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Institutional Guidance for WCC Registration

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1.   Introduction

The EAUC has developed this guidance for universities and colleges as a technical manual focused on establishing tree planting projects under the Woodland Carbon Code process in England. This guidance intends to brief higher and further education institutions on the key, high-level requirements and project phases of large-scale, multi-hectare woodland creation projects. For small-scale <0.5-hectare projects including projects merged with other institutions refer to the Woodland Carbon Code website.

This document is part of the Environment Agency funded NEIRF project – University and College Land for Carbon, delivered by the EAUC in partnership with MyCarbon, which aims to facilitate the establishment of woodland areas within higher and further education sector institutions for carbon credit generation and carbon sequestration. This guidance and all resources for the project were developed with a dedicated steering group made up of institutions and the Woodland Carbon Code. We thank the following institutions who have taken part in this project and helped shape the guidance:

- College of West Anglia
- Harper Adams University
- Royal Agricultural College
- South Devon College
- University of Cambridge
- University of Chester
- University of Leeds
- University of Leicester
- University of Southampton
- University of Warwick

The document outlines steps for project initiation, including ecological site assessment, financial modelling, engaging stakeholders, and governance structures. Within 5 phases, it highlights the importance of ecological understanding, environmental impact assessment, and community integration for effective project execution under the Woodland Carbon Code guidelines. Within this, there are two key stakeholders that must be considered: Forestry Commission and Woodland Carbon Code.

Forestry Commission
The Forestry Commission is a non-ministerial government department supported by agencies and public bodies. The Commission increases the value of woodlands to society and the environment. As well as providing a reliable source of timber, the Commission protects, expands, and promotes the sustainable management of woodlands.

Woodland Carbon Code
The Woodland Carbon Code (WCC) is the quality assurance standard for woodland creation projects in the UK, and generates high integrity, independently verified carbon units. Backed by the Government, the forest industry and carbon market experts, the Code provides woodland carbon units. The Code is supported by robust science from Forest Research, independent validation and verification and a transparent registry. It is currently the only UK carbon code to be endorsed by the international carbon reduction and offsetting alliance (ICROA). The Code allows organisations to reduce their net emissions, claim carbon neutrality (PAS 2060:2014) and assists with organisations routes to Net Zero by 2050 at the latest.

Currently the WCC is the only way of generating carbon credits through UK woodland creation. In general, the WCC can be viewed as a low-risk form of offsetting project due to its government backed nature. WCC credits cannot be used for international aviation, this includes supply chain emissions and international travel offsetting.

Universities and colleges can use the carbon credits created for their own offsetting needs as part of their net-zero journey or they can sell their carbon credits to other institutions through the EAUC's Carbon Coalition, this provides a market for universities and colleges to purchase carbon credits to meet their net-zero targets.

Disclaimers:

Where information is copied it has been taken directly from its source document and is referenced. This document is intended for use in England, however most the information, especially the WCC information, can be applied UK wide. This guidance is intended for effective project execution under the Woodland Carbon Code guidelines at the time of writing but please refer to the Woodland Carbon Code guidelines directly for any changes. EAUC or MyCarbon are not responsible for any decisions based on this guidance and institutions should make decisions based on their own requirements.

Figure 1 will enable institutions to decide if creating a woodland is appropriate and then proceed further with the guidance. Key phases of the process are outlined below in Figure 2.
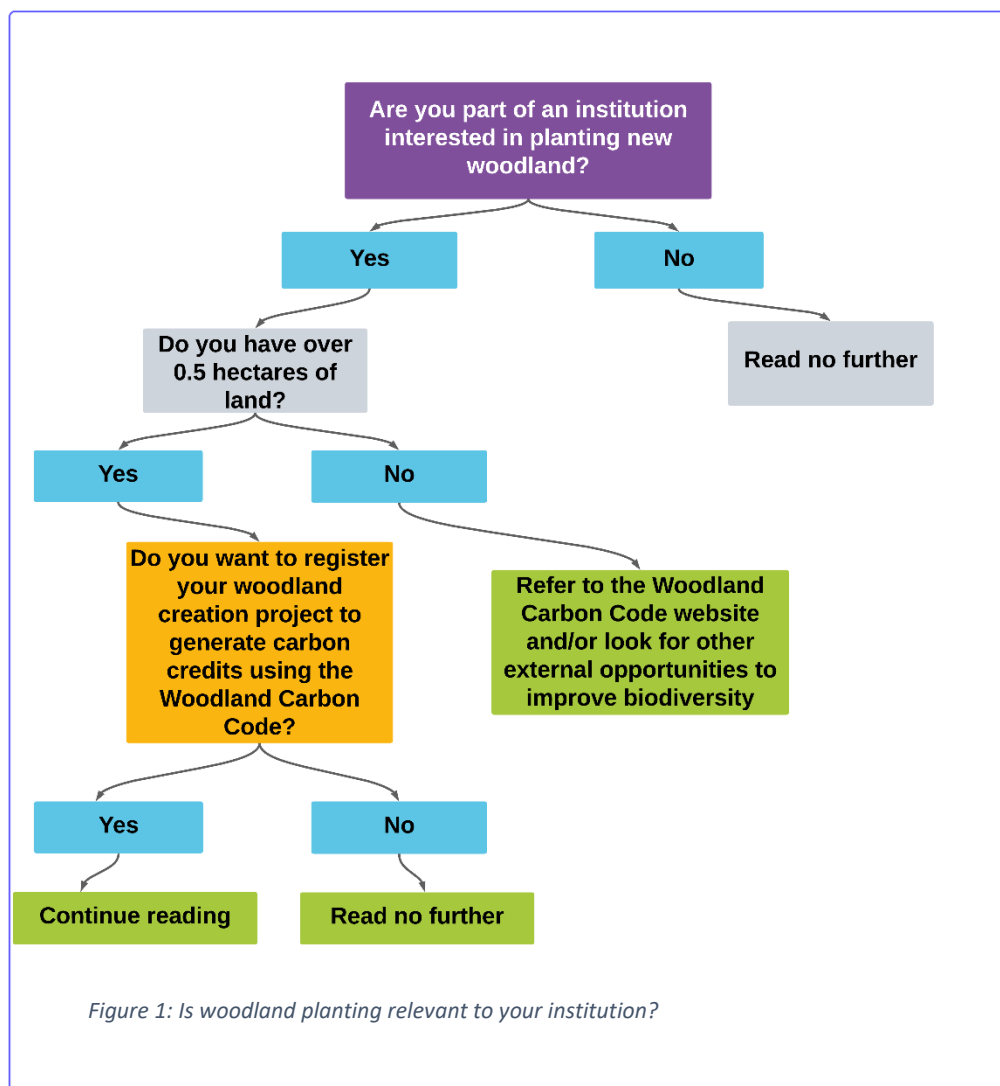

