Valuation of woodlands and forests
RICS professional standard, UK and Ireland
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The RICS Rules of Conduct set high-level professional requirements for the global chartered surveying profession. These are supported by more detailed standards and information relating to professional conduct and technical competency.

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As well as developing its own standards, RICS works collaboratively with other bodies at a national and international level to develop documents relevant to professional practice,

such as cross-sector guidance, codes and standards. The application of these collaborative documents by RICS members will be defined either within the document itself or in associated RICS-published documents.

Document definitions

RICS professional standards	**Set requirements or expectations for RICS members and regulated firms about how they provide services or the outcomes of their actions.** RICS professional standards are principles-based and focused on outcomes and good practice. Any requirements included set a baseline expectation for competent delivery or ethical behaviour. They include practices and behaviours intended to protect clients and other stakeholders, as well as ensuring their reasonable expectations of ethics, integrity, technical competence and diligence are met. Members must comply with an RICS professional standard. They may include: • mandatory requirements, which use the word 'must' and must be complied with, and/or • recommended best practice, which uses the word 'should'. It is recognised that there may be acceptable alternatives to best practice that achieve the same or a better outcome. In regulatory or disciplinary proceedings, RICS will take into account relevant professional standards when deciding whether an RICS member or regulated firm acted appropriately and with reasonable competence. It is also likely that during any legal proceedings a judge, adjudicator or equivalent will take RICS professional standards into account.
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Glossary

Acquisition/disposal cost	The cost associated with the acquisition or disposal of the property, usually including legal and agent's fees, as well as sales or purchase taxes.
Cash flow	The movement of money by way of income, expenditure and capital receipts and payments.
Comparable transaction	A property used in the valuation process as evidence to support the valuation of another property.
Diameter breast height (dbh)	The overbark diameter of standing trees measured at 1.3m above ground level.
Discount rate	The rate, or rates, of interest selected when calculating the present value of some future cost or benefit.
Discounted cash flow (DCF)	A method of valuation explicitly setting out the expenditure and revenue over the agreed time limit.
Internal rates of return	The rate of interest at which future project cash flows will be discounted in order that the net present value (NPV), of those cash flows be equal to zero.
Maximum mean annual increment (MMAI)	The age at which the mean annual increment peaks. It is the rotation age which maximises timber volume production.
Net present value (NPV)	The sum of the discounted cash values of a net cash flow including all inflows and outflows, where each receipt/payment is discounted to its present value at a specified discount rate. Where the NPV is zero, the discount rate is also the internal rate of return.
Rotation	The complete life cycle of a tree crop measured in years, from initial establishment through to final felling (clearfell).
Standing timber value	This is the current market value of the standing timber and is assessed by assessing the quantity of standing timber and then multiplying this amount by the current standing timber price.
Top height	The height (metres), of the largest 100 diameter trees per hectare. It is frequently used as a parameter in growth models.
Yield class	Measure of the rate of volume growth per hectare based on the maximum mean annual volume increment, using two cubic metre intervals between classes.
Yield model	Tabular or graphic presentation of the future growth and yield development of a particular species and site productivity.

1 Introduction

The aim of this professional standard is to highlight the main factors that affect the valuation of woodlands and forests, and to consider and outline the valuation process and approaches. It does not set out to provide a comprehensive manual for the appraisal of trees, woodlands and forests nor the explanation of the different valuation methods as these aspects are documented elsewhere.

The principles set out in this professional standard apply to all valuations of woodlands and forests and should be read in conjunction with the current edition of the RICS Valuation – Global Standards (Red Book Global Standards) – incorporating the International Valuation Standards (IVS). Where updates to Red Book Global Standards take affect after the publication of this professional standard, these take precedence and valuers must ensure that they are fully aware of any changes. While this professional standard addresses the valuation of woodland and forest assets from a global perspective, valuations should always be undertaken within the context of the institutional framework of the jurisdiction where the property is located. Furthermore, each country has its own policies, regulations and fiscal incentives.

References to Red Book Global Standards use the relevant section identifier only (e.g. VPS 1 or VPGA 1).

1.1 Definition of woodlands and forests

The principles set out in this professional standard apply to all valuations of woodland and forest assets.

There are many different types of woodland and forests which in turn not only impacts on the potential demand, but also the valuation approach. For those that form distinct entities there are essentially two ‘market categories’ of woodlands:

- primarily commercial or investment woodlands and
- primarily amenity woodlands.

Within these categories, there are many different woodland types in terms of size, species, age, silvicultural systems, structure and condition. Furthermore, there is no set definition of what is sometimes referred to as ‘amenity woodlands’ or ‘commercial woodlands’, and some woodlands can have characteristics of both categories and be owned and managed for a range of reasons. Woodlands are also subject to a range of different legal interests – some being let on long leases; others having their sporting rights reserved.

Woodlands may also form an integral part of a farm or rural estate. Whether they form this or a distinct entity, they still need to be carefully assessed and valued by a person with appropriate knowledge, experience and skill, as set out in section 1.4 below.

For the purposes of this professional standard, woodlands and forests include woodlands that form distinctive entities in their own right as well as woodlands forming part of a farm or a rural estate. The term ‘woodlands’ will be used in this professional standard to cover both woodlands and forests and the different types and entities. Also included within this professional standard is the valuation of previously afforested land that has been felled and requires to be restocked (sometimes referred to as bare forestry land or prairie land), as well as non-afforested land that has the scope to be planted with trees.

1.2 Scope–basis and purposes of the valuation

Woodlands, like other property assets, are valued under different bases – including market value, fair value, market rent, investment value (worth), equitable value, synergistic value and liquidation value. The basis or bases of valuation adopted must be agreed in writing in accordance with VPS 4 and IVS 104. This professional standard considers all of the above bases of valuation.

Likewise, valuations are required for a range of different purposes, which will influence both the basis of valuation adopted and the valuation process. Typical purposes include fund or financial accounting valuations, sale and acquisitions, pre-purchase advice, loan security, winding-up procedures, taxation (including inheritance tax and capital gains tax), divorce, business arrangements, financial reporting, dispute resolution, disposal under the Charities Act (UK) and expert witness work.

The purpose and relevant basis of the valuation need to be determined at the outset and defined within the terms of engagement, as this will inform the assumptions and special assumptions required and the most appropriate methodology adopted.

1.3 Valuation challenges

The valuation of woodlands poses a number of particular challenges.

Firstly, the woodland resource is very diverse, being made up of a wide range of woodland types, ages and sizes. Secondly, woodlands can also provide a wide range of income sources, and a wide range of costs. In addition to the income from the sale of timber, woodlands can provide many other benefits, such as providing important habitat for wildlife, adding to the amenity of the surrounding area, assisting with flood alleviation schemes and the improvement of water and air quality. Thirdly, specialist survey and timber mensuration techniques may also be required, for example if it is considered important to determine the quantity and quality of the timber. Finally, the time-period between planting a tree and the time that it is mature and ready to fell, may be many years or even decades. If the trees have not reached their full potential, it may be important to determine what would be the appropriate future management strategy and the expected products and sources of income achievable.

The valuation of woodlands can therefore often involve a wide range of factors, some of which are complex and of a specialist nature. Many of the considerations relating to the assessment of the woodland itself are likely to require professional forestry experience and expertise. Ensuring that comprehensive and reliable data is both available and properly understood and analysed is critical. Valuers may therefore need to accept that they are not necessarily silvicultural or forestry experts, but have the skills to interpret appropriately sourced data in the context of the land use and market.

PS 2 of Red Book Global Standards sets out criteria for valuers regarding whether an individual is appropriately qualified and experienced to accept responsibility for (or supervise the undertaking of) a valuation instruction, or the inputs into and preparation of a valuation. Valuers should therefore carefully consider whether they are appropriately qualified and experienced within this specialist sector prior to accepting any instructions.

1.4 Effective date

This professional standard is effective three months from publication.

2 The valuation process

In undertaking the valuation of a woodland, valuers should have a full understanding of the process. This includes the instructions and terms of engagement, the site investigations to be undertaken, the data collection, handling and interpretation and application to the valuation and reporting. The valuation process to be followed should be in accordance with VPS 1-5 of Red Book Global Standards. In accepting instructions, the valuer will need to include in the terms of engagement the matters to be agreed before the valuation report is issued. These terms of engagement will differ depending on the purpose of the valuation and must be fully set out and agreed before undertaking the valuation, as set out in VPS 1.

