

Appendix F: Detailed Matrix Assessment

Measure 1: Afforestation, Native Woodland Establishment, Agro-Forestry and Forestry for Fibre Schemes









Measure 2: NeighbourWood Scheme

Measure 3: Forest Road Scheme

Measure 4: Prevention and Restoration of Damage to Forests: Reconstitution Scheme

Measure 5: Woodland Improvement (Thinning & Tending- Broadleaves)

Measure 10: Forest Genetic Reproductive Material Scheme

Key for Significance of Effect	
	Major or Major/Moderate beneficial effect
	Moderate or Moderate/Minor beneficial effect
	Minor or Minor/Negligible beneficial effect
	Negligible beneficial/adverse effect or neutral effect
	Minor or Minor/Negligible adverse effect
	Moderate or Moderate/Minor adverse effect
	Major or Major/Moderate adverse effect
	Uncertain beneficial/adverse effect

Measure 1: Afforestation and Creation of Woodlands - Afforestation, NW Establishment, Agro-Forestry and Forestry for Fibre Scheme

SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required
1	Ecology	Short to long term	Continuous	Temporary to permanent (possibly reversible)	Local to regional	High	Local to international	Negligible to high	Negligible to high	Moderate/Minor	Medium	Yes



Measure 1: Afforestation and Creation of Woodlands - Afforestation, NW Establishment, Agro-Forestry and Forestry for Fibre Scheme													
SEA Objective		Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required
2	Socio-Economics	This measure will have significant benefits for the wood production and energy from fibre industries (providing sustainable jobs in the rural economy), whilst landowners will benefit from payment of grants and premiums to manage their land for forestry. Tree planting on farmland can help to improve the micro-climate and provide food and shelter for pollinators, boosting productivity and diversifying income. Agro-forestry revenues would be negligible due to small funding allocation.	Short to medium term	Regular to continuous	Temporary	Local to national	Negligible to High	N/A	High	Low to high	Major/Moderate	Medium	No
3	Health	Quality of life may benefit indirectly from the increase in healthy, biodiverse woodland and associated flood protection and air quality improvements, as well as the increase in clean energy supply. Site selection methods and NWS establishment will avoid and may even improve water quality issues. There may be a temporary adverse noise/vibration/ local traffic effect during forestry operations but this will be highly localised.	Short to long term	Infrequent to continuous	Temporary	Local to regional	Negligible	N/A	High	Negligible	Minor/Negligible	Low	No

Measure 1: Afforestation and Creation of Woodlands - Afforestation, NW Establishment, Agro-Forestry and Forestry for Fibre Scheme

SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required
4	Soil	Short to long term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Medium	N/A	Negligible to high	Medium	Minor	Medium	Yes



Measure 1: Afforestation and Creation of Woodlands - Afforestation, NW Establishment, Agro-Forestry and Forestry for Fibre Scheme													
SEA Objective		Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required
5	Water	<p>Water resources should benefit from increased tree cover as there will be less sedimentation of watercourses during rainfall events, improved water infiltration rates, helping water travel deep into the ground, whilst trees and vegetation can also filter pollutants from surface water run-off, thus reducing pollution of water courses. The NW Establishment and Agro-forestry schemes will be particularly beneficial through targeted riparian buffer planting to protect Freshwater Pearl Mussel catchments, especially where these are used to mitigate impacts of coniferous afforestation. However, the initial planting of trees and subsequent management activities are likely to increase pollution and sedimentation of watercourses, whilst coniferous plantations can cause acidification of groundwater. There could also be adverse effects if wet soils are drained prior to or as a result of planting. The Draft FP will minimise such adverse effects by avoiding planting in upland and peat sites that have a high sensitivity regarding water quality as well as fisheries sensitive areas. Planting of NWS will be considered in acid-sensitive catchments but not other forms of afforestation. Any proposed planting site (contiguous) with lakes, rivers, streams or drains with continuously flowing water are subject to the Forest Service's Forestry and Water Guidelines.</p>	Short to long term	Continuous	Temporary to permanent	Local to regional	High	Local to international	Low to high	Low to high	Major/Moderate	Medium	Yes

