

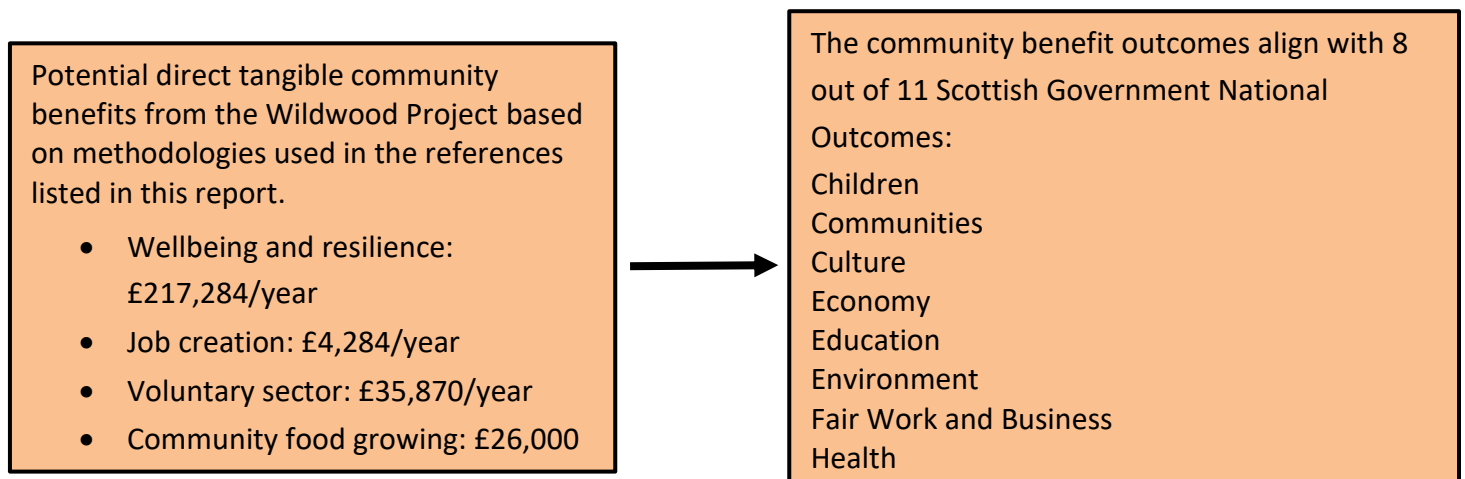
**A Revised Statement on Social Return on Investment (SROI) for Taymount Wood**  
**Analysis of potential social value of bringing Taymount Wood into community ownership**  
September 2023



## Summary

In this SROI study, WSWG has demonstrated our Living Forest, economic, nature-based initiatives will not only deliver meaningful social and financial benefits to local communities, but will also deliver wider outcomes to the Scottish economy. For the purposes of calculating the more tangible direct benefits deriving from the WSWG management of its charitable activities and services we have focused on health and wellbeing benefits gained from participation in woodland based activities including volunteering opportunities. However, there are other significant benefits which tend to go unrecognised, but which must be acknowledged due to the gravity of impact of ignoring them. These are the ecosystem services afforded by nature, our life support system.

In assessing the benefits of community ownership of Taymount Wood, Scottish Government agencies and policy makers should consider a range of benefits that are not obvious, but could be of profound importance to the community. Some of these benefits and their associated economic value are examined within this report. Figures and methodologies may well be debated, but the underlying outcome is that of a profound value to people and the local economy and meeting government targets.