In accordance with paragraph 1.4 of PS 2, valuers must only accept instructions to carry out a valuation if they have the appropriate technical skills, experience and knowledge of the subject of the valuation, the market and the purpose of the valuation.

2.1 Basis of value

IVS 104 and VPS 4 identify several bases of value. The valuer is required to select the appropriate valuation basis, or bases, and follow all applicable requirements.

Determining the basis of value is key; in meeting client needs and ensuring both consistency of understanding and regulatory compliance. The basis of valuation will also influence or even dictate the valuation approach(es) and in turn the value. This can be particularly significant for the valuation of a woodland as there can be a range of scenarios for the management of a woodland that will impact on the existing and future income receivable from a woodland. These options could, for example, include the selection of different frequencies and intensities for future thinning programmes, as well as different rotation lengths. This could also be a particularly important consideration for non-afforested land that has or is likely to gain consent to be planted with trees. There is a range of tree planting schemes in terms of tree species and approaches to planting that could be adopted that would impact on the costs, and future income, as well as timescales.

By way of example, when assessing the Market Value, there is an assumption of the optimum management option being selected – this is likely to be the one resulting in the highest value, taking into account current and prospective economic and market circumstances and any regulatory conditions. By contrast, there may be a requirement for a financial appraisal or for a market appraisal that relates to a specific entity or client, which may mean that the existing management strategy or one proposed by the client is the most appropriate to select. In such cases, assumptions should be identified as special assumptions where the valuation does not assume the optimum management option Furthermore, the range of different management options, long timescales in forestry and the resultant difficulties in identifying and assessing the impact of any potential changes in circumstances in the future, all create additional uncertainty. These uncertainties create particular reporting issues and valuation challenges. All valuation assumptions should be set out in the valuation report. Any assumption that is not part of a market expectation should be identified as a special assumption. In addition, as these assumptions can have a

significant impact on the valuation outcome they should be as clear and consistent as possible. The valuer may also need assistance from other professionals to form a judgement of the optimum management option selected.

Any special assumption must be agreed in the terms of engagement in advance and must be both reasonable and realistic. Consideration may need to be given as to whether required assumptions or special assumptions could depart too far from the framework of market value or fair value (for financial accounting purposes), and if so, other approaches might be required such as Investment Value (Worth).

2.2 The valuation approach

IVS 105 identifies three main approaches to valuation:

i market approach
ii income approach and
iii cost approach

Each of these approaches includes different, detailed methods. The approaches and methods used in any valuation will depend on the required basis of value and the purpose of the valuation, as well as asset specific facts and circumstances.

In the case of the valuation of woodlands, valuations are normally undertaken in two ways:

i the market approach using the comparable transactions method and
ii the income approach

For newly established woodlands and for certain types of valuations, such as insurance, a cost approach may be appropriate. From a Market Value perspective, the cost approach should be treated with great caution, and as with other property assets it should only be used as an approach of last resort or as a cross check, as it often does not correlate with pricing achievable in the market.

Best practice is for the valuer to avoid reliance on a single approach or method of assessing the value of a property. However, the application of an income or cost approach is problematic for certain types of woodland. For example, there are some types of woodland, particularly smaller blocks of amenity type woodland, that do not currently provide or have the capability to provide any meaningful income, but which may still have a significant capital value. There are also challenges and limitations for using the income and cost approaches for assessing the market value of newly established woodlands and bare land, both previously afforested and non-afforested land. These challenges and limitations are considered further in section 6.

3 Factors affecting the value of woodlands

There is a wide range of factors that can either singly or in combination influence the value of woodlands. The relative importance of these factors will depend on the type/category of woodland and the purpose of the valuation. These factors broadly fall into five main categories:

1. physical factors, such as the location, area and the physical site characteristics

2. tree crop details
3. legal and regulatory factors, and other obligations
4. forestry policy, support measures and fiscal incentives
5. market factors.

Each of these five categories are considered in turn.

3.1 Physical factors

There is a wide range of physical factors that influence the market value of woodlands and as a result a wide variation in values is evident. These factors include the location and size of the woods, physical site characteristics and buildings (including dwellings).

Location can, as for all properties, greatly affect market values. For primarily commercial woodlands, the main interest is likely to be the current and future income from timber production, so location is particularly important in relation to access and the proximity to the timber markets, i.e. the timber processing plants and shipping facilities.

For primarily amenity woodlands, location in relation to the wealth and interests of the local population is more important, as the main interest currently is likely to be generated from those who are more attracted to the amenity, environmental and recreational potential than future income generation from timber production. However, as a consequence of the increasing interest in non-timber benefits, often now referred to as ecosystem services, there may be opportunities to monetise some of these – as such the assessment and valuation of these ecosystem services may become an important consideration. This is considered further in section 11.3.

Proximity to urban settlements may also be an important factor. Urban located woodlands tend to be subject to greater levels of public access and in turn offer less privacy. There also tend to be greater problems with trespass and encroachment, and greater risk of fire damage. They may also attract more public attention to any proposed commercial operations, all of which adversely affect value.

Area (size) normally, but not always, offers economies of scale. Therefore, larger primarily commercial woodlands, where the main interest is the current and future income from timber production, are likely to attract a premium to reflect the possible economies of scale and ease of management that they afford. By contrast, smaller primarily amenity woodlands whose main interest is likely to be lifestyle buyers, tend to achieve higher unit prices than larger areas of such woodland. The degree of fragmentation of the woodland holding also needs to be considered as it can impact on the costs of future management activities such as harvesting and access tracks with consequent impact on value.

Physical site characteristics such as soil type and drainage, climate, elevation, exposure and the threat of wind damage impact not only the range of tree species that can be grown successfully, but they also underpin the fertility of the site and in turn the timber growing potential of the tree crop. This timber production potential is often referred to as yield class and is defined as the number of cubic meters per hectare per annum that a site will produce over the rotation of maximum mean annual increment (MMAI). Yield class for a given species will vary according to these physical site characteristics and can vary widely even within areas of a plantation.

Site terrain, external access (including proximity to adequate public roads) and internal access are also important factors. The terrain, in terms of unevenness, slope and drainage, can also impact on the choice of harvesting system and the cost of harvesting. These in turn affect the value of the standing timber crop.

The character of the woodland and the presence of non-woodland features such as the existence and diversity of ground flora streams and ponds, ancient hedges and banks, and archaeological features and the other expected ecosystem services provided are also important to consider. They contribute to the amenity and habitat value of the wood and they can be the basis of an existing source of income or may have the potential to be the basis of income generation in the future. Attributes such as accessibility, seclusion and the potential for recreational activities also influence the demand for the woodland.

Dwellings, buildings, plant, machinery and other equipment, timber products and other materials may also need to be considered. For example, there may be cottages, an estate sawmill, preservation plant, a forest nursery. Both current and potential alternative or separate uses for such buildings should be considered.

3.2 Tree crop details

Tree crop details such as species, mix, age, stocking, tree size, timber quality and timber volumes also affect the value.

Species type is very important as this affects the yield class and rotation length as well as the likely timber markets. The age and stage of development of the crop will also affect likely rotation length and therefore the timing of costs and revenue. The diversity of species and the age class also influences the resilience of the woodland as well as the non-timber benefits that it can offer. In addition, the way the woodland has been managed will be important, such as the type and intensity of the thinning of the crop in the past and its general appearance. This will also influence the stocking density and timber quality, and in turn the likely timber markets available. Assessment of timber quality will consider attributes such as stem straightness, absence of forking and branching habit. An awareness of the genetic quality and origin of the crop is also important. For example, there can be a significant difference in both the growth rates and timber quality between recently improved Sitka spruce and older twentieth century Sitka spruce, and there may be greater susceptibility to disease among certain species or origins.

Tree health has always been an important issue, and this is becoming increasingly so. There are a range of diseases and pests that pose significant threats to particular tree species and forest sites. In addition to the risk of trees dying, the tree crop is likely to show reduced vigour, resulting in reduced timber production, and it may also have lower timber quality potential. Pests and disease can also adversely affect the biodiversity and amenity value of the woodland. In extreme cases, disease may necessitate the entire clearance and on-site or off-site disposal of plantations. The risk of wind and fire damage are also important aspects to assess and may be materially impacted by location and species as well as multiple other factors.

