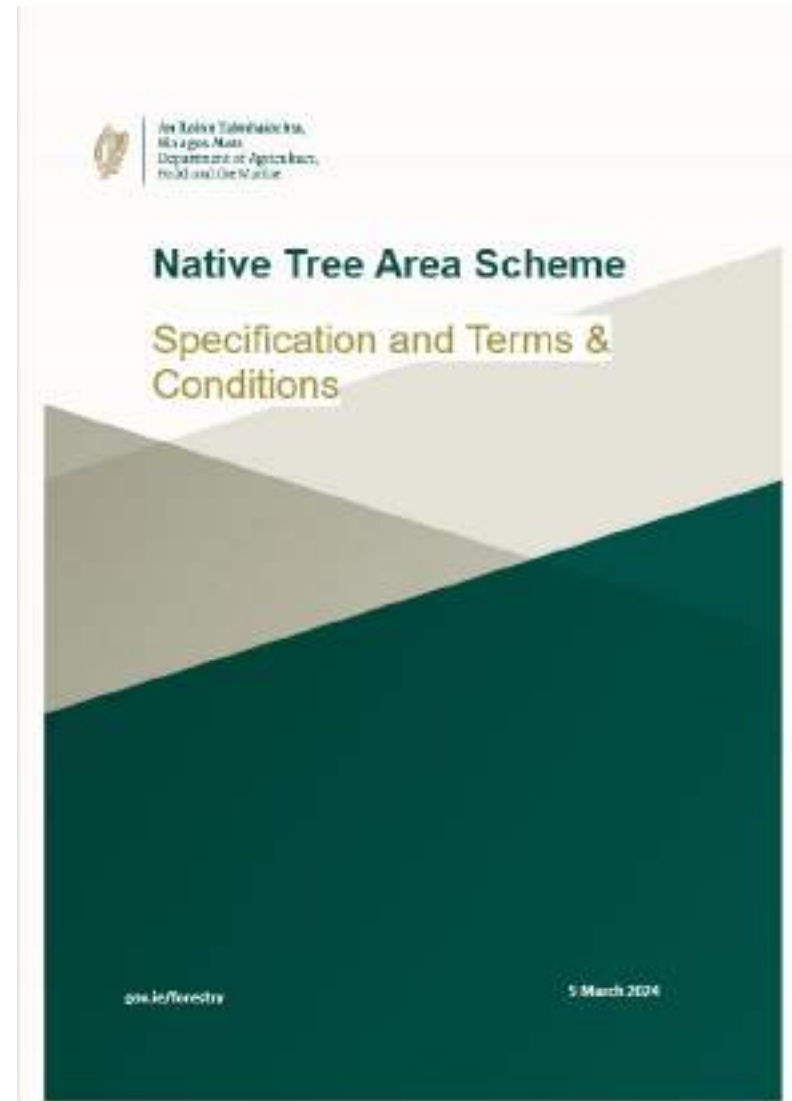


- In addition to the actions listed for forestry in the RBMP, the key principles guiding the DAFM's input into achieving the objectives of the RBMP are:
 - i. to safeguard water during all forestry operations;
 - ii. to restructure existing forests to reflect water sensitivities, where required; &
 - iii. to situate & design new woodlands & forests in a way that protects water quality. Using the WFD's 'source-pathway-receptor' model, reducing sources & breaking pathways are key.