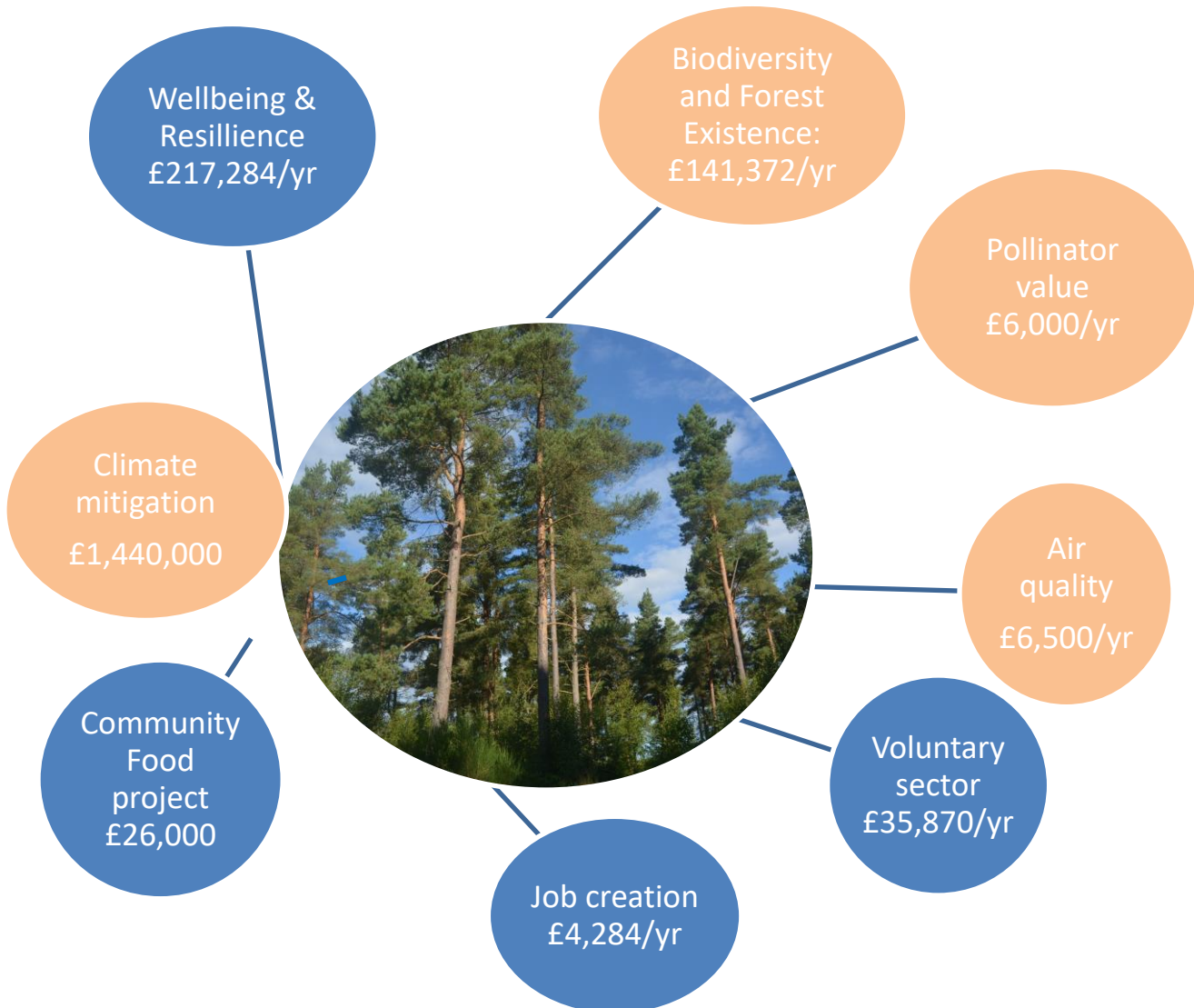
A different methodology of calculation of investment and return based on the case studies within the report is shown below. This shows a potential annual value using the case studies as reference points for ratio of investment to economic return from the Wildwood Project Community Benefit Programme assuming it is supported by half the annual investment in the Wildwood Project. These figures are indicative.

Wildwood Community Benefit Programme	Potential annual value derived from reference sources	% of value within overall Community Benefit Programme	Ratio of return per £ identified through reference case studies	Corresponding annual investment in Wildwood Project
Wellbeing & resilience	£217,284	73.42%	1 : 6.75 pa	£32,190
Community Food growing	£26,000	8.79%	1 : 7 pa	£3,714
<i>Pollinator value</i>	<i>£6,000</i>	<i>2.03%</i>	<i>n/a</i>	<i>n/a</i>
<i>Air quality</i>	<i>£6,500</i>	<i>2.20%</i>	<i>n/a</i>	<i>n/a</i>
Job creation	£4,824	1.45%	1 : 10.72/3yrs	£1,200
Voluntary sector	£35,870	12.12%	1 : 3 pa	£11,957
	<b>£295,938</b>	<b>100.00%</b>		<b>£49,000</b>

If we assume that scale of operations and investment in the WSWG Wildwood Project amounts to around £100,000 per year, if half relates to woodland management for nature recovery and half to direct community benefit, the SROI research that WSWG has done suggest that for this £50,000 investment in the Wildwood Project, there could be a social return to the Scottish economy of £295,938 per annum.