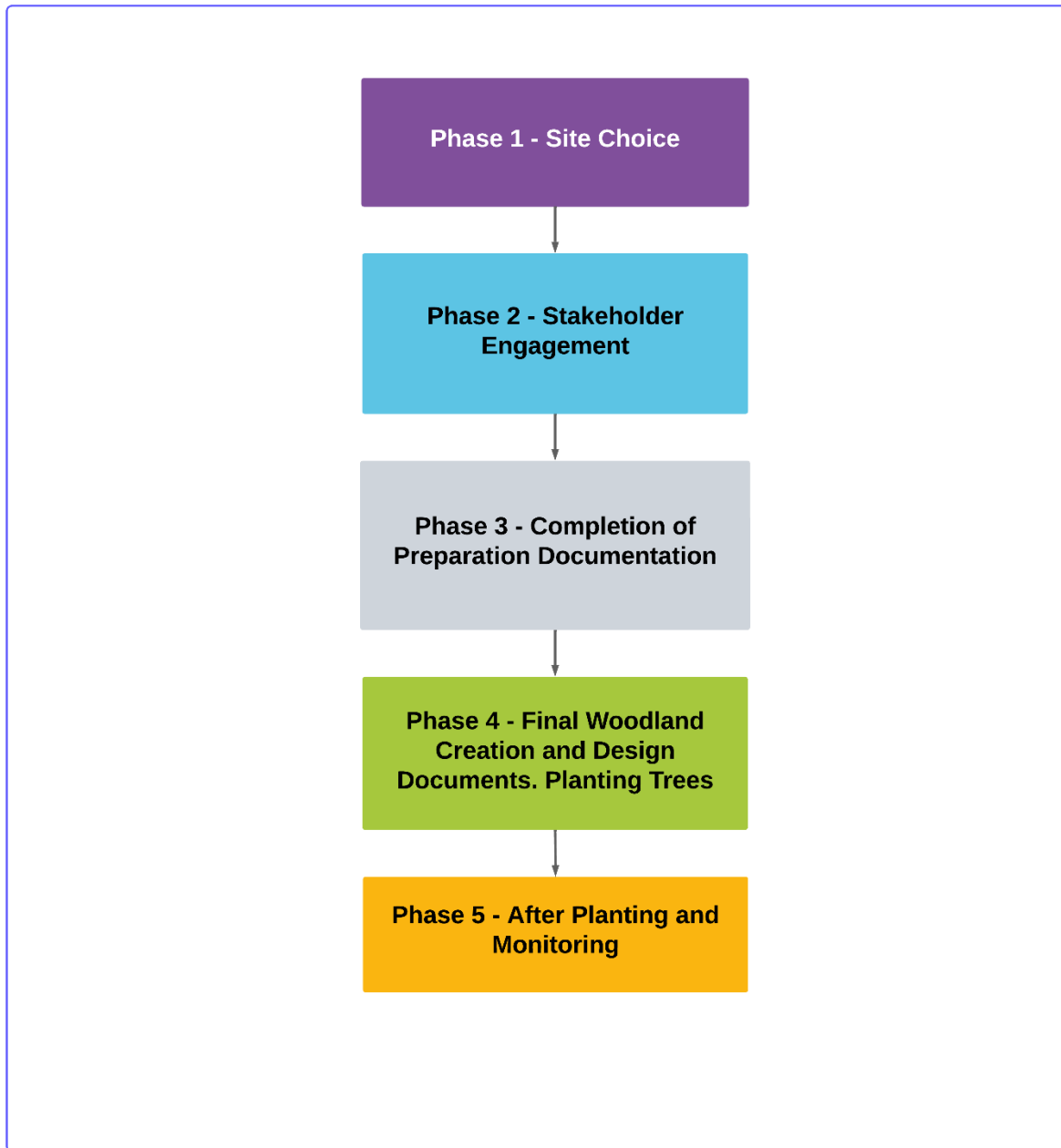*Figure 1: Is woodland planting relevant to your institution?*

Figure 2: Project Phases

2. Project Requirements

2.1 Project Requirements Checklist

Use the lists below as checklists to ensure you haven't missed any fundamental elements. Please note that there may be project specific planning requirements such as further drawings or site-specific ecology surveys not specified within these lists:

Task List:
- Funding and Grants Exploration
- Scoping Exercise
- Manage Objectives
- WCC Registration
- Stakeholder Engagement
- Woodland Benefit Tool
- UK Land Carbon Registry
- Additionally, check information listed in 3.10 of this document and list documents with the instructions from 3.10

Documentation List:
- Issues Log
- Scoping document - which captures all the scoping phase details
- The Landscape Context Plan
- Site Appraisal Plan
- Design Concept Plan
- Preliminary Ecological Appraisal
- Desk Survey
- Further Habitat Surveys (these vary)
- Design Concept Plan Stakeholder Responses Table
- Final Woodland Creation Design Plan
- Signed landowner commitment (project governance)
- Nominated group manager (project governance) and formal management structure between members
- Signed group agreement setting out terms (project governance)
- The landowner/project developer shall commit to the terms (project governance)
- Project Design Plan
- Management Plan
- Monitoring Plan

This document identifies consolidated practices and methods.

2.2 Further Requirements

Figure 3 below provides an overview of key project considerations, which should be factored in by the project manager before commencing on the project.
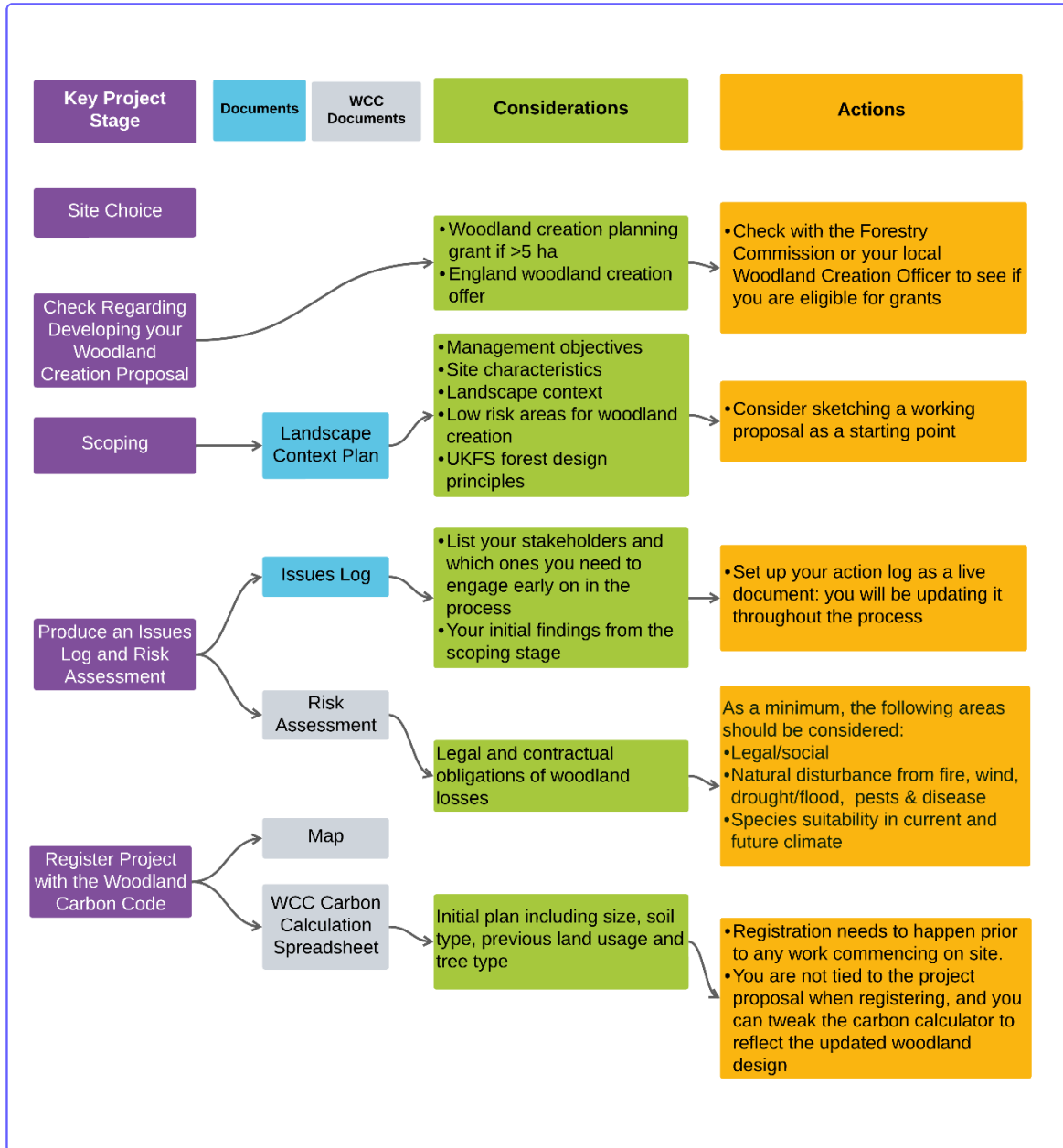
Figure 3: Overview of Key Considerations

3. Phase 1

3.1 Site Choice

The selection of the appropriate site for woodland creation is a foundational step. This involves:

- **Assessing the land:** Evaluate the suitability of the land for woodland creation. This includes considering soil types, existing vegetation, topography and climate.
- **Environmental and cultural factors:** Identify any environmental constraints or cultural heritage sites that might impact the design and management of the woodland.
- **Low-risk areas:** Use tools like the Forestry Commission Map Browser and Land Information Search to identify areas that are of low risk or sensitivity for woodland creation.
- **Assessing institution specific guidance:** Considering are there long-term plans for the land for other uses? Does the institution have existing long-term sustainability and net-zero goals?