3.3 Legal and regulatory factors and other obligations

There is a wide range of legal and regulatory factors and other obligations that influence the market value of woodlands, such as the nature of the title including freehold/leasehold, covenants, reservations and rights of access; non-woodland development potential, and environmental designations and felling regulations. These need to be identified and considered.

Title needs to be identified as it is important to establish the nature of the interest to be valued. Woodlands, like other properties, can be subject to leases and other forms of occupation. It is important to establish whether the land is subject to any leases, tenancies or occupational licences. The length of these agreements, the rent payable, the rights and restrictions on management, and the presence of Positive and Restrictive Covenants, such as conservation covenants, can all significantly influence value. Likewise, reservations to others, such as minerals and sporting rights, can affect value particularly if they are seen as having a reasonable likelihood of being exercised.

Partnership arrangements and management agreements are common in forestry, which may also impact on the ownership of the crop, the management of the crop/land, and the future rotations.

The approaches to the valuation of freehold and leasehold interests are well documented elsewhere and so are not considered further in this professional standard.

Rights of access through the woodland (to third parties or the public in general) granted by wayleaves, easements and rights of way, together with liabilities for the maintenance of other features, such as boundaries and fencing, also need to be carefully assessed. Similarly, rights of access to and from the woodland may be critical, particularly if there are any restrictions that could affect future operations such as extraction of timber or public access.

Sporting rights and opportunities may exist and can add value to the woodland and so need to be identified and assessed. The valuation of sporting rights is a specialist area, so depending on their scale and the extent of the income and/or potential income that they accrue, this may require a separate assessment by a valuer with specialist knowledge and experience in this area.

Woodlands can provide a range of sporting opportunities, including shooting, the taking and killing of game, hunting, fowling and fishing and can make a significant contribution to the overall value of a woodland. Furthermore, it is important to determine who owns and exercises these sporting rights, and on what basis. For example, while an owner may be in occupation of the sporting rights, they may also be let to a third party. Furthermore, in some cases there may be different sporting rights over the same area of land, with for example an owner granting the right to shoot deer to one party and the right to shoot pheasants to another party. Alternatively, the owner may lease the sporting rights to a third party, but retain the right to shoot a particular bird or animal species over the course of the season.

It is also important to consider whether the value of the woodland and the related sporting rights may be greater than the sum of the parts. Further consideration of the valuation of sporting rights is beyond the scope of this professional standard.

‘Non-woodland’ development potential may exist. If there is scope for future development potential, such as building development or mineral extraction, this must be carefully considered, and the relevant local planning policies need to be investigated. Any restrictions on future use arising from previous grants or other incentives should also be considered.

Environmental designations and, in turn, controls and regulations affecting the countryside are developing constantly. It would be impractical here to try to provide a list of each designation that might currently influence woodland values. However, it is important to be aware of the kind of factors that need to be considered and the impact they might have on the management of the woodlands, and in turn value. Such designations may be

described loosely as either voluntary or compulsory and also either restrictive or supportive.

Felling regulations can limit what trees can be felled and the conditions of that felling. For example, in the UK and Ireland, woodlands, in most cases, cannot be felled without permission from the relevant government organisation. Where there is a valid reason for the trees to be felled and removed, permission is usually granted, although normally subject to a requirement that the land be restocked with an agreed species or mix of species, following clear felling. Therefore, when valuing woodland, it will usually be necessary to assume that the property will remain as woodland in perpetuity and that, under current forest regulations, there is no likelihood that it might be converted to farmland after the crop has been felled. The existence of any felling consents and the restocking conditions, in particular the agreed species, are also important to establish. Delays or other issues arising with felling licenses can impact on value.

Forest certification is a voluntary market mechanism to promote responsible management of the world's woodland resources. It provides an independent means of certification that the management practised for the woodland conforms to specified standards and that the timber and timber products originate from sustainably managed woodlands. The two main international timber certification schemes are the Forestry Stewardship Scheme (FSC) and the Programme for the Endorsement of Forest Certification (PEFC), however there are over 50 certification programmes worldwide that address different types of woodland.

Furthermore, the timber processors as well as major retailers and end users of timber products are increasingly required, or are voluntarily opting, to solely or partially use sustainably certified timber. This in turn raises the possibility of dual pricing and demand patterns emerging for timber from certified and uncertified sources.

Therefore, one of the motivations for a woodland owner to get their woodland certified is the expectation of increased demand for their timber and an increase in the prices achievable. However, certification comes with costs and obligations. So, it is important to establish whether the woodlands have been certified in accordance with an approved timber certification scheme and where they have, to note the details and conditions of that certification scheme. It also important to remember that as forest certification is voluntary, it may not be retained on change of ownership.

3.4 Forestry policy, support measures and fiscal incentives

Forestry policy, support measures and fiscal incentives influence the extent and type of tree planting undertaken and the management operations carried out in existing woodlands. In turn, they can also affect the value of woodlands and bare land that might be suitable for a tree planting scheme and so need to be considered in the valuation.

For example, there can be a range of grants, subsidies and incentives available to help support and encourage investment into new tree planting projects and to more actively manage existing woodlands. These grants and subsidies might include support for creating new areas of woodland, and for maintaining them, grants for improvements to roads and other infrastructure projects, as well as improvements deemed beneficial to the local community and wider environment. However, these grants and subsidies often come with restrictions and obligations.

By way of illustration, successive governments in the UK and Ireland have sought to encourage both tree planting and sustainable management. Fiscal incentives, in the form of both grants and tax concessions, have been offered to promote these two aims. This section just gives an indication of the types of grants available in the UK and Ireland and

considers the influence that they may have on the valuation. It should not be considered as a complete or comprehensive guide to such incentive schemes in either jurisdiction, or internationally, but rather as an indicator of the main categories in these locations to consider. It is important to highlight that some of the incentive schemes may be historic but could apply to plantations established or otherwise qualifying from previous times.

3.4.1 Grants

There are a range of grants currently, or historically, available to encourage landowners to plant their land with trees. These grants can be discretionary and may for example, be targeted according to location and woodland type. Some grants are only available to certain categories of owners or have variable rates depending on the category of claimant. Some may also have clawback provisions. There are also a range of grants to help encourage sustainable management. These grants may be targeted and may for example, be weighted in favour of the environment and public access. Details of the rates of grant and the conditions applied to them can be obtained from various sources, including the government websites for the respective countries.

Although the availability of grant aid can be an important incentive to undertake specified works, grants that are designed to offset the costs of undertaking these works, rather than to generate an income, do not normally have a direct influence on the valuation of existing woodlands. However, where the grant aid potentially available can make a particular land use or management option more financially attractive than another, for example if the establishment of a new woodland creation scheme is likely to result in a greater income than competing uses for that land (such as agriculture), then this may increase the value of this land. It is important to consider the availability of grants and their expected impact on land use and management options.

Notwithstanding the above, grants are subject to various eligibility criteria and can be subject to various conditions, for example the granting of public access. Having to provide public access could have a detrimental effect on the value. The grants receivable and the amounts paid, as well as any conditions attached, should be noted in the valuation because receipt of these grants generally requires the owner to comply with those conditions, which, if broken in the future, may result in penalties.

3.4.2 Tax

Woodland owners in the UK and Ireland, both historically and currently, receive benefit from a range of tax concessions, including capital gains tax and inheritance tax. The availability of these tax concessions is likely to affect the supply and demand for woodlands and value.

The valuation of woodlands may be required for both tax planning and for capital taxation purposes. The valuer’s role is generally in the provision of the valuation(s) in connection with the specific requirements set out by the client and their financial advisors. It therefore follows that it may beyond the scope and role of the valuer to assess eligibility and other criteria related to a specific taxation scheme. The scope and purpose of the valuation to be provided need to be clearly established and set out in the terms of engagement, as set out in section 2 of this professional standard.

Each country will have its own taxes and in turn implications for tax planning and the associated valuation requirements. The valuation considerations for capital gains and tax payable on gifts and on inheritance are considered further in appendix A. This summary is for reference only and should not be taken as being either comprehensive or complete, so it is imperative that the valuer ensure that the client has appropriate tax advice.