**Diagram showing full range of potential values for community benefits arising from WSWG management**

In the diagram, the direct community benefits in the above table are shown in blue. The peach colour indicates ecosystem services which WSWG has not included in its SROI forecast.





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## 1. Introduction

The Scottish Government has signed up to the Wellbeing Economy Government’s partnership (WEGo). This collaboration of national and regional governments is aimed at advancing expertise and understanding to build wellbeing economies. WSWG has, from its formation, held this ethos as a driver for its approach to community woodland ownership. We also aim to use these woodlands to catalyse a landscape scale approach to supporting a wellbeing economy through the local West Stormont Connect initiative. We have drawn inspiration from Bhutan, with its Gross National Happiness (GNH) approach to governance over GDP. Their four pillars of GNH include:

- Sustainable & equitable socio-economic development
- Good governance
- Preservation of environmental diversity (ecological diversity and resilience)
- Preservation of cultural values & diversity (wellbeing and community vitality)

*“The end result of any development activities should be the attainment of GNH”*  
(Constitution of Bhutan, 2008)

Their understanding that “genuine happiness” arises from, amongst other things, a sense of harmony with the natural world, together with the ecosystem services it provides, has prompted them to enshrine in law a minimum conservation of 60% forest cover across the country in perpetuity, most of which is native forest. This is in comparison to an average of 37% forest cover across Europe and less than 20% in Scotland and the UK, most of which is non-native forest.

Towards achieving the aims of wellbeing economic objectives, Social Return on Investment (SROI) has become a method for measuring a monetary value that incorporates social, environmental and economic impacts. It is a way of assessing the value created by our activities and the factors which facilitate that activity. It is also one way of recording the history and story line of a particular journey.

There are two recognised forms of SROI - **Evaluative**, which is conducted retrospectively and based on actual outcomes that have already taken place, and **Forecast**, which predicts how much social value will be created if the activities meet their intended outcomes.

This evaluation examines the Forecast of SROI from Taymount Wood as a future community woodland and associated community benefits arising from WSWG’s proposed management of it. The SROI analysis draws upon an assessment of existing studies and published reports from a range of well-known, mainstream sources (eg The Woodland Trust and NatureScot) to give an indicative potential social value, applied to WSWG’s anticipated vision for the woodland and outcomes from the WSWG Wildwood Project at Taymount Wood.

WSWG cannot profess to be expert in this complex field but it has conducted thorough research in good faith with a view to illustrating the unseen value of nature as an integral part of the economy.

## **The Theory of Change**

The theory of change which we are basing our analysis on is that through innovative, meaningful and consistent community engagement via woodland activity programmes, a positive benefit within the community is promoted.

Our anticipated outcomes will be generated under the themes of improved mental and physical health and wellbeing through a positive engagement with nature. The recognised Natural Health Service these woodlands can provide under WSWG management will be as a preventative intervention that can mitigate the need for higher social and health related costs.

Additional outcomes will include reduced economic impact from health-related days off work, increased employment opportunities and associated economic benefits to society, ecosystem services and enhanced community cohesion and resilience.

## 2. Wellbeing and Resilience outcomes from woodland engagement

**Annual value of £217,284.**

Rationale:

The weight of evidence proving the health benefits to people from engagement with nature is indisputable. Governments the world over are actively incorporating this into public health programmes. The Scottish Government is no exception in recognising the health benefits of promoting nature-based solutions as a means to both improve people's lives and make significant savings for the Scottish economy. WSWG has been promoting nature-based activities for people for 5 years now in Taymount Wood and Five Mile Wood and is proposing a substantial upscaling of activities following community ownership. Relevant findings came from a Natural Health Service study with the Community Forest Trust, an environmental charity supporting community forestry in England - "*Measuring the social return from investment in the Natural Health Services*".

The study concluded that the Social Value, viewed over a 5-year period, of the total impact from 6,000 participants engaging in woodland-based activities for limited periods was **£13,037,051**.

Total investment figure in the same period to generate this value was **£1,931,500**.