The Forestry Commission provides regional woodland officers and field managers to offer expert advice throughout the regulatory process of establishing and maintaining your woodland. As well as research information and data on the specific land sites of each region in England. For more information on the forest service delivery areas of regional woodland officers, visit the [Forestry Commission Woodland Officers Boundaries England](#).

3.2 Funding and Grants

Contact your regional woodland officers for guidance in obtaining funding and grants, understanding eligibility criteria, application processes and assistance in shaping the design process on the [Forestry Commission Woodland Officer Boundaries England](#).

England Woodland Creation Offer (EWCO)

Institutions can apply for support to create new woodland in areas as small as one hectare if they are landowners, land managers, and public bodies. Financial support can be up to £10,200 per hectare, with additional contributions for public benefits potentially adding up to a further £8,000 per hectare.

Eligibility extends to owner occupiers, tenants, landlords, and licensors with full management control of the land. The scheme is competitive and based on a scoring system. Applicants must register with the Rural Payments Agency and then follow a step-by-step application process.

The application for a grant must include a woodland creation plan demonstrating compliance with the UK Forestry Standard (UKFS). This might include a 'stage 1' EIA application, which the Forestry Commission will use to provide a regulatory decision about the proposal.

Additional Contributions

These are one-off payments for woodlands that deliver specific public benefits such as nature recovery, flood risk reduction, water quality improvement, riparian buffers, proximity to settlements and recreational access.

Woodland Creation Planning Grant (WCPG)

Institutions can apply for funding to help cover the costs of producing a UK Forestry Standard (UKFS) compliant woodland creation design plan. WCPG is for **planning only** and does not provide approval to plant.

Applicants will go through two stages:

Stage 1: You can apply for £1,000 to complete the Woodland Creation Design Plan Template. This is a desk-based exercise to identify the constraints and opportunities that may affect the proposed planting.

Stage 2: You can get £150 per hectare, minus the £1,000 offered at stage 1, to complete stage 2 of the Woodland Creation Design Plan Template. You may get supplementary payments for specialist survey work if a need for them is identified at stage 1. If your application is under ten hectares in size, they will make a minimum payment of £500 for stage 2.

Woodland Carbon Code and Woodland Carbon Guarantee

Registration with the Woodland Carbon Code (WCC) is necessary to access private funding for Woodland Carbon Units. The Woodland Carbon Guarantee (WCaG) offers a financial incentive, providing an option to sell the carbon sequestration credits via government-backed auctions at a guaranteed price.

For more grants and funding, please refer to the Grants and Funding Support as part of the Universities and Colleges Land for Carbon resources and also refer to the Community Forests website for additional support and funding information.

3.3   Scoping

Scoping is a preparatory phase where you gather initial information about your site. It ensures that all critical aspects are considered before moving forward with more detailed planning and implementation. This stage is not only about gathering information but also about laying the groundwork for a project that is environmentally sustainable, socially responsible, and aligned with the broader goals of land management and carbon sequestration.

The Forestry Commission Advice

Appendix 1 (Commission, A guide to planning new woodland in England, 2021) explains the general mapping standards for woodland creation proposals, and what to show on the maps and plans in your in your woodland creation plan. In particular, it describes and provides examples of three fundamental spatial plans in your woodland creation plan: the landscape context plan, site appraisal plan and design concept plan. It is also sometimes necessary to produce additional outputs to support these as part of your plan. For example, annotated photographs, illustration of cross-sections, and drawings or digital renders of the new woodland from different perspectives can be useful for further illustrating important parts of your analysis and design. Using them to support your site appraisal plan and design concept plan is good practice, particularly for large-scale, complex or sensitive sites. You can see examples of these types of additional outputs in Appendix 2.

For scoping, you will need to provide information about your site. The degree of detail you provide will depend on the landscape context of the proposed woodland. Producing a

landscape context plan, a map showing the wider context of the site and highlighting relevant landscape and visual characteristics and site features, will assist with scoping the proposal (see an example in Appendix 1).

Identify your stakeholders and analyse their potential concerns in an issue log:

- Depending on the scale and sensitivity of your woodland creation project, you will need to engage the local community (for example, through a parish council) and neighbours to seek their views.
- You may also need to engage with public bodies, especially if there are designated landscapes or protected sites or features on or near your proposed site. If you think your project could impact on neighbours or other stakeholders, engage with them at an early stage and tailor your conversation to the audience, to make the best use of your time and the information they can provide to you. This might bring to light important and useful new information about the site that will help you improve the design of your proposal. It is also likely to make the later stages of the planning and design process easier, especially if you decide that consent is required under EIA Regulations.

Application of seven design principles:

Applying the seven UKFS forest design principles will help you design your new woodland well. It is helpful to become familiar with these and think about them at the survey stage – when you are getting to know the characteristics of your site. Having these principles as a framework for your scoping, analysis and synthesis of site information will help you to produce a UKFS-compliant and well-considered woodland creation design more easily.

1. **Spirit of Place**
   What makes a place locally distinctive? Spirit of place describes the combination of unique, distinctive and cherished aspects of a place that might be intangible. It is important to identify what makes a place special or unique early in the design process, and to consider how your proposal can conserve these qualities, rather than detract from them.

2. **Unity**
   How the woodland fits and functions in the landscape? Unity is achieved when all parts of your design contribute harmoniously to the whole, and the elements fit and function well together. It is about ensuring the new woodland integrates with the surrounding landscape, fitting in with the defining local character in a balanced and positive way – looking as though it belongs in the landscape. Woodland creation design needs to respond to the prevailing shapes and patterns in the landscape to achieve unity and visual integration.

3. **Scale**
   The relative size of the woodland and its components. Scale is an important visual factor in fitting new woodland into the landscape. The scale of the proposed woodland should reflect the scale of the surrounding landscape. For example, hilltops and higher slopes with open views present a much larger scale of landscape than the intimacy of restricted views on lower slopes, in valleys and close to settlements. Smaller scale elements are better located in valley bottoms and along woodland edges. Scale also

applies to the elements within the woodland, such as species compartments and open space.

4. **Shape**
   Shape is a powerful factor that has a major influence on how woodland can be designed to fit and enhance the landscape by using shapes that integrate well into the existing landscape. This principle applies to shapes experienced by the viewer both at a landscape scale and at the detail scale, including edge character and planting layouts. Public preference studies show that shape is one of the most important aspects of a forest and woodland design, with organic, naturalistic shapes being significantly preferred over geometric shapes.

5. **Diversity**
   Diversity refers to the number and variety of elements in a design. This is an important factor in woodland creation design. Public preference research shows that diverse landscapes are usually more visually and perceptually appealing places, rich in biodiversity, and are often not only more interesting to look at, but rich in the sound of birdsong, for example. A landscape character appraisal will help identify the existing degree of diversity. Diversity has many benefits for forest and woodland habitats. It also provides resilience in the face of climate change. Diverse and graded woodland edges, together with species mixes, will create visual and ecological diversity. Other landscape elements such as water, wetland, rocky outcrops and open spaces contribute to woodland diversity should be emphasised.

6. **Landform**
   Landform, or topography, is the is the dominant landscape influence on woodland creation design in upland areas with steep topography. This type of proposal may need to respond to the visual forces flowing down the main spurs and ridges and up the hollows and valleys, in order to assist with landscape integration. Natural forests and other vegetation patterns tend to reflect the underlying landform – for example, upper treelines are lower on exposed ridges and higher in sheltered valleys. These patterns should be integrated with new woodland.