Measure 1: Afforestation and Creation of Woodlands - Afforestation, NW Establishment, Agro-Forestry and Forestry for Fibre Scheme													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
6	Air	Woodlands are known to intercept and/or absorb gaseous pollutants such as PM10, NO2, O3, SO2 and CO (conifers are better at absorbing PM10, whilst deciduous trees are better at absorbing gases) so this measure will improve Ireland's already good air quality. Agro-forestry or other planting on or near farmland should help to reduce the impacts of ammonia on sensitive species by intercepting some of these emissions through dry deposition on the leaf and bark surfaces. There may be a temporary adverse dust/local traffic emissions impact during forestry operations, but this will be highly localised and infrequent.	Short to medium term	Infrequent to continuous	Temporary	Local	Medium	N/A	Medium	Medium	Minor	Medium	No
7	Climate	Ireland's potential for carbon sequestration will improve significantly from the planting of an additional 7,235 ha of healthy, biodiverse woodland each year, whilst the trees and associated vegetation (particularly riparian buffer planting) will also intercept surface water run-off reducing flood risk. At farm level, new woodland will also provide shade / evaporative cooling and shelter / reduction in the wind chill factor for nearby crops, livestock and buildings. Furthermore, the Forestry for Fibre scheme will help to minimise unsustainable use of fossil fuels and peat.	Long term	Continuous	Temporary to permanent	Local to national	High	N/A	High	High	Major/Moderate	Medium	No
8	Material Assets	Increasing the funding for forestry activities will ensure better and more efficient use is made of Ireland's forest resources, particularly regarding high quality hardwood timber, energy wood and fuel. The Forestry for Fibre scheme should also reduce unsustainable use of fossil fuels and peat.	Short to medium term	Infrequent to continuous	Temporary to permanent	Local	Low	N/A	Medium	Medium	Moderate/Minor	Low	No

Measure 1: Afforestation and Creation of Woodlands - Afforestation, NW Establishment, Agro-Forestry and Forestry for Fibre Scheme													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
9	Cultural Heritage	Woodland creation has potential for adverse effects on cultural or archaeological monuments/sites/objects, for example boundary banks and dykes, burial mounds, Celtic fields and areas where the landscape history is important, if not acknowledged and mitigated for. Tree planting on agricultural land could possibly cause damage to archaeological remains and hidden monuments if planted on areas not previously disturbed by ploughing etc., e.g. at field boundaries. There are also issues for submerged archaeology in neighbouring watercourses. However, the Measure states that where applications for forestry activities fall within 200m of a recorded monument, archaeological conditions will be imposed by the National Monuments Service and to avoid damage to unrecorded monuments a risk assessment will be carried out upon scheme application. In addition, the NW Establishment scheme aims to benefit cultural heritage. The concern is that, whilst some assets will be well protected by the FP, others (e.g. submerged archaeology) may be more difficult to identify in the risk assessment process.	Short to long term	Infrequent to continuous	Temporary to permanent	Local to regional	Medium	Local to national	Negligible to high	Negligible to high	Minor/Negligible	Medium	Yes