**Social return of £6.75 for every £1 invested.**

### **Relevance of this study to the WSWG Project:**

The study examined the outcomes of participants engaging in targeted activities. These included:

Forest school

Health walks

Horticulture Therapy and Green Gyms

Mindful contact with nature

WSWG intends implementing all of the above activities and many more as part of a comprehensive suite of themes in its "Window on the Woods" Vision. Using the statistics from the Community Forest Trust study above, where WSWG predicts a basic number of 100 participants who complete a programme of healthy living involving weekly engagements per year would give an annual value of £217,284. Even at a 90% reduced value for whatever reason as yet unknown, it still gives an annual value of £21,729.

However, the WSWG pilot project outlined for 2024 has an estimated 531 participant engagements from a diverse year round programme of tailored events. While this delivery is restricted in duration, it still shows the potential for community benefit even before staff are in place.

There is a severe lack of similar activity types across Perthshire and mostly confined to expensive holiday retreats. There is no regional Green Health Partnership (GHP) service which allows health care professionals to prescribe nature-based activities such as exists in Dundee and Angus and three other regions across Scotland. WSWG is already networking with organisations such as the P&K Health and Social Care Partnership to catalyse a GHP in the region where Taymount Wood would be a resource for patients, vulnerable groups and individuals to visit either independently or as part of structured activities under the many themed programmes.

## References:

**Natural Health** Service study with the Community Forest Trust “*Measuring the social return from investment in the Natural Health Services*”.

**NatureScot** “*Scotland’s outdoors, Our Natural Health Service*”

## Mental health statistics for Scotland

**£8.8 billion** = the cost of mental illness to the Scottish economy

Reference: Mental Health Foundation and the London School of Economics and Political Science (LSE),

**94%** = percentage of people who visited the outdoors and stated it “helps them de-stress relax and unwind”

Reference: Nature Scot *Scotland’s outdoors, Our Natural Health Service*

**Forest walking** = better for health than urban walking

Reference: (Mitchell, 2013) *Is physical activity in natural environments better for mental health than physical activity in other environments? Social Science and Medicine, 91, 130–134*)

**1 in 4** = number of people that will suffer mental health problems per year.

Reference: (MIND 2017)

**20.6%** = percentage of people having suicidal thoughts over their lifetime.

Reference: (MIND 2017)

**(Mitchell, 2013)** *Is physical activity in natural environments better for mental health than physical activity in other environments? Social Science and Medicine, 91, 130–134*)

## **Forest bathing and forest walks**

References:

Li Q1, Morimoto K, Kobayashi M, Inagaki H, Katsumata M, Hirata Y, Hirata K, Suzuki H, Li YJ, Wakayama Y, Kawada T, Park BJ, Ohira T, Matsui N, Kagawa T, Miyazaki Y, Krensky AM. Visiting a forest, but not a city, increases human natural killer activity and expression of anti-cancer proteins. *Int J Immunopathol Pharmacol*. 2008 Jan-Mar;21(1):117-27.

Li Q, Kobayashi M, Inagaki H, Hirata Y, Li YJ, Hirata K, Shimizu T, Suzuki H, Katsumata M, Wakayama Y, Kawada T, Ohira T, Matsui N, Kagawa T. A day trip to a forest park increases human natural killer activity and the expression of anti-cancer proteins in male subjects. *J Biol Regul Homeost Agents*. 2010 Apr-Jun;24(2):157-65.

Li Q, Kobayashi M, Wakayama Y, Inagaki H, Katsumata M, Hirata Y, Hirata K, Shimizu T, Kawada T, Park BJ, Ohira T, Kagawa T, Miyazaki Y. Effect of phytoncide from trees on human natural killer cell function. *Int J Immunopathol Pharmacol*. 2009 Oct-Dec;22(4):951-9.

### 3. Community food project

#### Social value of £26,000

Rationale:

A priority of WSWG is that of educating people to become more aware and self-confident, building community cohesiveness and resilience with food growing in a world where food security is being increasingly threatened by global warming, loss of biodiversity and war. Our objective includes community food forest, commercial food forest, edible forage trails and hazel orchards.

Research carried out by the Countryside and Community Research Institute (CCRI) in 2014 on the SROI of local food programmes which covered three separate community food growing initiatives, revealed that for every £1 invested in Local Food (including not only the grants but also the value of volunteer time and other in-kind contributions) generated just under £7 for society. This represents a 700% return on investment for Local Food.