7. **Pattern of Enclosure**
   Pattern of enclosure has historic and cultural value and is a cherished and distinctive characteristic in the English countryside. The field pattern, hedges, walls and tree lines define field boundaries in most of the lowlands and upland fringes. Often, the influence of enclosure patterns and landform blend together but sometimes the pattern of enclosure may be the dominant influence on design, rather than landform. This is often the case in lowland areas. In these circumstances, tree planting can reinforce the pattern, especially where hedges and trees have been lost. The layout and proportion of new woodland can be designed to reflect and add to the established pattern.

3.4 Issues Log

An issues log is a dynamic document used throughout the woodland creation process:

- **Recording Concerns:** It tracks concerns, potential problems, or challenges identified during surveys, stakeholder engagement, or any other phase of the planning process.
- **Action Planning:** The log helps in planning actions to address these issues, ensuring they are resolved or mitigated as the project progresses.

The Forestry Commission (Commission, A guide to planning new woodland in England, 2021) creates an issue log. The scoping stage is a good time to set up an issues log – a record of positive or negative considerations and actions taken or mitigations proposed during the planning and design process. We recommend that you start it as early as possible, to provide a record of your journey to develop a woodland creation proposal. The log should be a working document that is updated as issues are found and addressed. It should be proportionate to the scale and sensitivity of your proposal. See (Commission, A guide to planning new woodland in England, 2021) Appendix 3 for an example of what an issues log may look like.

The issues log can provide a basis for stakeholder engagement and discussions with your FC Woodland Officer (and agent or woodland creation advisor, if you have one) on the appropriate next steps. A list of Woodland Officers and their geographical boundaries can be found [here](). Recording what has been considered and reviewed can help you answer stakeholder questions, reducing the need for more correspondence later. It will also help you move through the EIA process, UKFS compliance assessment and the grant approval process.

3.5 Eligibility

- The project must register with the WCC before site work begins
- The project must be validated within 3 years of registration
- Validation statements can only be issued after planting is complete
- The project must have a clearly defined duration does not exceed 100 years.
  - 40 years is common for conifer projects
  - 65-75 years is common for native woodland species
- After the defined project timeline, the wooded area will be permanently classed as woodland by UK law so any change of use for this land will not be possible without permission by the local governing body
- All projects must comply with UK law
- All projects must comply with the UK Forestry Standard
- If the project is felled, only one third of the carbon credits can be claimed in this instance
- This rule will be assessed as part of the financial modelling to understand any potential to mitigate the reduced claim
- Sequestration rate models are currently available to estimate carbon credit volumes over the project lifetime. The project business plan and framework documents will align with these models but alternative scenarios may be proposed based on project learnings.

3.6 Eligible Activities, Soil and Land Use

The project must be developed on mineral or organomineral soils and not on soils with peat depth over 50cm in Wales, Scotland and Northern Ireland or over 30cm in England. You will need to conduct stakeholder discussions to assess whether additional requirements will be proposed in regards to peat depths with the potential of full exclusion of planting in peat rich environments.

- Local forestry commissions can provide soil maps and ESC tools to support the soil analysis
- Projects must be deployed on land that has not been under tree cover for at least 25 years

- New woodland can be established by planting, direct seeding or natural regeneration
- New Woodland must meet the definition of woodland set out by the National Forest Inventory: a minimum area of 0.5 hectares and a minimum width of 20 meters
- A soil carbon survey may be required to understand what soil is present on the project land:
  - If soil is peaty a peat depth survey is required to confirm a layer of no more than 50cm
  - Mineral and organomineral soils are acceptable for WCC projects
  - A variety of methods are available for assessing soil type under WCC guidance.

It is advised that plants come from Plant Healthy certified nurseries to ensure suitable biosecurity measures have been taken.

3.7 Eligible Land, Ownership

- Legal ownership or tenure of the project area must be proven
- For tenanted land, both the owner and tenant must commit to the WCC
- Suitable methods for proving ownership include:
  - Land registries
  - Solicitors letter
  - Title deeds
  - Certified lease copy

3.8 Introduction to Compliance with UK Law

All projects must comply with UK law, with compliance being check at validation and every verification. The verification/validation body will check for evidence of non-compliant legal practices. The verification/validation body will check that regulatory authorities and other interested parties have not raised issues of non-compliance.

3.9 Conformance with UK Forestry Standard

The project shall conform with the UK Forestry Standard including elements of sustainable forest management:

- Climate change
- Soil
- Water
- Biodiversity
- Landscape
- Historic environment
- People

Conformance will be checked at validation and verification by WCC. This check is not a full conformance audit, instead it will check for non-compliance with the UK Forestry Standard.

3.10 Additionality

Additionality is an important term used in carbon projects as it describes carbon sequestration/avoidances that happen in addition to what would have happened in the absence of the carbon project.

This is important for those purchasing carbon credits because they need to understand that the money they have spent has directly incentivised the initial project development and therefore the subsequent carbon sequestration.

Projects must pass a legal and an investment test to prove additionality.

- The WCC cashflow spreadsheet is used to demonstrate compliance against the investment test
- Incomes sources must be declared in the project design document
- Additionality is checked during the validation stage only
- The legal test reviews whether there is a legal requirement for the tree's to be planted. Additionality can only exist when woodland creation does not have a legal requirement e.g. as the result of a planning condition.
- The investment test assesses whether over the project duration, without carbon finance, woodland creation is either not the most economically or financially attractive option for the area of land or not economically or financially viable on that land at all.
- The investment test assesses whether the income generated by the sales of carbon credits from the project was required to justify whether the project was financially viable or not.
- It is possible to 'bundle' or 'stack' ecosystem service credits/units in woodland projects.
- Bundled Credits/Units: Currently, the wider benefits of woodland creation are 'bundled' with the carbon unit when they are sold with the Woodland Carbon Code.
- Stacked Credits/Units: In the future, it may be possible to 'stack' voluntary credits/units generated from a woodland creation project.

3.11 Permanence

20% of the carbon credits will be held within a WCC buffer stock. Essentially the buffer stock account held in the UK Land Carbon Registry safeguards the investments made by carbon buyers and maintains and protects the integrity of verified Woodland Carbon Units. Full requirements can be found in the further reading section of this document.

3.12 Potential Barriers

Be aware that as with any project and its project management there are potential barriers and that barriers are project specific. Here are some common barriers that we have identified:

- Land size, meet the definition of a woodland. The National Forest Inventory sets this out as a minimum area of 0.5 hectares and a minimum width of 20 meters. Consider minimum thresholders that apply to grants if you are applying for a grant.
- Heritage, landscape and ecology barriers for example neighbours may want to retain their views therefore plan gaps in the new woodland. Further examples are presence

of invasive plants, protected species and their habitats which will require further professional surveys and management.

- Stakeholders e.g. reliance on volunteers or hired tree planters and their commitment to tree planting. Also, be aware that individual institution projects are planned to be grouped together to establish a larger project.
- Availability of tree saplings. To avoid risk plan ahead and order saplings from a nursery well in advance.
- Inclement in weather during planned tree planting period such as the ground being frozen and too hard to dig in winter. Allow contingency in project management plan.
- Internal institution discussion with governors, committees and property services needed to approve the land use change.
- Understanding the obligations and commitments in order to manage the risk associated with the project and its on-going costs.
- High staff turnover at institutions can make it difficult to sign-off the project's long-term viability.
- Not properly fitting in the project to the institutions net-zero plan. This would be a missed opportunity.

3.13 Manage Objectives

Within Forestry Commission guides (Commission, A guide to planning new woodland in England, 2021) be clear about the short and long-term objectives for your woodland as this will inform the rest of the process. You might have multiple objectives for the same woodland, for example, commercial timber production, biodiversity gain, public recreation, natural flood management or business diversification. They will reflect the nature and characteristics of the site and will inform the type of woodland that is created. Your information gathering informs these objectives. The UKFS General Forestry Practice section explains how to develop management objectives.