Measure 1: Afforestation and Creation of Woodlands - Afforestation, NW Establishment, Agro-Forestry and Forestry for Fibre Scheme													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
10	Landscape	New woodland can have both adverse and beneficial impacts on landscape character and visual amenity, depending on where it is located and how it is designed in relation to the landform or the enclosure pattern. Enhancing the quality and diversity of Ireland's landscapes is an objective of the NW Establishment and the Agro-forestry schemes, whilst the Measure as a whole requires new forests to be established and maintained in a way that enhances the landscape. This will be done with reference to DAHG's latest Landscape Strategy document. Sensitive areas such as National Parks are susceptible to damage through forestry plantations, particularly wilder parts. Hedgerows are afforded additional protection in afforestation schemes, though it is not clear if this also applies to landmark trees.	Medium to long term	Continuous	Permanent	Local to regional	Low	Local to national	Negligible to high	Negligible to high	Minor	Medium	Yes
11	GI & ES	The creation of new forests will improve water regulation and purification, soil erosion control, carbon sequestration, climate control, air quality maintenance, pest regulation and provision of stepping stone habitat across the landscape, improving connectivity. Preservation of hedgerows and trees may facilitate greater crop productivity through pollination, whilst any riparian planting will greatly improve water quality from agricultural run-off. Agro-forestry's benefits will be limited by the negligible size of the scheme. The Forestry for Fibre scheme will also increase energy production from renewable sources. Benefits will also arise from the need for afforestation applicants to record the flora and fauna and ecosystem services that the woodlands will seek to enhance.	Short to long term	Continuous	Temporary to permanent	Regional	High	N/A	Negligible to high	Negligible to high	Major/Moderate	Medium	No

Measure 2: Investments Improving the Resilience and Environmental Value of Forestry - NeighbourWood Scher

SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required
1 Ecology	Ecology could benefit indirectly from increased education and protection of waterbodies adjacent to NeighbourWoods, whilst permanent forestry for recreational purposes in the environs of a watercourse could enhance the protection of the aquatic biodiversity while increasing locally the terrestrial biodiversity. However, silvicultural enhancement of existing amenity forests could increase the level of disturbance and perhaps loss of dead trees; establishment of new NeighbourWoods could have positive or adverse effects depending on how biodiverse the previous habitat is (brownfield sites can be very biodiverse) although the site suitability screening and AA will reduce the risk of adverse effects. Provision of recreational facilities can also increase disturbance and possibly cause loss of habitat or nesting/roosting sites.	Short to long term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local to regional	Negligible	Local to international	Negligible to high	Medium	Minor/Negligible	Medium	Yes
2 Socio-Economics	The Neighbourwood scheme which will provide local opportunities for people to socialise, learn about nature and enjoy themselves. Also, because the scheme can access NWS Cons funding, there is scope for coppicing which may generate community woodfuel or other products.	Short to medium term	Infrequent to continuous	Temporary	Local	High	N/A	High	Medium	Major/Moderate	High	No

Measure 2: Investments Improving the Resilience and Environmental Value of Forestry - NeighbourWood Scher													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
3	Health	Physical and mental health and quality of life will benefit significantly for those able to use attractive, close to home woodland amenities and recreational facilities, whilst there may also be indirect benefits from the air quality benefits that increased areas of woodland can provide. Similarly, urban woodlands can indirectly benefit quality of life through provision of shading and minimising surface water run-off during extreme weather events.	Short to medium term	Infrequent to continuous	Temporary	Local	High	N/A	High	High	Major	High	No
4	Soil	Increased recreational use of existing woodlands may result in erosion and compaction of the soil, however the creation of new woodlands on brownfield sites, particularly those that currently have hard-surfacing will greatly improve the land resource through reducing soil sealing, allowing drainage and increasing carbon storage. (It should be noted that if trees are planted in drought-prone urban areas with clay soils, the subsequent shrinkage and swelling of the soil due to changes in moisture content could cause physical damage to structures and hard surfaces).	Short to long term	Regular to continuous	Temporary to permanent (possibly reversible)	Local	Medium	N/A	Negligible to high	Medium	Minor	Low	Yes
5	Water	The protection of waterbodies adjacent to NeighbourWoods should prevent any adverse effects of this scheme during silvicultural or woodland creation activities. In addition, there will be benefits as newly created forests will be able to filter pollutants from urban surface water run-off, as well as improving drainage thus reducing flood risk.	Short to long term	Infrequent	Temporary	Local to regional	Medium	Local to international	Low to high	High	Major/ Moderate	Medium	No