**Our Community/Mini Food Forest project on its own should therefore give around £26,000 in social value return for the £3,800 set-up investment.** There will be a continual community benefit through subsequent years as this community-led project evolves.

**References:** Countryside and Community Research Institute (CCRI) in 2014

### 4. Job creation

#### Annual value of £4,284 per job created

Rationale:

The full scale WSWG project submitted in December 2022 proposed 5 full time jobs after year 6, with an estimated social value return of £207,413 over 10 years not including part time jobs. Due to FLS requesting the project is scaled down we have put together a smaller community benefit package to reflect this. The reduced scenario has the equivalent of 1 full time worker with this having the potential to increase across additional fundable projects.

Using the Street Elite report referenced below which indicated a £10.72 return to society over a 3 year period for every £1 invested. WSWG estimates the social value and impacts of job creation per person over a 3-year period for 1 full time job equivalent are valued as:

- 1) Avoiding social security benefits payments and increased tax payments on earnings from working = £2,127.37
- 2) The economic contribution made by each person moving into employment =£3,407.61.
- 3) Reduced health costs & increased well-being and associated benefits = £8,939.29.

This gives an annual value to society of approximately £4,824. per job created.

This value is regardless of whether the job is funded by public funds or private. In addition, WSWG is only seeking funding for start-up costs for the first 2 years only and at this stage there is no confirmation as to how much public funding, if any, will contribute to job creation. WSWG has already been invited to submit a funding application to the Gannochy Trust for start-up costs.



## References:

*Street Elite, Social Return on Investment Analysis Report 2019, Bean Research, Berkeley Foundation and the Change Foundation.*

## 5. Voluntary sector and volunteering

**5.1 Annual value** of volunteering to society of £35,870

**5.2 Annual value** of volunteers of £4,221 based on 2 months of volunteering:

5.1 Rationale: We have based our forecast valuation partly on the SROI Analysis of the Greenlink, a partnership project managed by the Central Scotland Forest Trust (CSFT) Greenspace 2009. The report found that from 185 volunteers participating over one year, the Net Present Value was £976,552 over a five year period, equating to a ratio of £3 return to society for every £1 invested. This gives an average annual value of £1,055 for each volunteer.

**WSWG case study:** Two community projects run by WSWG during 2023 attracted 35 volunteers across 53 volunteer engagements. Discussions with volunteers concluded only 1 person had the choice to volunteer on a different event unrelated to WSWG. (This equates to roughly 3% deadweight.) Our initial SROI report 2022 used a minimum estimate of only 18 volunteers, yet WSWG almost doubled this in 2023 with just 9 events over 2 months and more are planned for the rest of the year. In addition, in the WSWG Wellbeing and Resilience Programme 2024, we have an estimated 531 participant engagements from vulnerable groups programmed in for activities. This will require dedicated volunteer output until we are in a position of owning the wood and hiring staff. All things considered including deadweight and displacement, our calculated annual value is based upon 34 volunteers (35-1) at £1,055 per volunteer.

5.2 Rationale: A different way to calculate this is a basic payment system of what volunteers would be paid if working. However, this system excludes the wider economic benefits to society and is based on the Office of National Statistics and Scottish Government's guidance. This comes out at £15.75/ per hour over 268 hours for just 9 events over 2 month period to £4,221. The actual anticipated number of participant engagements over the remainder of 2023 year is higher.

References:

- Greenlink, a partnership project managed by the Central Scotland Forest Trust (CSFT) Greenspace 2009.
- Office of National Statistics 2023
- Scottish Government volunteer calculator.

## 6. Ecosystem Services

The Taymount and Five Mile Woods provide a wide range of ecosystem services including air quality regulation, carbon sequestration, water filtration, soil formation, nature-based tourism and recreation, noise buffer, natural health service and pollinator resource for both community and commercial food growing. While it is impossible to put an accurate figure on these services, they are still recognised by government and integrated into policy and legislation.

## 6.1 Pollinator value

### Annual value of £6,000

Rationale:

The woodlands are host to many pollinating species including social and solitary bees, hoverflies and other insects. Our aim is to substantially increase the essential habitat of these species throughout the woodlands, resulting in a significant increase to their numbers and diversity.