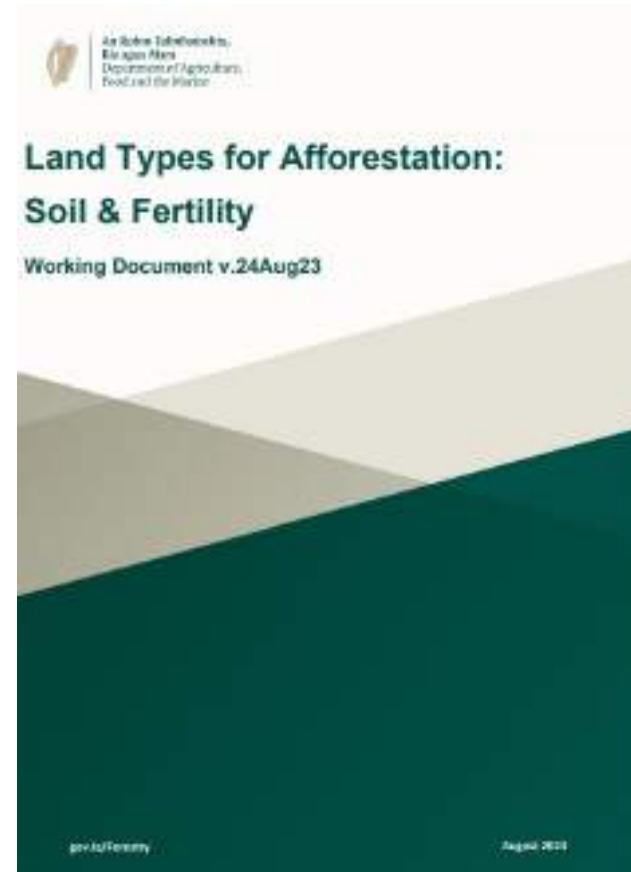
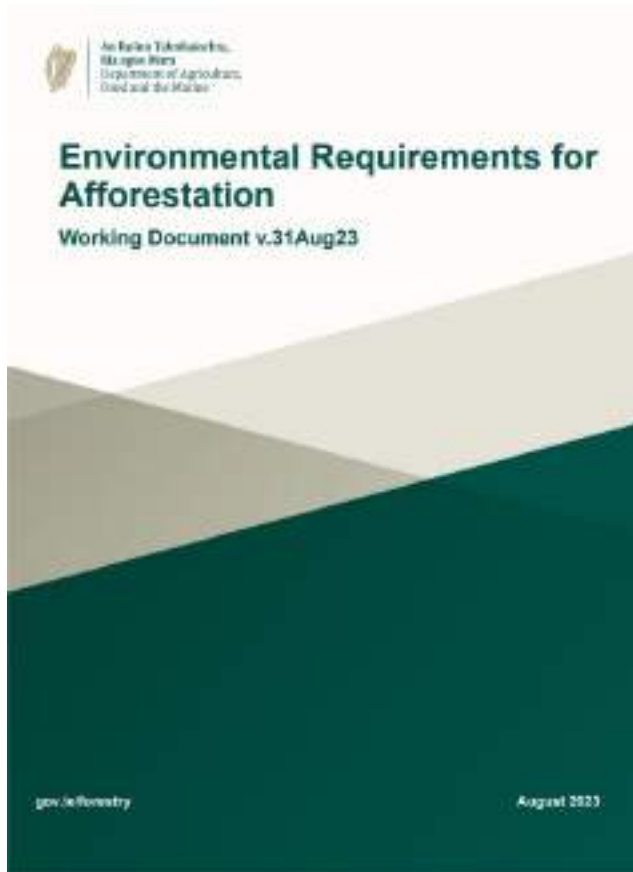
The aim is to fully realise the significant role woodlands & forests can have in protecting & enhancing Ireland's waters & associated aquatic ecosystems

Afforestation as a measure

- Department operates a Native Woodland Establishment Scheme and Agroforestry Scheme under the Forestry Programme
- New FT2 and NTA2 Forests for Water Scheme proposed in the new programme
- Any type of afforestation could mitigate certain pressures – *Right Tree in the Right Place*
- Appropriately sited trees and forests can slow flow, improve infiltration, take up nutrients, stabilise banks, create physical barriers, regulate stream temperatures, improve stream ecology and more



Afforestation



All afforestation, whether grant aided or not, requires a licence from the DAFM. Licences are subject to Appropriate Assessment, and all contain these requirements as a minimum standard.

Fertiliser or pesticide is not widely used in afforestation as the ground being planted was previously in agricultural use. Where they are applied, it is by hand or knapsack and only at the very early stages. Once free growing, (>4 years) neither are required.