3.5 Market factors

As with commercial property, there is a range of market factors that influence the woodland market. These include:

- supply and demand
- interest rates and the availability and cost of finance
- the state of the economy and the performance of other investments
- planning and fiscal policies and
- societal trends and fashions.

In addition, it is important to consider the economics of woodland management.

Demand for woodlands is wide ranging – while it is impossible to describe all of the various parties who are interested or involved in the investment and purchase of woodlands, potential buyers have varied motivations, circumstances and objectives. Some purchase for capital appreciation and investment returns and some for reducing potential inheritance tax liability, or a combination. For others, the motivation is less financially orientated, for example pride of ownership, the desire to be involved in a conservation project, or the sporting or recreational potential of the woodland may be the main drivers.

Environmental, social and governance (ESG) has also become an increasingly significant driver of demand from corporations and investment funds to invest in forestry and woodlands. The commitment of many organisations and governments to seek improved ESG standards through carbon neutrality is going to continue to increase the focus on woodland establishment and management in the coming years. Ownership of largescale woodland is also likely to be seen as key to offsetting carbon emissions for many corporations. *Sustainability and ESG in commercial property valuation*, RICS professional standard is a useful resource in considering the reporting of ESG matters in valuations.

Furthermore, woodland purchases are often financed with cash, particularly the case with lifestyle buyers, so changes in the general economy and the banks willingness to lend are less important.

There are a range of factors that influence the economics of woodland management. These include not only timber prices, but also financial incentives (both grants and tax concessions), as well as non-timber income, in particular any opportunities to monetise the various ecosystem services that the woodland is providing or has the potential to provide, such as the sale of carbon that is expected to be sequestered from a new woodland creation scheme.

4 Establishing the facts – the preparatory work and the property inspection

A physical inspection of the site and related enquiries will reveal site specific information that will have a bearing on the value and the valuation process. It is important that the valuer has a clear awareness of the particular characteristics of the woodland together with a sound knowledge of the various opportunities and restrictions for that woodland. The extent of the property inspection, and the level of detail that is appropriate when assessing the woodland, may vary according to the purpose and any agreed limitations of the valuation, the characteristics of the woodland, any assumptions or special assumptions made and what is to be valued. For example, there may be a cottage, an estate sawmill, plant, machinery and other equipment to be valued. Where the woodland forms an integral part of a farm or rural estate, it is important to consider whether a separate valuation is

required or whether it is to be valued as part of the whole farm or estate. The scope and extent of the property inspection and any limitations or restrictions on the inspection must be set out and agreed in the terms of engagement, and in the valuation report.

The valuer also needs to consider the appropriateness of their knowledge and skills as required under PS 2 of Red Book Global Standards. Following on from this, the terms of engagement may also need to set out particular requirements and information pertaining to the treatment of the non-woodland assets and where the woodlands form part of the overall property, as might be the case with a farm or rural estate. *Valuation of rural property*, RICS professional standard, provides further information on the valuation of rural property, including farms and rural estates.

4.1 Preparatory work

Before inspecting the property, it is important to consider as many of the factors pertaining to the valuation as possible. This means likely problem areas can be highlighted before the site visit, allowing for more effective consideration on the ground. There is a wide array of publicly available and subscription-based information sources and mapping/geospatial services that can and should be consulted in advance, as well as any site-specific information provided by the client.

4.2 The site inspection

As for all valuations it is important to physically inspect and appraise the subject property. The site inspection has several purposes. It enables the valuer to validate the information already collected, to collect the required site and crop information, to consider the future management regime and to identify issues that could impact on the valuation.

Inspections are necessary not only to check or verify the legal boundaries, access routes, location of wayleaves and rights of way, but also to determine the physical site and crop details which are necessary to assess the current or potential timber value of the wood and its potential market. In addition, it is important to consider the non-timber attributes, such as the sporting and leisure potential, as well as any non-woodland developments, such as dwellings and buildings.

Various technologies are available to assess the state, condition and health of the tree crop. The use of appropriate technologies can provide greater detail and may assist in making inspections more cost effective. These may include the use of drones, satellite imagery, LIDAR survey information and soil mapping. Such technologies are likely to be supplementary to, rather than an alternative to, an appropriate physical site inspection.

Woodlands, like other property assets, can contain a range of hazards. The RICS guidance on '*Surveying safely: health and safety principles for property professionals*' provides a comprehensive guide to safe working practice. Due regard to the biosecurity implications of inspecting woodlands is also important. There may also be the risk of site contamination, for example in the vicinity of an old treatment yard. The RICS guidance on 'Environmental risks and global real estate' as well as a range of other sources, provides further information on such issues.

5 Valuation Approaches: the comparable transactions method

Valuation using the market approach using the comparable transactions method, based on comparable property transactions and other market based data, is normally the preferred

method of estimating market value. Indeed, it is used as the primary method in many valuations. However direct comparison with market evidence may be problematic in some markets and a more detailed analysis may be needed.

Valuation of woodlands using the comparable transactions method based on comparison, requires a depth of information of similar assets normally in a similar type of location or geographic area. The RICS guidance on '*Comparable evidence in real estate valuation*', sets out a hierarchy of different types of evidence with direct transactional data at the top. This includes all types of transactional comparable evidence.

Other market-based evidence lower in the hierarchy, such as information from published sources or commercial databases, can provide guidance rather than a direct indication of value – its importance will depend on its relevance, authority and variability. Likewise, there are other data sources, such as asking prices, market reports, timber price data and background data that might provide broad indications of value, rather than evidence that relates to the property itself. Depending on the individual circumstances, the weight attached to the different sources and information can vary significantly.

In the case of woodlands, valuation by using market evidence is potentially reliable if evidence of comparable transactions can be found and analysed on a common unit basis. Units of comparison normally revolve around the relationship between value and area. So, in certain cases, it may be possible to compare the woodland being valued to other properties that have recently been sold or are currently being offered for sale at specific asking prices. It should be noted, however, that woodland properties, like all properties, reach the market for many reasons and by various methods of sale. They vary considerably according to location, extent, age, structure, yield class and tree health and condition. Knowledge of both the market and the comparables relied upon for the valuation are key.

In addition to these numerous variables, there may be a shortage of market evidence. Not only may there be limited transactions, but also woodland sales tend to be handled by a small number of specialist agents, be they chartered surveyors or forest management companies. Results of transactions may not be disclosed. Guide price data, of course, can be gained by obtaining property particulars and bulletins from these specialist agents, but such data has the usual limitations. Furthermore, it is difficult to compare like with like, unless you have good knowledge of those properties, so varied are the location, extent and quality of sites and crops. Wide variations in values are evident when comparisons are made, for example:

- favourable location and site conditions versus those with a range of limitations and restrictions
- woods of high-quality timber versus those of low-quality timber or
- young woods versus mature woods.

These variations in value are due to the fact that all these aspects impact upon the existing or potential income generation opportunities.

Notwithstanding these difficulties, market evidence has been the main approach to gain an estimate of the market value, particularly for smaller amenity woods, where the main market features are non-timber based. Such woodlands may have little or no standing timber value but may have high environmental/amenity value, or recreational or sporting potential, and these attributes may be the principal value associated with such woodland. This non-timber use value can be difficult to quantify, particularly where there is no income generating potential – the attraction tends to lie in the eye of the beholder, and so is a more subjective

assessment, based on knowledge and experience of the market and relevant market evidence.

As with all properties, the possible impact of special purchasers on any particular comparable transaction needs to be considered when analysing.

6 Valuation approaches: the income approach and an assessment of the standing timber value

An income approach may be used to assess the standing timber, particularly where the main market features of the woodland are the quantity and quality of the timber being grown. For such woodlands, the main value tends to be related to their current and future timber value and in turn the projected revenue stream from mature and non-mature trees. Notwithstanding that, and as set out in section 3.5 above, woodlands can provide other sources of income such as grants and subsidies and tourism and recreation and opportunities to monetise the various ecosystem services that the woodland is proving, or has the potential to provide, such as sale of carbon that is expected to be sequestered. This section focusses on the assessment of the standing timber, The assessment of ecosystem services and natural capital accounting are considered under section 11.