We envisage this will have meaningful benefits to society including:

- Increased pollination rates to food producing local gardeners and landowners.
- Increased pollinator populations across the wider landscape as the woodland carrying capacity is exceeded, leading to increased dispersal of pollinators into the wider landscape.
- The woodlands will be resilient refugia for pollinators in times of landscape-scale biodiversity decline, for example under increasing global warming influences.
- Educational resource where people from local or further afield locations can come and learn how to manage pollinator species and their habitats.

Pollinators contribute around £400 million to the UK economy annually, not including the millions of pounds saved by householders growing their own food and health care cost savings to the NHS from those eating home grown healthy foods. Therefore, our nature recovery strategy that will benefit pollinators and their value to the wider communities must be valued in economic terms.

In the absence of raw data for appropriate calculations, we have attributed a nominal ecosystem value of £50 per woodland hectare over the 120 hectares of Taymount Wood outwith the sustainable timber production zones.

#### References:

- The average economic benefit for apple orchards from bee pollination was estimated to be up to £14,000 per hectare. *Garratt et al. (2014)*
- National Pollinator Strategy: evidence statements and summary of evidence  
<http://sciencesearch.defra.gov.uk>

## 6.2 Air purification

### Annual value of £6,500.

Rationale:

We have attributed a nominal value at £50/ha/year over the 130 ha of Taymount Wood not being felled in Phase 1 Years 1-5. To put this value in perspective, one hectare of urban woodland has been estimated to improve health to a value of nearly £150,000 a year, based upon early death prevention and reduction of hospital visits due to air pollution.

**References:** Woodland Trust; *Economic Benefit of Woodland 2017*

### 6.3 Climate change mitigation

#### Value in perpetuity £1,440,000

Rationale:

The Climate Change Act 2008 estimated UK costs of between £324bn and £404bn for enacting measures to avoid and mitigate the impact of a 1.5 degree rise. However, the benefits were estimated between £457bn and £1,020bn (DECC, 2009). The world is currently on track for a 3 degree rise. The collapse of civilisation under a temperature rise of 3 degrees is likely to be unavoidable, (World Economic Forum 2020) and reiterated by the IPCC 2023. The Scottish Government has a target of Net Zero by 2045.

The Woodland Trust report 2017 (*The Economic Benefit of Woodland*) states that the value of climate change mitigation is estimated at £16,000 per hectare for standing timber. The way in which a woodland is managed has a direct impact on the climate change mitigation potential. For example, our objective of retaining and enhancing a substantial area of maturing mixed woodland as biological reserves is in keeping with the principle outlined in the process of “proforestation” – a term used to describe allowing trees to reach their biological potential, thus maximising their carbon sequestration potential within trees and undisturbed fungi rich soils. We have estimated a minimum of 90ha @ £16,000/ha. We have excluded areas where harvesting will occur. We do not consider the 90ha as deadweight because as mature woodland this would be felled by another private owner.

#### References:

- The Woodland Trust; *The Economic Benefit of Woodland*
- Fen Montaigne, [Why Keeping Mature Forests Intact Is Key to the Climate Fight](#), *Yale Environment 360*, 15 October 2019.
- Harmon, Mark; Ferrell, William; Franklin, Jerry (9 February 1990). ["Effects on Carbon Storage of Conversion of Old-Growth Forests to Young Forests"](#). *Science*. **247** (4943): 699–702. [doi:10.1126/science.247.4943.699](#). [PMID 17771887](#). [S2CID 29755884](#). Retrieved 12 November 2020.
- ["Proforestation"](#). *Regeneration.org*. Retrieved 2023-02-01.

### 6.4. Biodiversity, Forest Existence and Bequest

#### Annual value of £141,372

Rationale:

Although the current forest valuation system used by the forestry industry and government economists usually focus on the market value of forest products, such as timber and land, it is clear this thinking has significantly restricted other values, such as the non-timber use benefits and specifically the existence values. However, awareness that forest existence values are real and growing in society, with many people showing their willingness to pay to conserve the forests and their associated wildlife. Our objective of proforestation,

nature recovery and naturalisation of substantial areas of the woodland ensures this value is increasingly realised, more so than the usual system of rotational felling and restocking across a biologically impoverished woodland.

The Woodland Trust report 2017 (*The Economic Benefits of Woodlands*) estimated the Value of Existence and Bequest - safeguarding woods and their associated biodiversity for future generations - at £1,848 per hectare per year for new broadleaved woodland. Taymount Wood is an ancient/centuries old woodland with predominantly mature Scots pine/broadleaved mixed with valuable residual biodiversity, that far exceeds most new broadleaved plantings. It is also accessible to the public.