Measure 2: Investments Improving the Resilience and Environmental Value of Forestry - NeighbourWood Scher													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
6	Air	Trees remove gaseous pollutants such as PM10, NO2, O3, SO2 and CO, so creation of new woodlands in (congested) urban areas would improve air quality. Increasing silvicultural and recreational activities in existing urban woodlands could possible have a small adverse effect however depending on the activities.	Short to medium term	Continuous	Temporary to permanent	Local	Low	N/A	Medium	Medium	Minor	Medium	No
7	Climate	Newly created Neighbourwoods will help to sequester carbon whilst improving urban drainage (thus reducing flood risk), and also providing shade to help combat the urban heat island effect.	Short to long term	Continuous	Temporary to permanent	Local to national	Medium	N/A	High	High	Major/Moderate	Medium	No
8	Material Assets	New and enhanced Neighbourwoods will increase the use of the existing built environment, and will also make more efficient use of forest resources in terms of their potential for recreation and possibly a source of local food, fibre and fuel products.	Short to medium term	Infrequent to continuous	Temporary	Local	Low	N/A	Low	Medium	Moderate/Minor	Low	No
9	Cultural Heritage	Creation of new Neighbourwoods (e.g. on brownfield sites), and increased silviculture and recreational activities in existing woodlands could disturb, damage or destroy undesignated cultural heritage or archaeological assets including existing veteran trees, though un-discovered heritage is unlikely in what is already a modified urban environment.	Short to medium term	Infrequent to continuous	Temporary to permanent	Local	Negligible	Local to national	Negligible to high	Low	Negligible adverse	Low	Yes
10	Landscape	Visual amenity is likely to improve if brownfield sites are converted to woodland. Increased management of existing, perhaps neglected woodland sites could possible also improve the overall urban landscape.	Short to medium term	Continuous	Temporary	Local	Medium	Local to national	Negligible to high	Low	Moderate/Minor	Medium	No

Measure 2: Investments Improving the Resilience and Environmental Value of Forestry - NeighbourWood Scher												
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required
11 GI & ES	This scheme will have significant benefits, with new Neighbourwoods providing habitat connectivity across the urban landscape, restoring previously degraded land, and increasing the multifunctionality of this important GI resource. Knowledge and understanding of the environment should improve from educational activities, with outdoor recreation also increasing. Provision of ES such as carbon sequestration, climate regulation, water regulation and purification, air quality maintenance, and aesthetics will also improve.	Short to long term	Infrequent to continuous	Temporary to permanent	Local to regional	High	N/A	Negligible to high	High	Major	High	No

Measure 3: Investments in Infrastructure - Forest Road Schem													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
1	Ecology	Support for infrastructure to facilitate access to forestry land may increase the amount of light reaching the forest floor thus stimulating vegetative growth. Nevertheless there could be an adverse effect where forestry has been located in peatland areas (especially lowland raised bogs). The construction and use of forest roads can disturb wildlife and may also facilitate the spread of invasive species, pests and diseases. However, Forest Road construction will link with existing road network and use existing entrances, thus reducing disturbance.	Medium to long term	Continuous	Temporary to permanent (possibly reversible)	Local to regional	Low	Local to international	Negligible to high	Medium	Minor	Low	Yes
2	Socio-Economics	Revenue from forests will greatly increase where new forest roads facilitate much needed thinning operations. This scheme will therefore have significant benefits for those involved in the forestry industry, particularly if roads can be shared between neighbouring land owners. Construction jobs will also increase.	Short to long term	Infrequent to continuous	Temporary	Local to national	Medium	N/A	High	Low to high	Major/ Moderate	High	No
3	Health	Quality of life may indirectly benefit as a result of increased income and employment for those in the forest sector, whilst the general public may benefit if forest roads facilitate access for amenity or recreation purposes. There may be a temporary adverse noise/vibration/local traffic effect during construction of infrastructure works, and during forestry operations but this will be highly localised.	Short to medium term	Infrequent to continuous	Temporary	Local	Negligible	N/A	High	Low to high	Negligible beneficial	Medium	No