Information Gathering

- **Site Characteristics:** Understand the physical and ecological aspects of the site. This includes the soil type, climate, existing vegetation, topography, water resources, and any existing wildlife habitats. Each of these elements influences the type of woodland that can be established and the species that can be planted.
- **Historical and Cultural Context:** Assess any historical or cultural significance of the land. This might include the presence of archaeological sites, historical landmarks, or areas of cultural importance.
- **Existing Land Use:** Determine the current use of the land and how a change to woodland might impact this use. For instance, if the land is currently used for agriculture, converting it to woodland can have economic, social, and environmental implications.

Setting Objectives:

- **Defining Goals:** Clearly articulate what you want to achieve with the woodland. Objectives may include carbon sequestration, biodiversity enhancement, recreational use, or a combination of these.

- **Long-Term Vision:** Consider the long-term goals for the woodland. This involves thinking about how the woodland will evolve over decades and what ecological, social, and economic roles it might play.

Environmental Impact Consideration:

- **Preliminary Ecological Assessment:** Conduct an initial evaluation of the potential environmental impacts of the woodland creation. This might include impacts on local wildlife, water resources and the broader ecosystem.
- **Required Surveys:** Determine if more detailed environmental surveys are necessary. These surveys can provide a deeper understanding of the site's ecological value and potential constraints.

Documentation and Planning:

- **Scoping Document:** Create a comprehensive document that summarises all the findings from the scoping phase. This document should include a detailed description of the site, the proposed objectives for the woodland, the results of stakeholder engagement, and any identified environmental considerations.
- **Issues Log:** Start an issues log during the scoping phase to record any potential problems or challenges and how these might be addressed in subsequent planning stages.

Documents and Landscape Context Plan:

- Landscape Context Plan – a map showing and analysing the context of the site within the wider landscape.
- Issues Log
- Risk Assessment

3.14 WCC Stakeholder Identification

Identifying Stakeholders: Determine and list who will be affected by or have an interest in the woodland creation project. This group can include local residents, environmental organisations, local authorities, and potential users of the woodland.

3.15 WCC Registration

Registering your woodland creation project with the Woodland Carbon Code involves several key steps:

- **Initial Registration:** Projects should be registered on the UK Land Carbon Registry before onsite work begins. This includes setting up an account and deciding between the 'Standard' or 'Small Project Process'.
- **Project Types:** Understand and choose the appropriate project type – standard or small – based on the size and scope of your woodland creation project.
- If you need to contact key WCC personnel at this stage visit the WCC contacts page.
- Contact a WCC project developer to assist with registration, verification and monitoring procedures under the WCC. Visit the Woodland Carbon Code Project Developers for contacts.

Registration Process:

1. **Setting Up an Account:** Project developers or landowners must create an account on the UK Land Carbon Registry.
2. **Adding Projects:** Once the account is set up, they can add their project(s) to their account.
3. **Project Classification:** Applicants need to decide whether to use the 'Standard' or 'Small Project Process'.
4. **Individual or Group Scheme:** Projects can be registered alone or as part of a group scheme.
5. **Registration Fee:** Registration on the UK Land Carbon Registry is free.

Criteria for 'Standard' Projects:

- **Project Size:** There's no specific limit on the size of a 'Standard' project.
- Woodland Blocks: Woodland blocks should either be part of a contiguous land ownership unit or under the same ownership, manager, and management plan.
- **Canopy Cover:** The new woodland should have the potential to achieve at least 20% canopy cover, with specific planting requirements of at least 400 stems per hectare or maximum 5 meters spacing over the net project area.
- **Establishment Methods:** Woodlands can be established through planting, direct seeding, or natural colonisation/regeneration.

Criteria for 'Small' Projects:

- **Project Size:** 'Small' projects have a net planting area of five hectares or less.

Streamlined Requirements:

- Optional streamlined processes include a simplified carbon calculator.
- Default assumptions are made for some sections of the requirements (e.g. baseline and leakage).
- A less intensive 'Small Project Monitoring Protocol' is used from Year 15 if the small project calculator is utilised.

Differences: The WCC standard and guidance outline where requirements differ for projects using the 'Small Project Process'.

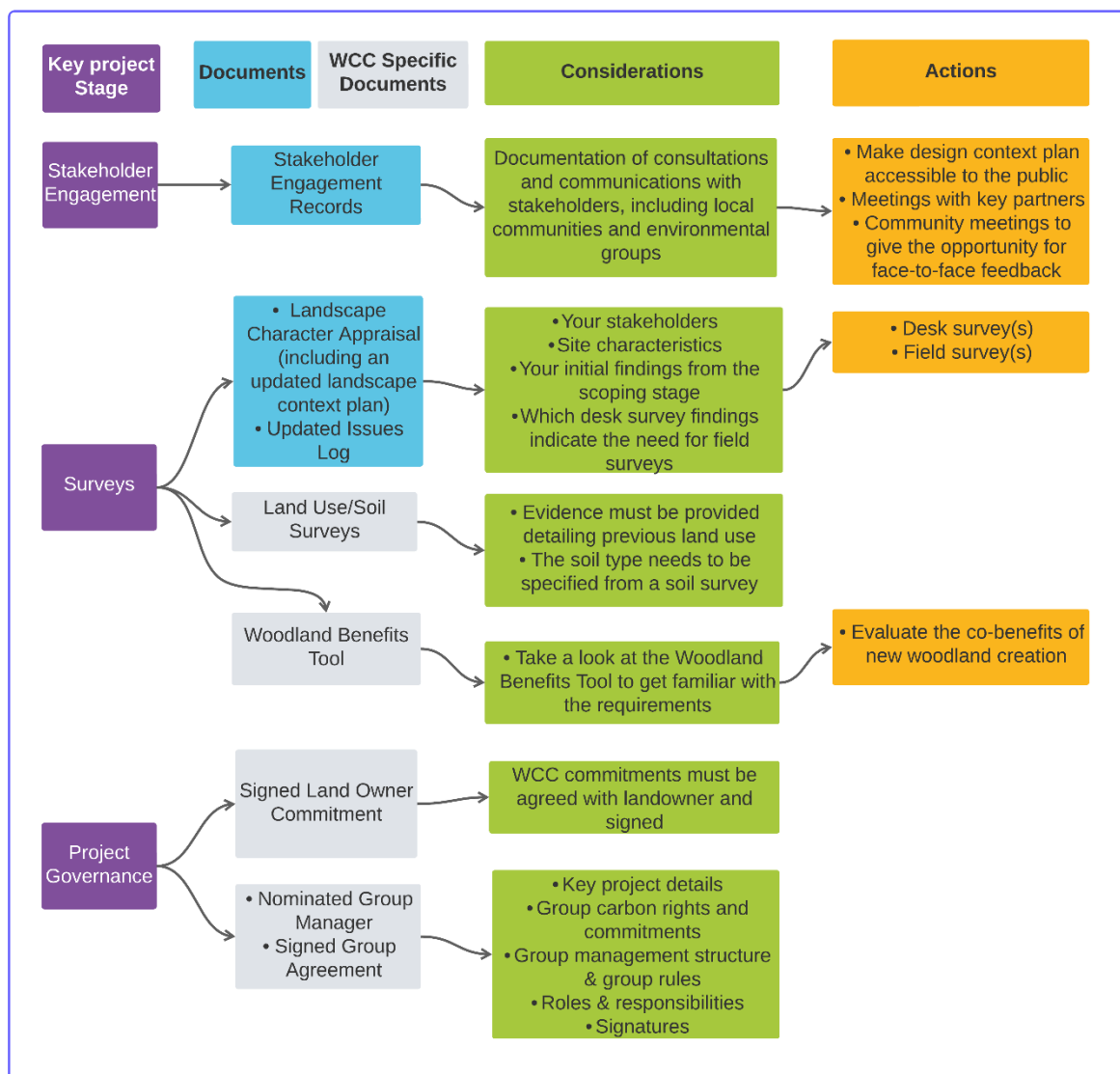For documents required at the point of registration see Figure 4.