WSWG has produced a woodland management plan that will ensure the ecological and aesthetic values of these woodlands are protected and substantially enhanced for future generations, thus maintaining this value. The same cannot be said if a private buyer were to acquire the woodlands and exploit them for short term timber profits, while at the same time restocking with exotic conifer plantation monoculture, resulting in a catastrophic impact on biodiversity, woodland aesthetics and amenity values. To claim that this outcome is unlikely is to ignore the reality of investment forestry history over past decades and still prevalent today.

While it is impossible to put an accurate value to the comparisons of impact from different future management objectives, we have used the Woodland Trust estimate of £726 per hectare per year for lowland conifer woodland as deadweight (ie. what would happen without WSWG intervention). Deducting this deadweight figure from the £1,848 per ha figure above gives a reduced Existence and Bequest annual value of £1,122 per hectare. At the 126 hectares being managed primarily for nature, this equates to £141,372.

**References:** Woodland Trust: (*The Economic Benefits of Woodlands*) 2017

## 7. SROI outputs and impact predictions

Activity	Output	Outcome	Impact
“Window on the Woods”- themed Year-Round Activities Programmes:	Group activities, individual activities, social interaction. Green Health Prescriptions, NHS referrals	As a result, people were healthier, happier, increased mental health and wellbeing. Self confidence improved, able to function better in workplace and personal life. New abilities and awareness gained. Greater environmental awareness.	Less reliance on NHS. Fewer days off work. Reduced costs to economy and NHS. Family units more cohesive and happy. Happier and self confident individuals. More cohesive society. Individuals, groups and wider community taking action to mitigate climate emergency and become more resilient.

<b>Activity</b>	<b>Output</b>	<b>Outcome</b>	<b>Impact</b>
Volunteers learning environmental skills via activities and training sessions	Group activities, individual activities, social interaction, skills learning, confidence building, employability and communication skills.	As a result they were able to find work, try new volunteering activities, moved into higher education and continued learning. Skills and ideas utilized and shared as people move around.	Increased wellbeing from employment, contributed to economy, reduction in NHS costs, reduction in alcohol and drug addiction leading to savings to society and happier family life.
Activities for older, less mobile or socially isolated people	Group activities, social interaction	As a result, people felt less isolated, happier, fitter & healthier. Renewed vigour for life.	Less reliance on NHS and social care. Happier individuals and more cohesive society.
Activities for people with learning disabilities	Group activities, individual activities, social interaction.	As a result people felt less isolated, better self confidence, sense of achievement, doing activities	Increased self worth leading to greater social interaction and employability. Happier people and less stress in family unit.
Activities for young people	Group activities, social interaction	As a result new skills learned, confidence building, self awareness and value. Appreciation of mixed generations.	Happier individuals, fewer drug, alcohol and crime incidents leading to reduced costs on social and health services. Greater employment potential.
Activities for children	Outdoor learning, social interaction, physical activity	Healthier children, imagination stimulated, physically fitter, greater self-confidence, increased communication skills	Children reconnected with nature leading to greater awareness of the importance of the natural environment. Happier and more motivated children leading to healthier, more resilient young people.

## **8. Conclusion**

We conclude that the true value of Taymount Wood is the intrinsic nature of the woodland itself. Because of the unique biodiversity value of the woodland, its proximity to so many rural settlements, the health and wellbeing resource it offers to the community and its economic potential in terms of supporting novel green enterprises, we conclude that it is in the Public Interest that Taymount Wood be brought under community ownership, and that, as such, we ask FLS and the Scottish Government to work with WSWG to facilitate this outcome.

In this SROI study WSWG has demonstrated there is real potential for significant social returns from a well managed woodland resource that places nature - our life support system - at the forefront of decision making. In this UN Decade on Ecosystem Restoration we must adopt a paradigm change in land management thinking. WSWG aims to help catalyse this change through its many themed activities.

In assessing the benefits of community ownership of Taymount Wood, Scottish government agencies and policy makers should consider a range of benefits which are not obvious but could be of profound importance to the community. Figures and methodologies used to calculate these benefits may well be debated, but the underlying outcome is that of a profound value to people and the local economy and meeting government targets.