Measure 3: Investments in Infrastructure - Forest Road Schem													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
4	Soil	The construction of roads may cause erosion, compaction, nutrient loss, sealing and contamination of the soil. However, to receive funding, applicant must prevent siltation and erosion. If roads are constructed through the forest rather than at the edge or nearby, they may also adversely impact forest soil productivity by directly reducing the productive area. The construction of roads can also have an impact on the geological properties of an area, e.g. through the physical removal or importation of rocks, the compaction of the ground or damage to geology deemed to be of national or county importance.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Negligible	N/A	Negligible to high	Low	Minor/Negligible	Medium	Yes
5	Water	There could be adverse effects relating to pollution and sedimentation during the construction phase, both from surface water run-off during rain events and also where the roads may cross watercourses, whilst pollution may also occur from run-off when the roads are in use by vehicles. Inappropriately constructed water crossings may impede fish passage. However, this will be minimised by prioritising and assisting applications that help minimise the potential for sedimentation of any nearby watercourses. SCW grant provided for this purpose. Construction works also to comply with the water quality guidelines. Penalties in place for inadequate culverts/drainage.	Short to medium term	Infrequent	Temporary	Local to regional	Low	Local to international	Low to high	Low	Negligible adverse	Medium	Yes
6	Air	There may be a temporary adverse dust/local traffic emissions effect during construction of infrastructure works, and also during forestry operations but this will be highly localised.	Short term	Infrequent	Temporary	Local	Negligible	N/A	Medium	Low	Minor/Negligible	Medium	Yes

Measure 3: Investments in Infrastructure - Forest Road Schem												
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required
7	Climate	Medium to long term	Infrequent to continuous	Temporary to permanent	National	Negligible	N/A	High	Low	Minor/Negligible	Medium	Yes
8	Material Assets	Short to medium term	Infrequent to continuous	Temporary	Local	Negligible	N/A	Low	Low	Negligible beneficial	Medium	No
9	Cultural Heritage	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Low	Local to national	Negligible to high	Medium	Minor	Medium	Yes
10	Landscape	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Low	Local to national	Negligible to high	Medium	Minor	Medium	Yes

Measure 3: Investments in Infrastructure - Forest Road Schem													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
11	GI & ES	The construction of forest roads (and subsequent increase in thinning and felling activities) may result in habitat loss/ fragmentation, deterioration in soil, water and air quality, and an increase in CO2 emissions. However, impacts on ES will be minimised by prioritising and assisting applications that help minimise the impact of harvesting operations on the environment and in particular the potential for sedimentation of any nearby watercourses.	Short to long term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local to regional	Low	N/A	Negligible to high	Medium	Minor/ Negligible	Low	Yes

Measure 4: Prevention and Restoration of Damage to Forests - Reconstitution Schem													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
1	Ecology	The scheme aims to support the development and promotion of forestry through the incorporation of practices that restore, preserve and enhance biodiversity. In addition, the removal and destruction of trees infected by contagious pathogens will be beneficial as it will stop the spread into and across high nature value sites. However, restoration works following other damage will cause some level of disturbance; the ecological sensitivity of affected sites is a concern, as many forestry plantations pre-date any legal requirement for environmental assessment.	Medium to long term	Continuous	Temporary to permanent (possibly reversible)	Local to regional	Low	Local to international	Negligible to high	Medium	Moderate/Minor	Low	Yes
2	Socio-Economics	Forest holders will benefit from not losing their entire woodlands to disease. For damage in general, forest holders will benefit from the money saved through this scheme, whilst restoration activities are also likely to occur sooner and be more extensive than without the funding, benefitting the forest holder in the longer term.	Short to long term	Infrequent to continuous	Temporary	Local to national	Medium	N/A	High	Low to high	Moderate	High	No
3	Health	Human health and wellbeing is unlikely to be affected by this scheme.	N/A	N/A	N/A	N/A	N/A	N/A	High	N/A	Neutral	Medium	No
4	Soil	Soil erosion, disturbance and sedimentation could occur during restoration activities (felling and replanting), particularly if the original damage occurs on sensitive sites (e.g. acid sensitive, upland and peatland). However, this should be minimised in order to fulfil the main purpose of the scheme, i.e. to restore and maintain forest ecosystems.	Short to medium term	Infrequent to continuous	Temporary	Local	Low	N/A	Negligible to high	Low	Minor/Negligible	Low	Yes