Figure 4: Streamlined Requirements at Project Stage

4. Phase 2

4.1 Stakeholder Engagement

The Design Concept Plan map (Commission, Practice Guide, Design techniques for forest management planning, 2014). This is shaped by the Site Appraisal Plan with an annotated map showing one or more options for the design of the woodland, as a tool to support stakeholder engagement and consultation. Scale 1:5,000 – 1:10,000, or smaller scale if required to illustrate detail sufficiently (Commission, Practice Guide, Design techniques for forest management planning, 2014). There are other examples of Phase 2 maps listed here.

Elements of the plan:

- **Identifying Stakeholders:** Determine who will be affected by or have an interest in the woodland creation project. This group can include local residents, environmental organisations, local authorities, and potential users of the woodland.
- **Engagement Strategy:** Develop a plan for engaging with the identified stakeholders. This could involve public consultations, meetings with local community groups, or working with environmental experts.
- **Incorporating Feedback:** Use the stakeholder engagement process to gather input and address concerns. This feedback can be crucial in shaping the project to ensure it meets both your objectives and the needs or expectations of the wider community.

Use:

The Design Concept Plan should be sent to all stakeholders noted in the identification process as well as all other stakeholders who have input into the survey stage. Record recipients and their responses in a table, example given below. All stakeholder engagement communication from this stage and from the survey stage must be attached to the Woodland Creation plan as an appendix (The recommended format is Appendix 4a, 4b, 4c, e.g. where each sub appendix relates to all of the engagement with an individual stakeholder). Holding a stakeholder meeting can be a more effective method than having of one-to-one meetings.

Table 1: Stakeholder Engagement Table Layout

Organisation/ individual	Date contacted	Response	Mitigation agreed / action required	Appendix no.

The Forestry Commission (Commission, Practice Guide, Design techniques for forest management planning, 2014) have set out documents required for the Landscape

Character Appraisal:

The landscape and visual survey and analysis needs to be expressed in the form of annotated spatial plans and photographs. This will inform the shape of the woodland design by integrating the site, landscape context with the project objectives. The UKFS Factors of Landscape context (Landscape charter, Landscape and visual sensitive and Historic context and Designed landscapes) and Forest design principles (spirit of place (local distinctiveness), unity (landscape fit), shape, landform, pattern of enclosure, scale and diversity) will help inform the appraisal (page 103 of the UKFS). Your Forestry Commission officer can provide examples.

You should undertake a landscape survey and appraisal to include assessment of the following:

- Landscape and Visual context including photographs
- Landscape and other relevant designations
- Viewpoints and views from within and outside planned woodland
- Elements of landscape and visual diversity
- Visual detractors and zones of high landscape and visual sensitivity
- Identify watercourses, infrastructure supply catchments
- All characteristics that make the place distinctive and contribute to landscape fit

4.2 Surveys

The Forestry Commission's Design Techniques (Commission, A guide to planning new woodland in England, 2021) include survey stage requirements. These are set out below.

During the survey stage, you should collate and assess information on the site's characteristics and landscape context, which will determine whether any follow-up surveys are needed to help develop your plan. Early engagement with the FC is recommended to help provide guidance on the main types and level of information that you need to consider for your site.

- A desk survey of existing data sources (Commission, A guide to planning new woodland in England, 2021) section 2.3.1.
- One or more site surveys (Commission, A guide to planning new woodland in England, 2021) section 2.3.2.
- Desk survey – assessing site characteristics, (Commission, A guide to planning new woodland in England, 2021) section 2.3.1.

There are many sources of information that can provide evidence on the land in your proposal. The first check to make is whether the land is partly or wholly identified as protected under international, national or local designations. You can search for protected areas in England using Forestry Commission's map browser and Land Information Search.

You can also search for land designations on Defra's interactive MAGIC Map Application. (Commission, A guide to planning new woodland in England, 2021) Appendix 4 lists further data sources by category and (Commission, A guide to planning new woodland in England, 2021) Appendix 5 provides links and further detail on some of these sources. The desk survey should consider the following site characteristics and establish whether further survey work is needed.

Site Characteristics: Landscape

- Begin by reading Section 6.4 of the UKFS to understand more about the requirements and guidelines on landscape context and forest design principles (see Section 2.5 of (Commission, A guide to planning new woodland in England, 2021)). These will help you consider how the site's landscape context and characteristics will shape your proposal.

- Consider the landscape in which your project sits by reviewing the relevant Landscape Character Assessment and National Character Area (NCA) profile, and finding out if there are any other designations such as Areas of Outstanding Natural Beauty (AONB), National Parks, World Heritage Sites, Sites of Special Scientific Interest (SSSI) or priority habitats on, or adjacent, to the site.

- You will need to choose appropriate species, forest structure and size to ensure that the new woodland will fit into its landscape. Woodlands and forests should be holistically designed with an approach that integrates management objectives with all features present on the site, as well as the context of the site within the wider landscape. Opportunities should be explored to enhance all existing features and avoid damage (Commission, A guide to planning new woodland in England, 2021).

Site characteristics: Physical Information

- Get to know your site by assessing the soils, prevailing climate, aspect and altitude. National soil maps are available from the Magic Map and UK Soil Observatory digital platforms. However, national scale maps often do not represent the variability across a site nor the detailed characteristics of the soils, so it is strongly recommended that you carry out or commission a soil survey to help identify appropriate species and establishment methods (for example ground preparation and weed control). This more detailed information can be used with Forest Research's Ecological Site Classification Decision Support System5 (ESC) to help inform these decisions.

- Your ground preparation method(s) must be based on soil type and individual site requirements. Ground disturbance must be kept to the minimum required to ensure successful establishment and must avoid the unnecessary release of soil carbon.

- The environmental impacts of your proposal, from establishment (including your chosen ground preparation method(s)) to subsequent forest operations (including harvesting), must be considered during the planning and design process. Read the FC's Operations note 53 on cultivation and UKFS compliance for application in England. (Commission, A guide to planning new woodland in England, 2021)

Site Characteristics: Vulnerability to The Impacts of Climate Change

- Consider the pressures of climate change and read advice on Managing England's woodlands in a climate emergency.

- You should access up-to-date information on climate projections for your area and consider how this will affect the suitability of the species you propose to plant.

- The ESC tool includes climate projections which will help inform you decisions. It may also be helpful to use the FC's Climate Matching Tool to understand which locations currently experience a climate that is consistent with future climate projections for your site.

- You should also consider that woodland which is diverse in species and age will be more resilient to climate change and extreme weather events (Commission, A guide to planning new woodland in England, 2021).

Site Characteristics: Threats to Your New Woodland

- Young trees can be outcompeted by vegetation or browsed out by deer, livestock, rabbits, hares and voles. Think about which browsing animals are already present on-site and which ones might be attracted to your new woodland. You must consider appropriate protection, such as fencing, at the planning stage to protect the newly established trees. Although effective in many situations, tree shelters may not be the most appropriate, effective or sustainable option and their use is optional within grant schemes. Your plan should address the use of plastics and show why the chosen type of tree protection and weed control is necessary or culturally beneficial. If you do intend to use tree shelters, be clear how and when they will be removed and disposed of or recycled, in compliance with waste disposal regulations. You can find more information in the FC guidance on the use of tree shelters and guards. Read further guidance on Tree protection: The use of tree shelters and guards.

- Deer can quickly occupy new woodlands and many sites are likely to need deer management from an early stage. Further specific guidance is available, or you can contact one of the FC's Regional Deer Officers.

- If you are planting (or encouraging natural colonisation of) species that are susceptible to grey squirrel damage, consider at this planning stage how you will manage this threat to your new woodland. You will also need to consider the susceptibility of your proposed species to pests and diseases. Information on the Forest Research website will help you understand the risks presented by pests and diseases, including maps of current distribution.

- When selecting species and provenance/origin for your new woodland, you should consider where you source your planting stock from, recognising the biosecurity risks of importing plants. Where possible, get your plants from nurseries with clear plant health management standards in place (including, for example, nurseries with Plant Healthy certification or similar) (Commission, A guide to planning new woodland in England, 2021). Specific provenance guidance is available at Forest Research, the table should be used to determine which trees are suitable for your woodland.