Market evidence derived from other woodland sales is likely to be of less relevance due to the greater number of technical variables. Against this background, a number of alternative approaches are advocated which take into account the expected income from the current and potential timber value within the woodland, as well as any other relevant sources of income.

To assess the current and potential standing timber value within a woodland, it is important to establish the quantity, quality and value of the timber that the woodland contains and its availability for harvest. In turn, the current timber value and the potential timber value need to be carefully assessed – this is likely to require specialist survey and mensuration techniques to determine the existing and potential volume of the timber, its quality and in turn its potential markets and value.

There are a number of approaches and techniques used to assess the quantity, quality and value of the timber. These methods will usually involve the compilation of data on species, stocking density, age, top height, diameter at breast height, yield class, and health/quality of the crop. This can be arrived at by using a range of approaches, including relevant records, physical site inspections and sample plotting techniques. The sampling method and measurement technique selected, and in turn the accuracy required, will depend on the uniformity of the woodland and the purpose of the valuation. There are a range of publications that set out the different approaches to the compilation of these forest inventories. An explanation of these is beyond the scope of this professional standard.

The method of valuing the growing timber will then depend on the age of the trees at the time. When the trees are mature, or nearing maturity (i.e. their optimum rotation length), the current market value of the growing trees can be used to assess the current value of the standing timber. For younger, immature woodlands (such as those younger than 20 years old), it may be more appropriate to estimate the ‘expectation value’ to assess the future timber income or even the replacement cost.

It will also be necessary to consider the site or 'land value'. This figure is then added to the ‘standing timber value' to help assess the market value of the whole property. The land will

be assessed as ' bare forestry land' and comparables used to assess its value. It should be noted that a separate assessment of the site or land value and the timber values may also be required if undertaking a valuation for Inheritance Tax or Capital Gains Tax purposes in the UK. The requirements and implications of valuations for capital taxation purposes are considered in more detail in Appendix A.

6.1 The current standing timber value

The current standing timber value is the current market value of the growing trees , if cut now and can be appropriately applied to mature (or nearly mature) commercial woodland categories. The current standing timber value is calculated by assessing the quantity of standing timber and then multiplying this amount by the relevant standing timber price.

However, the assessment of the current standing timber value is not always appropriate, particularly when assessing the market value of a woodland not yet at the end of what is considered to be its optimum rotation period. The value derived from this method can often be less than the market value, and for some woodlands the assessment of the standing timber value can actually result in a negative value. For example, a woodland that contains small and immature trees and/or where the timber is of a poor form can cost more to harvest than the proceeds from the sale of timber. Yet comparable transactions clearly indicate that such woodlands have a market value over and above the value of just the planting land. This highlights the need for triangulation or crosschecking of methods, as the comparable approach may yield useful evidence upon which to support a valuation in such a case.

6.2 Expectation value

Expectation value may be used, where a crop is not yet mature, and the timber may not have reached its full potential in terms of its size and value. Just estimating the current standing timber value will ignore this future potential value and may result in an undervaluation of the asset. Expectation value is often used for market valuations as this method takes into account the expected future income and expenditure, which is likely to be more appropriate for such woodlands. This can be done using a discounted cash flow technique which will value the growing trees' expected sale price, at today's prices, but allowing for the crop to grow on to reach its full potential.

Forecasting timber volumes

To assess the future volume of timber that can or should be harvested, it is necessary to select what is considered to be the optimum management regime and the optimum time frame over which to fell the trees. The yield of timber from any recommended thinning operations up to the anticipated optimum rotation age, and the volume of the timber at the optimum time of felling can then be forecasted. However, there is no standard time frame for this – the period selected will need to be decided on a case-by-case basis, taking into account all the relevant factors.

The optimum management regime and optimum time frame will vary between different woodlands and will be influenced by a range of factors including the physical site, the age, stage and health of the tree crop and its current and expected growth rates as well as market, financial and regulatory factors. In turn the optimum management regime and the optimum time frame influence the amount and type of timber felled and therefore the future timber income and expenditure.

There are various sources of information that can be used to help determine the optimum rotation length, and the associated expected volume yield from thinnings and final felling to that rotation age. Using the data from the crop inspection and relevant records, together with an assessment of the relevant market and regulatory factors, an appropriate management regime, forest growth and 'yield models' can be used to forecast timber production and by implication future timber revenues.

The selection of the optimum management regime and the optimum time frame, particularly where it might differ from what is currently set out in the woodland management plan agreed between the owner and the relevant government department responsible for forestry matters needs to be clearly stated within the valuation report, together with any assumptions underpinning the projection of the costs and revenue over the agreed time frame. The level of detail supporting these assumptions will depend on the purpose of the valuation and the timing of the expected income.

Once future volume yields from thinnings and final felling have been estimated, unit values, based on standing timber prices, should be applied to the volumes at relevant points in time. As this expected income is in the future, it is usual practice to prepare a discount cash flow model to reflect the assumptions about the timing of revenue and expenditure over the agreed time frame. This requires explicit period by period assumptions concerning the breakdown of this expenditure and revenue and these should be explicitly stated in the valuation, together with the assumptions used to underpin these projections. The discounted cash flow can also be used to calculate the net present value (NPV), of the estimated costs and revenues over the agreed time frame. An internal rate of return is also usually calculated. The use and application of discounted cash flows are set out in numerous corporate finance and investment appraisal texts and so are not considered further for the purposes of this professional standard. Also see the current version of, Discounted cash flows for commercial property investments, which provides further detail about the uses and applications of discounted cash flows in the property sector.

The discount rate

The selection of the discount rate will have a significant impact on the capital value derived – the higher the discount rate, the larger the impact upon the current value, and the greater the timescale involved, the greater the impact.

There are four approaches to identify the most appropriate discount rate to use. They are:

- Capital Asset Pricing Model (CAPM)
- Weighted Average Cost of Capital (WACC)
- surveying active investors and valuers and
- using comparable forest transactions.

Determining the appropriate discount rate to use for the valuation will be dictated by the market, if estimating the market value. For other valuation bases, a different discount rate may be applicable, such as the level of internal rate of return being sought by the owner or the prospective owner at the time. Notwithstanding that, the discount rate adopted will also vary according to the woodland category, its age, timber quality and location. This in turn requires a full awareness of the prevailing trends in the forestry land and investment market. The reasoning for the selection of the discount rate and the target rate of return and any assumptions made should be explicitly stated. This reasoning could, for example, include evidence of rates of return, projections and other inputs from other known transaction evidence where available.

Timber prices
These have a significant impact on the current and expected timber revenue and need to be carefully assessed. Prices for standing and felled timber can fluctuate significantly, even over a short period of time and so using current timber prices can be inappropriate and can give a misleading result, unless the woodland being valued is considered to be mature and ready to fell. Factors such as the economic conditions, exchange rates and market demand influence timber prices. Therefore, it may be appropriate to use stabilised or averaged timber prices (as opposed to just using prices at a single point in time), particularly during periods of significant volatility. In turn, alternative markets and uses for each component of the timber harvest are also important to consider, as prices for these different market components can vary. Such considerations and adjustments become all the more important the further the crop is from its optimum and/or agreed rotation length. There is however no set period over which the average price is calculated, so the valuer will need to use their knowledge of the market and professional judgement to determine what is appropriate and the reasoning for their selection should be clearly set out.

The main factors that affect the standing timber value of each woodland include the species, tree size, quality, quantity being sold, ease and cost of harvesting, access and proximity to the timber markets. The costs of realisation, for example, the timber marketing costs and the contract supervision costs also need to be taken into account.

Sensitivity analysis of values based on the DCF approach are helpful both in testing the reliance of the value on some of the core inputs, but also in illustrating to the valuation user of the potential impact of changes in these variables on returns.

7 Valuation Approaches: (Depreciated) replacement cost method

Younger woodlands, for example woodlands less than 10 years old, are unlikely to contain any saleable timber. Therefore, the present market value approach to assess the value of the standing timber is not appropriate. Expectation value is also problematic for such woodlands as they are likely to be many years away from their optimum economic rotation length. The further ahead that costs and prices are predicted, the more inaccurate such projections are likely to be. The discount rate selected will also have a very significant effect on the capital value derived. Therefore, the availability and use of relevant transactional evidence is of particular importance if undertaking a market value basis of valuation for younger immature woodlands.