Measure 4: Prevention and Restoration of Damage to Forests - Reconstitution Schem													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
5	Water	Pollution, siltation and sedimentation could occur during restoration activities (felling and replanting), particularly if the original damage occurs on sensitive sites (e.g. acid sensitive, upland and peatland). However, this should be minimised in order to fulfil the main purpose of the scheme, i.e. to restore and maintain forest ecosystems.	Short to medium term	Infrequent to continuous	Temporary	Local to regional	Low	Local to international	Low to high	Low	Minor/Negligible	Low	Yes
6	Air	Air quality is unlikely to be affected by this scheme.	N/A	N/A	N/A	N/A	N/A	N/A	High	N/A	Neutral	Medium	No
7	Climate	Climate is unlikely to be affected by this scheme.	N/A	N/A	N/A	N/A	N/A	N/A	High	N/A	Neutral	Medium	No
8	Material Assets	Providing funding for restoration of damaged woodlands will allow continued use of these resources, whether the original focus was production of timber or biomass, biodiversity, or carbon sequestration.	Short to medium term	Infrequent to continuous	Temporary	Local	Negligible	N/A	Low	Low	Negligible/beneficial	Medium	No
9	Cultural Heritage	Carrying out restoration activities (felling and replanting) could possibly cause damage to undesignated forest heritage (e.g. boundary banks and dykes, burial mounds, charcoal-burning platforms, saw pits and kilns, existing veteran trees) including hidden underground (and overground) archaeological remains that may not yet have been discovered. DAFM has indicated that this Measure will be subject to same risk assessment methodology as Measure 1.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Low	Local to national	Negligible to high	Medium	Minor	Medium	Yes
10	Landscape	It is likely that the original damage, be this storm, disease or pest related, will result in impaired visual amenity. Restoration of damaged sites will therefore have a positive effect on visual amenity, though necessary felling could have adverse effects on local landscape character in the short-term.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Low	Local to national	Negligible to high	Medium	Moderate/Minor	Medium	No

Measure 4: Prevention and Restoration of Damage to Forests - Reconstitution Schem													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
11	GI & ES	The scheme's purpose, to restore and maintain forests and forest ecosystems following significant damage by natural causes, and its objective to develop and promote forestry through the incorporation of practices that restore, preserve and enhance biodiversity should ensure that the forests' ability to provide a range of ecosystem services is not adversely affected, and in many cases is enhanced.	Short to long term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local to regional	Low	N/A	Negligible to high	Medium	Moderate/Minor	Medium	No

Measure 5: Investments Improving the Resilience & Environmental Value of Forestry - Woodland Improvement (Thinning & Tending- Broadleav													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
1	Ecology	Support for thinning and felling activities will increase the amount of light reaching the forest floor thus stimulating vegetative growth, support will also be provided for enrichment planting of broadleaves and provision of open areas. However, removal of malformed/mature trees could remove habitat for a number of species, though this may be mitigated by following Forest Biodiversity Guidelines in this respect. Thinning and felling activities can also disturb wildlife and may also facilitate the spread of invasive species. Measures to improve water quality will have a beneficial effect on aquatic species.	Medium to long term	Continuous	Temporary to permanent (possibly reversible)	Local to regional	Low	Local to international	Negligible to high	Medium	Minor/Negligible	Low	Yes
2	Socio-Economics	Revenue from forests will greatly increase where much needed thinning operations are funded due to the sale of forest products. In addition to providing revenue, thinnings also enable the timber to grow better and more productively so that at harvest time the revenues themselves received are greater. The number of forestry jobs will also increase.	Short to long term	Infrequent to continuous	Temporary	Local to national	Medium	N/A	High	Low to high	Major/Moderate	High	No
3	Health	Human health and wellbeing is unlikely to be affected by this scheme.	N/A	N/A	N/A	N/A	N/A	N/A	High	N/A	Neutral	Medium	No
4	Soil	Soil protection is an objective of the scheme, so the potential adverse effects on soil of forestry management activities e.g. soil erosion, disturbance and sedimentation should be avoided.	Short to medium term	Infrequent to continuous	Temporary	Local	Low	N/A	Negligible to high	Low	Minor/Negligible	Medium	No