Site Characteristics: Historic Environment

- Check if there are Scheduled Monuments, World Heritage Sites, Registered Parks and Gardens, Registered Battlefields, Listed Buildings or Conservation Areas on or near your site, because they have legal protection.

- You will also need to consider features recorded on the Historic Environment Record (HER) and assess if they will be adversely affected by woodland creation (Commission, A guide to planning new woodland in England, 2021).

Site Characteristics: Access and Terrain

- Think about how the site will be accessed for establishment operations and for future forest operations such as maintenance, felling, timber extraction and haulage. Planning for access in the event of a wildfire or an emergency is also important. The slope, ground conditions and roughness of the terrain will influence options for machinery and haulage access. When planning access, consider what tracks, rides and forest roads will be required now and in the long-term.

- Forest roads may require EIA screening, depending on length and sensitivity. Also consider where materials, planting stock, equipment and machinery will be stored and maintained safely. Access to the site from a public road might be restricted – you can check if there is a local Agreed Routes Map maintained by the Timber Transport Forum.

- All woodland creation applications greater than 10 hectares will require the FC to undertake formal consultation with the Local Planning Authority, who may require evidence of planned and forecast haulage operations depending on the scale and nature of the woodland creation project. Any public rights of way, or land that has open access under the Countryside Rights of Way Act 2000, must be kept open unless in place to restrict or exclude access. Consider how existing access could be improved, or new access provided for the public to enjoy, if that is one of your management objectives. If so, consider the terrain and how you will meet minimum access standards (Commission, A guide to planning new woodland in England, 2021).

Site Characteristics: Biodiversity

- The existing value of the site for wildlife must be fully understood. A number of habitats and species are protected under the Natural Environment and Rural Communities (NERC) Act 2006. Whilst historic losses and habitat fragmentation have rendered such habitats a scarce resource, the best examples of these habitats and areas that are most important in sustaining populations of key species are protected by the designation of a suite of protected areas: RAMSAR sites, Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs), Local Nature Reserves (LNRs) and National Nature Reserves (NNRs).

- You will need to find out if there are protected species, habitats or areas on or adjacent to your site and assess if they will be adversely affected by woodland creation. The presence of peat and associated hydrological systems should also be identified. If any part of the site is located on peaty soils as defined by the Natural England peat map (available on the Forestry Commission's map browser and Land Information Search) or as directed by your Woodland Officer, this has implications for site survey and you will need to follow the Decision support framework for peatland protection and the establishment of new woodland (interim) June 2021.

- If there is evidence (data or survey results) that your site supports important habitats or species, your site is likely to require survey to fully understand its ecological value. This must be carried out by appropriately qualified professionals at the appropriate times of the year, so factor this into your schedule for starting work. FC Operations Note 4312 provides further information and consideration of priority non-woodland habitats when planning new woodland. The FC Field Guide Priority Open Habitats and Woodland Creation will help you to identify any existing priority open habitat on the site and provides further information on undertaking surveys. Contact your local FC Woodland Officer early to discuss the need for surveys if you are in any doubt (Commission, A guide to planning new woodland in England, 2021).

- In the context of UK woodlands and the Woodland Carbon Code, the significance of biodiversity cannot be overstated. Biodiversity Net Gain represents a pivotal enhancement within the environmental sector, enhancing biodiversity beyond conservation efforts. As woodlands are essential ecosystems, integrating biodiversity net-gain principles into woodland management practices not only ensures the preservation of existing habitats but also fosters the creation of new ones. This approach holds promising potential for the expansion and diversification of habitats, offering opportunities to enrich the woodland mosaic across the UK. By prioritizing biodiversity alongside carbon sequestration, stakeholders can effectively mitigate habitat loss, promote species resilience, and cultivate thriving ecosystems for generations to come. At the time of writing this there is currently no formal overlap or relationship between the WCC and Biodiversity Net Gain. However, a Biodiversity Net Gain survey/report may be necessary to meet planning requirements at your location, check this on your local planning portal.

Site Characteristics: Water

- Water quality, flood resilience and water availability must all be considered when planning a new woodland, as the impact of establishment and management operations on private water supplies.

- Water quality can be maintained or enhanced through good woodland design and subsequent management, and the identification and management of buffer areas. These areas, which will include the riparian zones next to watercourses, are set aside to help buffer any potentially adverse effects from adjacent land management, including commercial forestry. The aim of buffer areas is to establish and maintain a partial cover of riparian woodland comprising species native to the location and soils.

- You must always consult the Environment Agency if you propose to create woodland within eight metres of a main river or flood defences and must obtain the necessary consents. In areas prone to flooding, woodland creation in relevant upstream water catchments should be considered as a way of mitigating flood risk and improving flood resilience.

- Where new large woodlands are proposed, the sensitivity of downstream water bodies and wetlands to a reduction in water quantity should be considered. If there are sensitive waterbodies downstream that may be affected by your woodland creation or management actions, advice should be sought from the Lead Local Flood Authority and Natural England.

- You must identify whether the site is in an acid vulnerable catchment, in which case you will need to follow the steps set out in the [FC Practice Guide on managing forests in acid sensitive water catchments](#). If you are designing a large scheme (generally taken as moracid-vulnerableres) in a catchment at less than good quantitative status, you should consider impacts on water availability. Although trees tend to use more water than some other vegetation types, this varies with forest type and tree species; in some situations, woodland water use, particularly for broadleaved species, may be less than other land covers.

- You should include the Environment Agency amongst your stakeholders in this instance and ask them to consider whether your proposal will have an adverse effect on water availability in the area.

- Operations associated with establishing and subsequent management of the woodland could affect both the quality and quantity of water draining from the site. This may have impacts for statutorily protected rivers systems (SACs and SSSIs). The potential for negative impacts due to increased sediment discharge need to be properly considered. See the [FC Practice Guide on Managing Forest Operations to Protect the Water Environment](#) for more information (Commission, A guide to planning new woodland in England, 2021).

Summary of Survey Requirements

Table 2 below aids the design and project management process:

Table 2: Site Characteristics Summary

Information Class	Information type required / features present	Survey
Biodiversity		
Landscape and visual		Landscape and Character
Historic Environment		
Water		
Stakeholder Interest (not covered elsewhere, e.g., access)		
Protection required	Presence / level of deer or other browsing mammals	
Silviculture / soil / climate change		
Other (e.g., legal)		

Site Characteristics: Other

Utility infrastructure (such as water, gas and electricity) might be present and might impact on the design and subsequent management of your new woodland. Other characteristics that could influence your design and management include other waives, access rights (and any others, such as sporting rights).

Site Survey:

Site survey: are there any sensitive, site-specific issues that may require extra consideration?

- If there are any designations, protected sites or features, indications of peat, priority habitats or species present, historic environment features, or sensitive landscape or visual characteristics that are likely to influence the design of your woodland creation proposal, additional information is likely to be required. In such cases, your FC Woodland Officer will be able to advise you on how early you should begin discussions with relevant statutory bodies or environmental records centres that have an interest on the site, or on land that is adjacent to it. Key sources of data and information are listed in Appendices 3 and 4. Keep a record of the source and date of your surveys or searches and where the data is kept, for future reference.

- Surveys may be needed for features such as priority habitats, priority species, peat depth, deer and other herbivore presence and potential impact, historic environment surveys and landscape character appraisals. These features might also be identified during stakeholder engagement, which is why it is a good idea to start that as early as possible. If a stakeholder provides enough reason to suggest that a feature may be present and adversely affected by the proposal, you might need to undertake a survey (at your own cost) to establish the likely significance of any effect. You should not undertake any surveys until you have discussed and agreed them with your FC Woodland Officer.