An alternative approach is to consider the net costs of establishment. The costs of establishment can be derived from actual or standard published costs. The availability of any grant aid also needs to be taken into account to ascertain the net cost. This net establishment cost should then be compounded to reflect the opportunity cost on the money invested for that period. Such a method has its limitations as, firstly, it does not take into account the future income potential, both timber and non-timber income and, secondly, it does not reflect the state of the market. Therefore, while such a method may be appropriate for certain types of valuation, the use and analysis of market evidence is also vital for assessing the market value of younger woods.

8 Risk analysis and assessment of income and value

All three of the discussed valuation approaches have their limitations. The replacement cost method has relatively limited application, and the market and income-based approaches also have their limitations and challenges. The valuation of woodlands by either the market approach or an income approach can result in the assessment of the value being at risk of valuation variation and uncertainty.

In the case of the market approach, the risk of valuation variation and uncertainty can arise from the individuality of each woodland and the quantity and quality of the comparable evidence available, which will affect the degree of difficulty in adjusting and relating that comparable evidence to the subject property. In the case of adopting an income approach, the risk of valuation variation comes from the fact that the current and projected income is affected by a wide range of inputs and outputs which are subject to variation. Small variations in these inputs and outputs can cause relatively high variations in the projected income. This therefore emphasises that reliance on one valuation approach can have its limitations and risks, and it is desirable to use more than one approach where the subject property and circumstances allow.

The range of different management options and timescales that are adopted for the management of woodlands also adds to the risks of increasing the valuation variation. The use of risk analysis techniques, however, can address some of these risks and help indicate likely variation around the valuation.

Risk analysis techniques such as sensitivity analysis can be used to evaluate how changes to individual inputs and outputs (such as the quantity and value of the timber to be harvested), might affect the valuation of the woodland. Scenario modelling can also be used to evaluate how different management regimes can affect the valuation. If these are combined with the use of discounted cash flows, this can also show, for example, the effect of different rotation lengths on the valuation. Where the adoption of a number of management options are potentially appropriate and so need to be tested, using scenario modelling combined with sensitivity analysis of each scenario is particularly appropriate to help support the valuation. Furthermore, such risk analysis techniques enable the inputs that have the most impact on the outcomes to be identified and evaluated and also give some measure of volatility between the different management options selected.

It should be noted that these risk analysis techniques rely on the valuer having the necessary skills and knowledge to make relevant judgements and assumptions concerning the different scenarios and variables selected. In turn a rational basis for the choice of those scenarios and variables selected should be clearly set out when reporting the valuation. The use of market evidence, where available, will help to substantiate these selections. The issues relating to the reporting the valuation and dealing with valuation uncertainty are considered further in section 12 of this professional standard.

It is also worth noting that different types of woodland will have different levels of risk and valuation variation and uncertainty. The state of the market both for timber prices and woodlands and the availability of comparable transactions will also impact on the risk of valuation variation and uncertainty.

9 An assessment of the growing trees and harvested timber for accounting purposes and compliance with International Accounting Standards (IAS) 41

An assessment of the growing trees and harvested timber may be required for accounting purposes. The current International Accounting Standards (IAS), and in particular IAS 41 Agriculture, prescribes the accounting treatment, financial statement presentation and disclosures relating to the growing timber and other biological assets. This standard sets out the requirements for the assessment of the value of both the growing trees and the harvested timber and that the basis of assessment should be the fair value.

The fair value assessed should be net of the costs to sell, therefore costs such as commissions to sales agents, cost of advertising and preparing information to support the sale process should be excluded to arrive at the net amount.

IAS 41 does not prescribe one particular approach. It does however set out guidance to help determine the valuation approach deemed to be most appropriate and should be the one adopted.

Quoted price
Where an active market exists for a biological asset then the quoted price in the market is the appropriate basis for determining the fair value of that asset. IAS 41 defines an active market as one where all of the following conditions exist.

1) The items traded within the market are homogeneous.
2) Willing buyers and sellers can normally be found at any time.
3) Prices are available to the public.

While the market for harvested timber under certain circumstances may satisfy all these conditions, growing trees would generally not.

Comparable sales
Where an active market does not exist, a market transaction price can be used. This market transaction price should be within the reporting period.

While such an method may be appropriate for harvested timber, it is likely to be problematic for determining the value of the growing trees. This is due to a range of reasons, including the limited availability of market data, coupled with the diversity of the growing trees, in terms of species, stocking density, age, quality, volume, etc. and the lack of sector benchmarks in many parts of the world, including the UK.

Present value
Where there is no active market and limited transactional data for a biological asset, the present value of the expected net cash flow from that asset is generally the most appropriate basis of assessment. Therefore present value is the technique most likely to be used for the growing trees and timber.

The expected income and future income from the growing trees is assessed and this income is then discounted. Taxation, financing costs and re-afforestation costs are excluded from the expected income forecasts. The discount rate is usually the current market determined rate. IAS 41 also requires that the possibility of variations in the income

forecasts should be reflected in the calculation of the growing trees and timber. These possible variations should be accounted for in either the cash flow forecasts, or the discount rate, or a combination of two, but in such a way as to avoid double counting.

There is no typical rotation length and in turn the forecast period and the period involved will need to be decided on a case-by-case basis. The criteria used to determine this period, together with assumptions about timber yields and prices all need to be clearly set out. IAS 41 also does not provide any guidance or requirements regarding timber prices to be used. However, if there is an active market for the harvested timber, then there is an expectation that current timber prices should be used. This can result in significant variations in value, year on year, in line with timber price movements.

Cost approach
A cost approach might be appropriate to use for young forest crops, particularly where 'little biological transformation has taken place, since initial occurrence' and there is no timber of harvestable size (and so market data for that timber). The cost approach should however be limited to relatively young forest crops.

10 Valuation of the land

A woodland is made up of two parts, the first being the tree crop growing on the land and the second, the underlying land itself. The land and the tree crop constitute a combined asset in which these two elements are inseparable biologically.

Notwithstanding this inseparability, there are occasions when separate valuations for both the land and the tree crops are required, as outlined in section 9.

When considering the value of land, it would usually be appropriate to consider its value when put to an optimum use, and any valuation should consider the possibility, desirability and likelihood of conversion to other uses. However, where the land has been previously afforested, there is often a requirement to replant that land following any felling being undertaken. This is generally the case, for example, in the UK and Ireland as a result of its felling regulations, and/or as a condition of grant aid. In such cases consideration of alternative and more optimal uses would not be relevant, unless the relevant regulations make any provisions in regard to replacement lands.

10.1 Bare forestry land

There may be occasions where a valuation is required for bare forestry land, for example where the tree crop has been harvested or removed but has not yet been restocked. Valuations of such land may also be required for capital taxation purposes as outlined in Appendix A and may be referred to as the 'prairie value' in England, or 'solum' in Scotland.

The valuation will therefore need to reflect that the land has to be replanted and that such replanting would usually be in accordance with any specified replanting conditions. Any deviation from the specified replanting conditions should be clearly set out and justified. Under such circumstances, the preferred approach is to use transactional data when available. However, in the absence of transactional evidence, the preferred approach would be an assessment of the expectation value As set out in section 6, to be able to use such approach would require a range of assessments and assumptions, including the

actual or expected replanting requirements, i.e. the method of restocking, the species to be planted, and their protection and maintenance. In addition, factors such as the location, site productivity and infrastructure and the expected future management regime would also need to be considered.

10.2 Non-afforested land that has scope to be planted with trees

In the UK and Ireland, there are a number of grant schemes available for establishing new woodlands. In addition, there are increasing opportunities to derive additional income streams from the various ecosystem services that woodlands can provide.

In some jurisdictions, it is already possible to sell the carbon predicted to be sequestered by a new woodland creation scheme. The sale of carbon can make a significant contribution to the future income achievable from a new woodland creation project. The importance of carbon may also be an issue for recently established woodlands.

If the above sources of income amount to a greater sum than competing uses for that land (such as agriculture), then this may increase the value of this land. However not all land is capable of growing trees successfully and not all land that can grow trees will gain consent to be planted with trees. Land use change to forestry can be a complex process and can require an environmental impact assessment and/or planning permission.