Measure 5: Investments Improving the Resilience & Environmental Value of Forestry - Woodland Improvement (Thinning & Tending- Broadleav													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
5	Water	Water protection is an objective of the scheme, and support is provided for the creation of aquatic buffer zones, so the potential adverse effects on water of forestry management activities e.g. pollution, siltation and sedimentation should be avoided, though given the existing problem more detail should be provided as to how this will be achieved.	Short to medium term	Infrequent to continuous	Temporary	Local to regional	Low	Local to international	Low to high	Low	Negligible beneficial	Medium	No
6	Air	There may be a temporary adverse dust/local traffic emissions effect during forestry operations but this will be highly localised. However, healthier and more productive trees may be able to absorb more airborne pollutants.	Short to medium term	Infrequent to continuous	Temporary	Local	Negligible	N/A	Medium	Low	Negligible beneficial	Low	No
7	Climate	There could be some adverse effects associated with increased vehicle emissions and energy use during forestry operations, along with short-term losses of carbon stocks from soil and the trees themselves as a result of thinning and felling. However, as this measure aims to improve the resilience and environmental value of forestry (by enhancing the health and productivity of these forests and protecting soil and water resources), overall carbon sequestration is expected to improve, as may adaptation to future climate change.	Medium to long term	Infrequent to continuous	Temporary to permanent	Local to national	Negligible	N/A	High	Low	Minor/ Negligible	Medium	No
8	Material Assets	Providing funding for thinning and tending of broadleaf forests will ensure better and more efficient use is made of these resources, in terms of production of timber, landscape and biodiversity enhancement.	Short to medium term	Infrequent to continuous	Temporary	Local	Negligible	N/A	Low	Low	Minor/ Negligible	Medium	No

Measure 5: Investments Improving the Resilience & Environmental Value of Forestry - Woodland Improvement (Thinning & Tending- Broadleav													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
9	Cultural Heritage	Creation of archaeological exclusion zones is supported. However, carrying out thinning, felling and other management activities could possibly cause damage to undesignated forest heritage (e.g. boundary banks and dykes, burial mounds, charcoal burning platforms, saw pits and kilns, existing veteran trees), including hidden underground (and overground) archaeological remains that may not yet have been discovered. It is not clear if the risk assessment process will apply to this measure.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Low	Local to national	Negligible to high	Medium	Uncertain	Medium	Yes
10	Landscape	Landscape enhancement is an objective of this scheme; pruning, thinning, felling, re-spacing and removal of malformed trees can potentially improve visual amenity, as can retro-fitting of setbacks to soften edges; though felling could also have adverse effects on local landscape character. The presence of forest machinery may have temporary adverse effects on visual amenity.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Low	Local to national	Negligible to high	Medium	Minor	Medium	No
11	GI & ES	The scheme's objectives to encourage healthy tree growth, landscape enhancement, soil and water protection and improved biodiversity function should ensure that the forests' ability to provide a range of ecosystem services is not adversely affected, and in many cases is enhanced, e.g. regarding production of fibre and fuel.	Short to long term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local to regional	Low	N/A	Negligible to high	Medium	Moderate/Minor	Medium	No