Afforestation – site eligibility



Interventions and Measures



Intervention	Measure
1-FT1	Native forests
1-FT2	Forests for water
1-FT3	Forests on Public Lands
1-FT4	Amenity forests & Neighbourwoods
1-FT5	Emergent Woodland / Rewilding
1-FT6	Broadleaf, mainly oak
1-FT7	Broadleaf, mainly birch, alder
1-FT9	Seed Orchards
1-FT10	CCF
1-FT11	Mixed high forests: Scots Pine, Douglas Fir
1-FT12	Mixed high forests with mainly spruce, 20% broadleaves
1	Woodland Environmental Fund
2 - FT8	Agroforestry
2	Silvoarable Systems - Pilot projects
2	Forest Farming Pilot - projects
2	Forest Gardening - Pilot
3	Forest Roads - km
3	Ecologically Enhanced Forest Roads
3	Special Construction Works - incl water attenuation
3	Engineering Design Support Measure
3	Forest Machinery Grant
3	Temporary Road Access Solutions Scheme
3	Investment Aid for Forest Tree Nursery Sector
3	Central Tyre Inflation Systems
3	Forest Technology Challenge Grant

Intervention	Measure
4	Forest Management Scheme
4	CCF - WIS - 3 payments of €1,200
4	Forest Management Plans
4	Private NF (Conservation)
4	Public NF (Conservation)
4	Environmental Enhancement
4	Deer Tree Shelter Scheme - DTS
4	Deer Tree Shelter Scheme - Deer Fencing
4	Deer Tree Shelter Scheme - Upgrade Deer
4	Deer Tree Shelter Scheme - Upgrade Hare
4	Coppice and Coppice with Standards
4	Seed stand management
5	Advisory Services
5	KTGs
5	Citizen Science
5	CPD/Training
5	Advisory and Promotion Services- call for proposals
6	Neighbourhood Scheme
6	Heritage Forests
6	Forest Classroom
6	Amenity & recreation Unit
7	Reforestation - CCF
7	Reforestation - NW
7	Reforestation - Water
8	Reconstitution

FT2 – Forests for Water



- Create new native forest in strategic locations, where this landuse change would deliver specific ecosystem services regarding the protection of water and aquatic ecosystems or would reinforce and expand areas of alluvial forests.
- FT2 is designed to address specific needs, to help Ireland achieve the water quality objectives as set out in the River Basin Management Plan for Ireland and to facilitate the expansion of Alluvial Woodland and to help protect drinking water sources.





FT2 – Forests for Water



Applications must meet one of the following targeted objectives in order to be considered eligible:

- Plant in areas identified as Rank 1-3 on the EPA Pollution Impact Potential (PIP) Maps for phosphorus to break the pathway and protect the delivery point to the receiving aquatic zone.
- Plant in areas identified by the Local Authorities Waters Programme (LAWPRO) or Agricultural Sustainability Support and Advice Programme (ASSAP), for Native Forest creation as a mitigation.
- Plant in areas identified by Irish Water or the National Federation of Group Water Schemes for drinking water source protection.
- Plant in areas suitable for Natural Water Retention Measures. Such areas are in the process of being identified by the Office of Public Works (OPW).
- Plant in areas identified by Inland Fisheries Ireland for improvement of fisheries habitat and stream ecology.
- Plant to facilitate the expansion of the Habitats Directive Annex I Habitat: Alluvial Woodland 91EO.

FT2 – Forests for Water



- Planting details are dictated by the Native Forest Framework (and in particular Scenario 6 – Alluvial Forest), which identifies the most appropriate native forest type, based principally on soil and vegetation.
- Species planted are restricted to those that are native to Ireland. The use of native provenance tree stock during establishment is prioritised.
- Minimum input required. No clearfell, CCF long-term management. Permanent stability

FT2 plots can be planted alongside other FT types within the same overall afforestation project



- Western plot consists of native broadleaf trees, pit planted
- Middle plot is conifer
- Lakeside plot constructs a permanent buffer along water's edge

Forest Type 3 – Forests on Public Lands

- The aim of Forest Type 3 – Forests on Public Lands is to encourage public bodies (e.g. government departments, state sponsored organisations, higher education authorities, local authorities,...) to establish new native forests on suitable land under their ownership and control



FT3 provides funding which can deliver various ecosystem services:

- The restoration of lost native woodland habitats, rich in biodiversity and cultural significance.
- The formation of corridors with and between other semi-natural habitats within the surrounding landscape.
- Carbon sequestration arising from woodlands that will exist in perpetuity.