There is often a lack of comparable transactional evidence to value such land. In addition, forecasting the amount of income and in particular, the amount of carbon that is expected to be sequestered from land (and any scheme for pricing of the same) that has not yet been planted with trees poses a number of challenges.

For example, in the UK, to be able to realise the value of the carbon forecasted to be sequestered, there are a number of criteria that need to be satisfied. Firstly, the new woodland creation project has to be verified and registered with a legitimate carbon scheme within the UK. The Woodland Carbon Code (WCC) is currently the most commonly used scheme. The WCC is the UK government's approved voluntary standard for UK woodland creation projects, where the landowner wishes to verify and trade the carbon captured. Carbon sequestered or 'captured' by woodland is measured in the form of a Woodland Carbon Unit (WCU).

Under the current requirements of the WCC, there are various eligibility criteria that need to be complied with for a new woodland creation scheme to be verified as a legitimate carbon sequestering project. This means that a new woodland creation scheme designed for optimum timber production might not be compatible with a design required to satisfy the requirements of the WCC or any other legitimate carbon scheme. This in turn creates challenges in determining what should be the optimum woodland creation scheme for a given area of land.

It will be important to establish the following:

- whether a new woodland creation scheme has been registered with a legitimate carbon scheme, or has the potential to be
- the number of WCUs predicted or traded and
- if any sold, the basis and conditions of that sale.

There are also opportunities for certain woodland creation schemes to generate other sources of non-timber income, such as biodiversity offsetting, but again a number of criteria need to be satisfied. The range of ecosystem services that woodlands can provide and the approaches to the assessment of their value are outlined in section 11.3. It is also

important to consider the availability and expected amount of grant aid, both capital grants and annual payments. In the UK and Ireland, these grants tend to be discretionary and are subject to various criteria and so will influence the type of woodland creation scheme that might be grant aided for a given area of land.

Akin to assessing the expectation value, there is a range of possible scenarios and selecting an optimum option to assess the expected income in the future can be challenging, as set out in section 6. In addition, these sources of income and any assumptions made to determine these, as well as the timing and amount of the forecasted expenditure and income, need to be explicitly stated in the valuation. Likewise, the selection of an appropriate discount rate also needs careful consideration. This is why it is particularly important for such types of valuation to use transaction evidence wherever possible to help determine the land values, as well as the selection of appropriate rates of return, projections and other inputs used.

11 Valuation of other types of woodland

Valuations may be required for woodlands that form part of a farm or rural estate and for mixed aged woodlands. There may also be a requirement to undertake natural capital assessments. Finally, in addition to capital valuations, there may be a requirement to assess the market rent that should be payable.

11.1 Rural estates and farm woods

Woodlands can form an integral part of a farm or rural estate where their significance will be more as an enhancement to the farm as a whole. These woodlands are often composed of smaller blocks of woodland and in many cases will be in the form of spinneys and shelterbelts. They may also have been designed and planted for a specific purpose, for example, to provide shelter from the wind, to prevent soil erosion or to improve the amenity or sporting value of the property. As such, determining their value tends to be a more subjective assessment, based on knowledge and experience of the market and relevant market evidence.

A valuer would also need to consider and to assess whether the woods offer some advantage to the farm, making the property more attractive. In turn, much of their value may come from their marriage value with the other property assets. For example, a small block of woodland may be one that adds considerably to the amenity and sporting value of the estate and therefore to the overall value than its value as a wood in its own right. In a case like this, a number of approaches may be considered in building up a soundly-based valuation. It will be for the valuer to choose which is the most appropriate approach or combination in light of the physical circumstances, economic conditions and the purpose for which the valuation is required.

11.2 Woodlands with irregular silvicultural systems

Woodlands that are or have been managed under irregular silvicultural systems can be particularly challenging to value. This is due to a number of factors, but in particular, there is currently limited transactional market evidence available for such woodlands. In addition, the assessment of the standing timber volumes and prices and in turn the estimation of expected income is more complicated.

Woodlands managed under irregular silvicultural systems tend not to have a defined date for clear fell and reforestation. Rather the crop is managed on a continuous cover basis with periodic selective felling interventions. The focus tends to be on individual tree stems or groups of tree stems, rather than on a compartment or stand basis, as is the case in regular and even aged woodlands. The result is an irregular stand structure in terms of age, distribution and size. This makes the assessment of the quantity, quality and value of the timber all the more challenging.

Continuous cover forestry may also allow for other agricultural or related uses to run in parallel, which may impact on revenues.

Relatively limited published data on irregular silvicultural systems, in particular reliable growth models for predicting the quantity and quality of the timber expected over a given period, may also pose a challenge. In addition, the absence of a definite rotation length makes the quantity and quality of timber more difficult to forecast. It is important that the management regime, time frames selected, and any assumptions made about these, as well as the quantity and quality of the timber and its values are explicitly set out and justified.

11.3 Assessment of ecosystem services

There has been growing recognition of the non-timber benefits that woodlands can provide. These non-timber benefits include biodiversity and conservation, landscape, leisure and recreation, including benefits for health, soil and erosion control, flood alleviation, water and air quality and climate change mitigation in particular carbon sequestration. In the past, the main sources of non-timber income have tended to be just from grant payments, agreements and payments for sporting, access, recreation and utilities use. This is because, up until recently, it has generally not been possible to monetise most of these non-timber benefits.

However, as a consequence of the increasing interest both from the public and private sector in these non-timber benefits (often referred to as ecosystem services), there are now opportunities to monetise some of these. It is possible to sell the carbon predicted to be sequestered by a new woodland creation scheme or there may be an agreement to use an area of woodland as part of a flood alleviation scheme or for biodiversity offsetting, to enable the development of other land in the vicinity. These can generate an income flow or capital sum that needs to be accounted for in the valuation. Where there are such opportunities, it is important to determine whether there is an agreement in place, and if so, its time frame, terms and requirements.

The valuation of woodland that provides sources of non-timber income should be no different to the established valuation approaches and methods that are currently used for other valuations. There are also techniques to ascribe values to those benefits that have not yet been commodified, but to date, they generally haven’t been included within market valuations, as they have tended not to have produced any tangible income. It is also important to consider market sentiment. Even when there is no current income or expected opportunities to generate income in the foreseeable future, that woodland may still have appeal to certain purchasers and hence a value.

11.4 Natural capital accounting and assessments

There is expected to be an increasing need and demand for natural capital accounting and assessments to audit and value the stock of natural capital.

Natural capital accounting provides a total valuation of all the benefits, society gets from the land. For a woodland, this includes both the timber and non-timber benefits mentioned above. These benefits need to be identified, all the relevant data compiled and reviewed, appropriate methods of valuation chosen and applied, and a value determined.

As with capital valuations, there will be a need for a formal and systematic approach for natural capital assessments, including setting out the terms of engagement, the purposes and basis of the assessment, the method to be taken and any assumptions that have been made.

The assessment of natural capital is beyond the scope of this professional standard. There are however a range of sources of information on the processes and approaches to natural capital accounting and assessments, including *Value of natural capital – the need for chartered surveyors*, RICS practice information.

11.5 Assessment of market rent

Woodlands, like other properties, can be subject to leases and other forms of occupation, and it may be necessary to determine the rental value properly payable. The rent should be assessed on the basis set out in the lease. Often that basis of assessment is a market rent. However, generally the lease does not lay down a formula or method of valuation to assess the rent properly payable, nor is there any specific legislation to assist. In such cases it will be important to consider all the relevant factors, in particular those physical details relating to the leased area, the lease terms and the current market conditions prevailing at the time.

There are a range of different methods to assess a market rent. Clearly it is important to take into account any comparable market evidence when considering the rent properly payable. However, there may be an absence of good comparable market evidence, as tends to be the case in the UK and Ireland. This is because there are relatively few areas of woodland subject to forestry leases and often these leases have relatively infrequent rent reviews, resulting in limited transactional data. An economic appraisal to assess the productive and ‘related’ earning capacity achievable from the leased land may therefore be a relevant method to use. This is likely to include an assessment of the annual income expected over the review period and would take into account both the expected timber and non-timber income. Any other relevant issues, such as the current timber market and the forestry land market, should also be considered.

12 Reporting the valuation

The precise nature of the valuation report depends on the instructions given and its purpose. But the requirements of VPS 3 must be considered. In particular:

- the basis of the valuation must be clearly stated. Where a basis other than market value is adopted, it must be fully explained and defined.