Measure 10: Forest Environment and Climate Services - Forest Genetic Reproductive Material Scher													
SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
1	Ecology	This scheme may reduce incidences of pests and diseases, whilst providing for in-situ and ex-situ conservation of forest genetic resources and providing breeding populations of certain broadleaf and conifer species. There could be adverse effects on existing animal and bird species however, as seed orchards are intensively managed and seed stands may each comprise only one species; maintenance and creation activities may cause disturbance or minor/temporary loss of habitat.	Short to long term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local to regional	Low	Local to international	Negligible to high	Medium	Negligible adverse	Low	Yes
2	Socio-Economics	This scheme will help sustain the forestry sector in the long-term by improving the productivity, resilience and number of native or economically important tree species. Seed orchards typically produce seeds of superior genetic quality compared to those obtained from seed stands.	Long term	Continuous	Temporary	Local to national	Low	N/A	High	Medium	Moderate/Minor	High	No
3	Health	Human health and wellbeing is unlikely to be affected by this scheme.	N/A	N/A	N/A	N/A	N/A	N/A	High	N/A	Neutral	Medium	No
4	Soil	Bringing existing broadleaf woodlands into production as seed stands may increase disturbance and erosion of the soil, as may the planting (and subsequent management) of new seed orchards. Coniferous plantations can cause acidification of the soil, though soil carbon content should improve where new seed orchards are planted.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Negligible	N/A	Negligible to high	Negligible	Negligible adverse	Medium	Yes
5	Water	The initial planting of new orchards and thinning activities associated with production may increase pollution and sedimentation of watercourses. In addition, coniferous plantations can cause acidification of groundwater. Depending on the previous land use, however, new orchards should improve drainage and intercept pollutants, thus reducing the quantity and improving the quality of surface water run-off.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local to regional	Negligible	Local to international	Low to high	Negligible	Negligible adverse	Medium	Yes

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6	Air	Woodlands, particularly those comprising a mixture of broadleaved and coniferous trees, are known to intercept and absorb air pollutants. This scheme could therefore have a small beneficial effect on Ireland's already good air quality.	Medium term	Continuous	Temporary	Local	Negligible	N/A	Medium	Negligible	Negligible beneficial	Medium	No
7	Climate	Planting under this scheme will be minimal, so carbon sequestration and water regulation benefits will also be minimal. However, by improving the quality of planting stock the scheme could help ensure the presence of climate resilient trees into the future.	Short to long term	Infrequent to continuous	Temporary to permanent	Local to national	Low	N/A	High	Negligible	Minor/Negligible	Medium	No
8	Material Assets	This scheme will help to preserve Ireland's natural tree resources into the future.	Short to long term	Continuous	Temporary	Local to national	Negligible	N/A	Low	Negligible	Negligible beneficial	Medium	No
9	Cultural Heritage	Creation of new seed stands/orchards and intensive management of these could potentially disturb, damage or destroy undesignated above and below ground archaeology or cultural heritage assets, including existing veteran trees, if these are present but not known about.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Negligible	Local to national	Negligible to high	Low	Negligible adverse	Low	Yes
10	Landscape	Creation of new single-species seed stands/orchards and intensive management of these could potentially impair on visual amenity or landscape character; depending on what the previous land use was the measure could also be beneficial. In the long term the landscape may benefit from higher quality and more resistant (native) tree species.	Short to medium term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local	Negligible	Local to national	Negligible to high	Low	Negligible beneficial	Low	Yes

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SEA Objective	Description of effect	Duration	Frequency	Permanence	Geographic Extent	Magnitude	Protected Status	Value	Vulnerability	Significance	Certainty	Mitigation Required	
11	GI & ES	By enhancing genetic resources and subsequently reducing incidences of pests and diseases and improving the resilience and quality of (native) tree species into the future, this measure will benefit ES provision. There could be adverse effects if local biodiversity or water or soil quality is impaired, though this is unlikely.	Short to long term	Infrequent to continuous	Temporary to permanent (possibly reversible)	Local to regional	Low	N/A	Negligible to high	Negligible to high	Minor	Medium	No