FT3 provides funding which can deliver various ecosystem services:



- The protection and enhancement of water quality and associated aquatic ecosystems.
- The improvement of air quality in urban and peri-urban areas.
- Soil protection and the reclamation of former landfill and brownfield sites



Available Funding



- Grant funding of up to €6,744 / hectare is provided to Local Authorities under this scheme to establish the forest. Fencing allocation of the forest area is grant funded also (see Forestry Standards manual)
- Additional funding for trails, seating and signage is set at €3,800/hectare and amenity funding (playground/ recreational facility etc) of €10,000 per application is also provided for
- The scheme also provides an additional grant for the development of forestry on former landfill sites/ brownfield sites of €500/hectare if the sites are considered suitable for planting, and under specific conditions as outlined in the DAFM Scheme document.



Native Forest Framework



- The Native Forest Framework identifies at pre-application stage, the most appropriate native forest type - based principally on soil and vegetation
- It contains six different scenarios, together representing the main native forest types found in Ireland, together with their associated soil types. They are:
 - Scenario 1: Podzols (Oak-Birch-Holly Forest)
 - Scenario 2: Brown Podzolics (Oak-Birch-Holly with Hazel Forest)
 - Scenario 3: Brown Earths (Oak-Hazel Forest)
 - Scenario 4: Gleys (Alder-Oak Forest)
 - Scenario 5: Highly Modified Peat & Peaty Podzols (Pioneer Birch Forest)
 - Scenario 6: Alluvial Floodplains (Alluvial Forest)

Native Forest Framework

Scenario 2:

Brown Podzolics
(Oak-Birch-Holly with Hazel Forest)

Planting mixture:

- 50% Sessile oak
- 15% Hazel
- 10% Downy birch
- 10% Scots pine
- 5% Wild cherry
- 10% minor species (at least one of: hawthorn, holly, rowan, crab apple)

Scenario 4:

Gleys
(Alder-Oak Forest)

Planting mixture:

- 50% Common alder
- 10% Grey willow
- 10% Downy birch
- 10% Pedunculate oak
- 5% Hawthorn
- 15% minor species (at least one of: holly, hazel, guelder rose)



Native Tree Area Scheme



- Provisions signed into law on 4th April 2022 (Animal Health and Welfare and Forestry Act 2021), to increase native tree planting as part of a scheme by removing the requirement for an afforestation licence for small areas.
- Scheme has been developed that will allow a maximum of 2 hectares to be planted per holding. Two interventions:
 - - NTA 1: Creation of small native forests.
 - - NTA 2: Creation of native forests for water protection.
- The Scheme will not follow the pre-approval process of the Afforestation Scheme. Direct entry to the Scheme will apply, using the same approach as Agri-Environmental Schemes.
- Eligibility criteria incorporated into the scheme to ensure that all tree planting works comply with environmental law.
- Applicants will be able to submit an application to join the scheme on approximately 3.1 million hectares of land.