- all the assumptions and special assumptions made must be stated, and where appropriate, comment made on the effect of those assumptions/special assumptions
- the statement requiring comment on the valuation approach is particularly important in valuations of woodlands.

The use of various risk analysis techniques will often be both appropriate and necessary to identify the variation in the valuations of particular types of woodland and the source of that variation. This may be more appropriate in woodland valuations than other property types due to the range of assumptions that may be required, as identified previously.

For most purposes, the requirement is for a valuation to be reported as a single figure. Where risk analysis has been applied, the valuation should still be reported as a single figure, but the potential for significant variation (if considered applicable to the valuation concerned) should be reported in an appropriate manner. Where valuation uncertainty is material, VPS 3 states that further proportionate commentary must be added to ensure that the valuation report does not create a false impression.

There is also a recommendation that material valuation uncertainty should normally be reported qualitatively and that a stated range of values is not good practice.

Notwithstanding that, where the purpose of the valuation is not one where a single figure is required, it is acceptable to agree with the client that a range of values be reported. Where this is the case, valuers should take great care in reporting this variation quantitatively as it may be used in litigation cases as proof of the permissible margin of error in some jurisdictions.

Valuers should also refer to the process by which the valuation was produced and highlight issues that contribute to any uncertainty surrounding the valuation, including the different options that may have been identified.

Appendix A Valuation considerations for woodlands for Capital Taxation Purposes

The valuation of woodlands may be required for both tax planning and for capital taxation purposes. The valuer's role is generally in the provision of the valuation(s) in connection with the specific requirements set out by the client and their financial advisors. It therefore follows that it may beyond the scope and role of the valuer to assess eligibility and other criteria related to a specific taxation scheme. The scope and purpose of the valuation to be provided need to be clearly established and set out in the terms of engagement, as set out in section 2 of this professional standard.

A1 Valuation for inheritance tax purposes

In the UK, the inheritance taxation treatment of woodland can depend on whether it is considered to be commercial or not, and whether it may rank as agricultural property. It is important to distinguish whether a woodland is regarded as commercial, agricultural or

amenity, for inheritance taxation purposes, as this will determine whether Business Property Relief, Agricultural Property Relief or Woodland Relief is available.

There is no single or simple test to distinguish the different types of woodland for taxation purposes, but a logical and hierarchical approach to the analysis of this question should be pursued and recorded. The Inheritance Act 1984 (IHTA 1984) sets out the general eligibility criteria for these three inheritance tax reliefs.

A1.1 'Commercial' woodlands: Business Property Relief

The IHTA 1984, provides for Business Property Relief (BPR) on assets used in a business, subject to a minimum ownership of two years. It also sets out conditions and criteria that need to be met to satisfy the requirements of BPR.

There may be a presumption that traditional broadleaved woodland is primarily managed for amenity purposes, while commercial forestry consists solely of coniferous plantations, but this assumption should not be left unchallenged. Any woodland may be managed 'commercially', even where a number of designations like Site of Special Scientific Interest (SSSI) and Ancient Woodland classification may indicate otherwise. Commercial management can take various approaches. These may be concerned with looking at woodland as a wider resource, for the ultimate production of high-quality hardwoods, for capital appreciation, for other sporting or amenity uses, to maximise the potential for grant support or, ultimately, for the promotion of capital growth or a combination of these approaches.

Evidence of commercial management and in turn eligibility for BPR can be derived from active management of woodlands. This evidence will include the existence of a management plan, evidence that the plan has been implemented and reviewed from time to time, timber receipts, receipt of grants and other sources of income, budgets, financial records, VAT registration and evidence in the form of estate records that the condition and state of woodland has been monitored (beyond the minimum necessary for safety purposes).

A1.2 'Farm' woodlands: Agricultural Property Relief

The IHTA 1984 also provides for Agricultural Property Relief (APR) subject to a minimum ownership of two years. It sets out conditions and criteria that need to be met to satisfy the requirements of APR, available on **agricultural property** on its **agricultural value.** Agricultural property is defined by s115(2) IHTA as

'…agricultural land or pasture and includes woodland and any building used in connection with the intensive rearing of livestock or fish if the woodland or building is occupied with agricultural land or pasture and the occupation is ancillary to that of the agricultural land or pasture; and also includes such cottages, farm buildings and farmhouses, together with the land occupied with them, as are of a character appropriate to the property'.

The key points to extract from this definition are that woodland must be occupied **with** agricultural land or pasture to be eligible for relief, and that its occupation must be **ancillary** to that of the land or pasture.

A1.3 ‘Amenity’ woodlands: Woodland Relief

Section 125 of IHTA1984 also provides Woodlands Relief by which inheritance tax can be deferred on the value of growing timber until such time as that timber is felled and sold. The resulting valuation requirement is levied on the ‘prairie value’ of the underlying land, broadly taken to mean that the land itself is valued in the absence of the growing trees, and in some kind of notional unimproved state. The valuation of “prairie land, is considered in section 10.

A2 Valuation for Capital Gains Tax purposes

Capital Gains Tax can arise on the chargeable disposal of woodland like any other non-wasting asset. However, the Taxation of Chargeable Gains Act 1992 makes special provisions for the apportionment of disposal proceeds and acquisition values where the woodland is managed commercially. Where the woodland is considered to be managed on a commercial basis and with a view to the realisation of profits, the value of the growing timber is excluded from the computation of the gain if the person making the disposal is the occupier. Therefore, a separate valuation of the land may be required. Apportionment of the value between land and trees is not available on the sale of a non-commercial woodland. This is a separate code from that for inheritance tax. Care is needed to avoid confusing the two, although some of the valuation principles may helpfully read across from one to the other.

A3 Valuation of Irish woodland for capital taxation purposes

In Ireland, like the UK, the capital taxation treatment of woodland can also depend on whether it is considered to be commercial or not, and whether it may rank as agricultural property. Furthermore, there is no set definition of what constitutes a commercial or amenity woodland.

A3.1 Valuation for Capital Gains Tax purposes

As in the UK, Capital Gains Tax can arise on the chargeable disposal of a woodland. In Ireland, where the woodland is managed commercially by an individual, the growing crop is exempt from Capital Gains Tax. The provision of Section 564 Taxes Consolidation Act 1997 specifically excludes consideration for the disposal of growing timber in the case of an individual. The underlying land is however not exempt. Any profitable gain on the underlying land is only on the surplus profit above the inflation adjusted costs. The above exemption does not apply to a corporate body. The growing crop in commercial woodlands is also exempt from Stamp Duty, though the underlying land is not. These exemptions are however not available on the sale of woodland not deemed to be considered as ‘commercial’.

Therefore, a valuer maybe required in the sale or transfer of woodland, to value the underlying land value. As in the UK, when considering the underlying land value for valuation purposes, it is usually appropriate to consider its value when put to optimum use. But, like the UK, there is usually an obligation to replant trees as part of the felling licence. This obligation implies that this underlying land must be retained as woodlands ad infinitum. This therefore restricts the use of the land and may also impact on the grants and subsidies available, and so the value of the underlying land for valuation purposes tends to be

significantly less than the equivalent land that has not been previously afforested. The crop value can be determined by the methods already discussed in this publication.

A3.2 Valuation for Capital Acquisition Tax

Commercial woodlands in Ireland are subject to Capital Acquisition Tax, which is a taxation on gifts or inheritance. Relief is available in the form of Agricultural Relief and Business Relief. To qualify for Agricultural Relief the beneficiary is subject to the 80% agricultural property 'test' and to the 'active farmer' requirements on the valuation date. Other requirements may include retaining the woodland for a number of years, but the beneficiary of the relief may sell the woodlands if they purchase other woodlands under certain conditions. The relief reduces the taxable value of the property, including land, by 90%. Where a beneficiary can not avail of the Agricultural Relief, they may be able to claim Business Relief. It also allows a 90% relief on the taxable value of the asset but has different conditions to the Agricultural Relief for qualification purposes. Therefore, it is important to determine whether the woodland is deemed to be 'commercial'. The valuation implications for both commercial or non-commercial woodlands are that the basis of the valuation will be the market basis, and that a valuation of the total asset (i.e. both the land and the growing crop) will be required.