Dairy farm



NTA 1 - Creation of small native forests

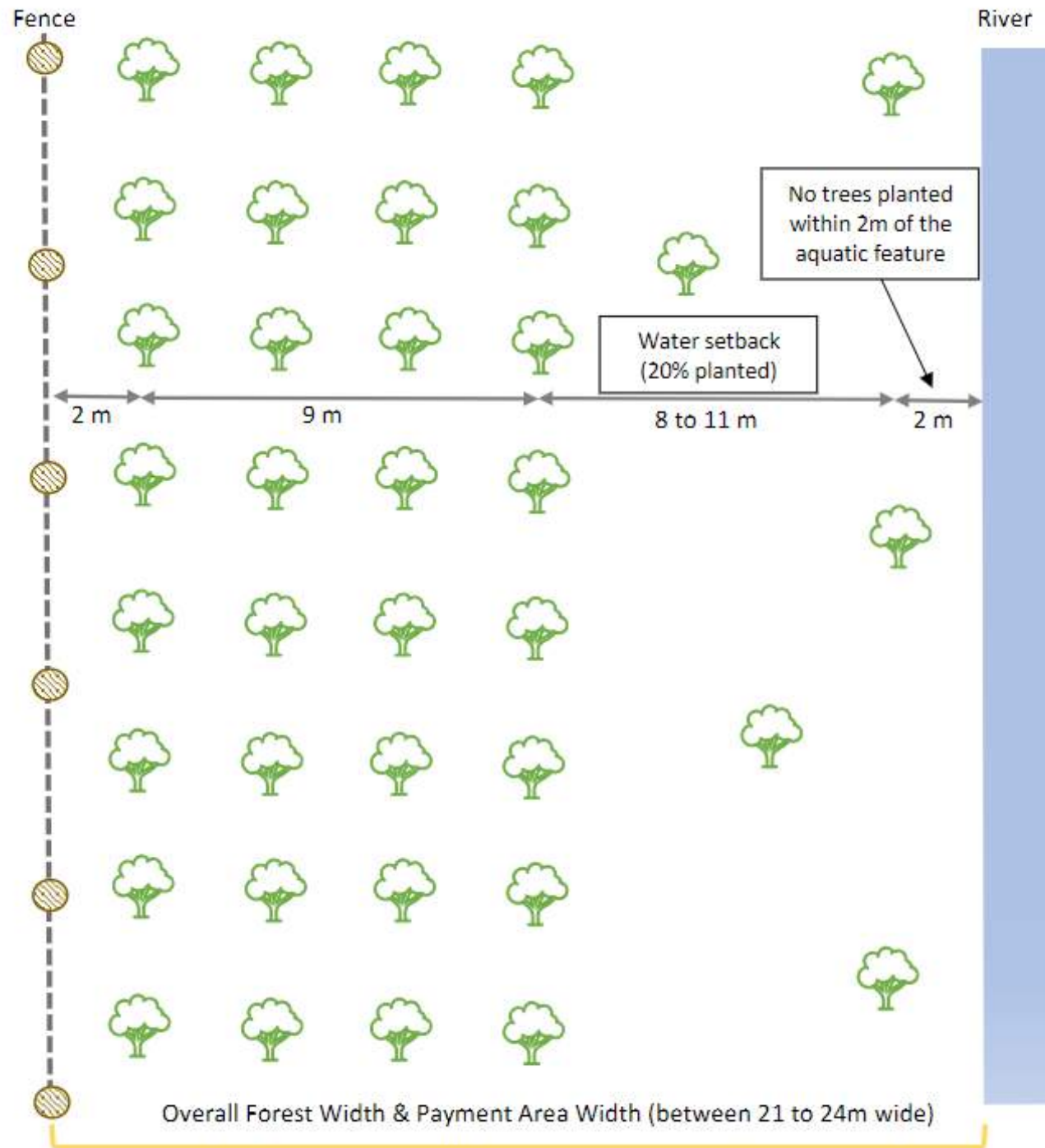


NTA 2 - Creation of native forests for water protection



Native Tree Area Scheme at farm level





NTA eligible soils and planting mixtures



Scenario	Planting Mixture
Scenario 1 Dry Mineral Soil (i.e. podzols, brown podzols & brown earths)	Oak (30%), birch (30%) Scots pine (25%) and other native species (15%). Oak to be planted in predominantly pure groups, with birch scattered intimately throughout. Scots pine planted in small pure groups, focusing on parts of the plot and away from any watercourses adjoining or crossing the plot. The remainder of the birch to be planted in pure groups. (Changes + or – 25% for each species will be accepted. A maximum of 25% Scots pine may be planted)
Scenario 2 Wet Mineral Soil (i.e. gleys)	Alder (50%), birch (30%), oak (15%) and other native species (5%). Alder and birch to be planted in pure groups (30-40 trees), with groups interspersed alternately. Oak to be planted in small pure groups, focusing on the dryer parts of the plot. (Changes + or – 25% for each species will be accepted.).

Intervention 7 - Climate Resilient Reforestation



- The overall objective of this intervention is to increase the climate resilience of the national forest estate by increasing the proportion of forest land managed under permanent forest cover.
- This intervention seeks to support forest owners at reforestation by incentivising species diversity and structural diversity.
- The intervention is comprised of three elements of a new pilot Climate Resilient Reforestation Scheme:
 - Element 1: Reforestation for Continuous Cover Forestry.
 - Element 2: Reforestation for native woodlands.
 - Element 3: Reforestation for biodiversity and water protection.







For any forestry and water related queries,
you can contact me directly:

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Thank you