- In an area where creating a new woodland could be highly sensitive, providing stakeholders with additional information could help dialogue and find a way forward. In turn, this will help you prepare a robust and evidence-based proposal. Surveys should cover both the extent of the area of land with your proposal and any adjacent protected areas or sensitive features that may be affected by the proposal. Site surveys should be undertaken once the initial evidence, maps and survey information have been collated and reviewed. Undertaking a survey may be the only way to confirm the findings of the desk survey or supply missing data or evidence, and will supplement the proposal – for example, you might provide evidence of species growing locally to supplement your Ecological Site Classification (ESC) assessment. See Appendix 5 for further details on ESC.

- Habitat and species surveys should be completed at the appropriate time of year, generally between April and September. Surveys undertaken at the wrong time of year may fail to pick up areas or features of interest and could result in environmental damage. Investigations at other times of the year are feasible if additional or supplementary evidence exists to support the investigation (for example, data from local raptor study group members, or a wader survey) (Commission, A guide to planning new woodland in England, 2021).

Survey Information to Collect

This section provides a checklist of the categories of information needed for the survey stage and how to collect it. Not all areas require the same attention to detail, and it may be possible to amalgamate different categories on one or two maps instead of each category being recorded on a single map. Information originates from (Commission, Practice Guide, Design techniques for forest management planning, 2014).

Legal Ownership

Establish the ownership boundary/fence line. This may be significant in providing a constraint to designing the layout of new woodland planting to fit the landscape or when changing the external margin of an existing forest to improve the design.

Legal Access

Identify specific routes and access points to the site, which limit, for example, road construction and harvesting access.

Physical
- **Surface geology:** identify the main rock types outcropping at the surface and superficial deposits from glaciations or rivers, old sand dunes or deep peats. This may affect soil type, nutrient status, drainage, tree rooting depth, and the presence of deep or blanket peats which should not be planted. A fully mapped survey is not necessary unless geological information is likely to be an important factor in the development of the forest management plan.

- **Topography:** obtain a suitable base map with contours to use for landscape character and landform analyses as well as for calculating slopes for road design or planning harvesting. GIS raster bases (e.g. OS 1:10 000) may not always include contours, in which case it is necessary to obtain a contour or height information layer or use paper maps which can later be scanned.

- **Drainage and watercourses:** map streams and watercourses and consider the implications of the UKFS and its supporting Guidelines on Forests and water for the area. Wetlands, mires, lakes and ponds, intermittent streams or seasonal watercourses should also be marked. The need to clear existing trees back from streams should be identified in all existing forests.

- **Soils/site types:** carry out a basic assessment of soils, which could be from vegetation indicators or landform (there is correlation with slope/form and soil type) or from sampling the site. Site types based on the Ecological Site Classification system can be more meaningful as they can be related to both choice of timber-producing species and native woodland types. In agricultural areas, soils are likely to be highly modified and contain high levels of nutrients and weed seeds. In urban areas, true soils may be altered or absent on brownfield sites or former mineral works. Compaction may be an additional problem.

- **Areas disturbed by mineral workings/landfill:** identify any factors that will influence forest and woodland design in areas where new woodlands are proposed

as an after-use in urban or post-industrial areas. There may be important issues related to former opencast mining, mineral spoil heaps, reformed quarries or capped landfills, such as a lack of soil or soil forming materials, lack of nutrients, compaction, low pH, a clay cap or toxicity problems.

- **Sites of geomorphological interest:** identify areas of geomorphological interest, such as geological SSSIs, by checking the databases available from the relevant statutory organisation and consider the implications for forest management planning.

- **Infrastructure:** identify and map infrastructures such as powerlines, pipelines, masts, wind energy installations and roads. These may act as significant constraints on woodland planting or other site operations. Record any technical constraints, for example minimum distances that trees can be planted from a powerline of a specific voltage.

- **Water supply catchments:** identify and map catchment areas for water supplies. In areas where water for settlements is obtained from streams, these areas need to be safeguarded.

- **Pests and diseases:** establish whether known insect pests or tree diseases are present in the area and assess the potential risks of their introduction into the forest or woodland.

- **Mammal damage:** assess the presence of different browsing animals, such as deer, their impact on trees and tree regeneration in different areas and the level of control measures (e.g. tree shelters and fences) needed to protect trees and vegetation.

- **Deer control:** assess deer numbers and establish patterns of movement during summer and winter (routes up and down hills or in from neighbouring estates) to give an idea of the way the stags and hinds use the area and where most pressure might be expected. The early identification of potential deer control areas (e.g. glades) in existing or proposed woodlands is useful so that they can be incorporated into the overall forest design.

- **Fence lines (existing and potential):** identify suitable locations for fence lines at sites where deer fencing rather than deer control is to be used. Fence lines need careful design based on the knowledge of how deer move, to remove pressure on fences and reduce risks of deer being trapped. Alignments also need careful consideration as fences can have significant impacts on landscape design as well as implications for woodland grouse such as capercaillie.

- **Wildfire:** assess the risk of wildfire from activities such as prescribed burning or vandalism, and the need for prevention measures such as fire breaks, fire ponds and access roads.

Biodiversity
- **Important habitats:** identify any special habitats or vegetation communities, especially those which are extensive in the area, and the value of all semi-natural vegetation. Significant areas of native woodland will normally require a distinct management plan. Consider the wider context and how the habitats in the forest management plan area can be seen as part of the wider ecological context.

- **Wildlife conservation:** identify sites of specific conservation value. These areas may form constraints or opportunities for the forest management plan. In agricultural areas, the condition of small copses, hedges and hedgerow trees should be assessed and potential linkages into the wider landscape considered. These may be corridors linking areas of new planting to existing woodlands, since these may be the main features of biodiversity value.

- **National Vegetation Classification (NVC):** use NVC maps to identify important existing vegetation communities which need to be protected from planting.

- **Sites/Areas of Special Scientific Interest:** obtain information on these from the relevant statutory agency and highlight all aspects likely to affect the planning process.

- **Important species:** obtain information on important plant and animal species (and territories where appropriate) from the statutory conservation agencies or other relevant organisation. These may be associated with very specific sites and, in cases where the species concerned is protected, the information may need to be kept confidential.

Historic Environment

- **Scheduled and unscheduled ancient monuments:** examine records of scheduled and unscheduled sites and monuments. In existing forests, there may be sites already planted over, so an assessment of their state will be needed for restoration purposes. Elsewhere, the implications for planting (such as minimum planting distances) should be recorded.

- **Other archaeological sites:** survey all potential sites, including those containing industrial archaeology. Special surveys may be needed where archaeological information is sparse (usually a simple 'reconnaissance' supplemented by test pits in potential 'hot spots').

- **Historic features:** obtain information on any historic features, which may not be classified as archaeological but which have historic interest or importance (perhaps locally). The Historic Land-use/Landscape Assessment for the area should provide information on features such as ancient field patterns, the presence of rig-and-furrow and hedgerow banks.

- **Gardens and designed landscapes:** identify these from registers or inventories held by the relevant statutory agencies. If information is unavailable, and the proposal involves woodland planting or management within the boundaries of such an area, extensive historical research may be needed.

- **Historical associations:** establish whether the area has any associations with historical events or famous people such as writers, painters, poets, or musicians (or their works). There may be implications for forest and woodland management of operations affecting specific views, for example. These must be understood and carefully accounted for.

Landscape

- **Landscape designations (national or local):** identify any designations and the policies for landscape associated with them.

- **Landscape character assessments:** find the relevant regional or local assessments and check what they say in terms of approaches to woodland planting or redesign which may have relevance and value.

- **Visual context:** assess the visual context for the site (i.e. how it is seen within the wider landscape and on approach from public roads and paths). Drive or walk around and take photographs to assess the wider landscape context and the experience of people travelling through the area.

- **Visual sensitivity:** assess the visual sensitivity of the planning area by taking photographs from external viewpoints. These locations should be marked on a map and, if possible, recorded on a GPS to ensure accuracy and to enable the viewpoints to be plotted in GIS or used as a base for visualisations. The assessment should be made based on the visibility of the proposals in the wider landscape.

- **Visual diversity:** identify the aspects which give an area its visual diversity and which could or should be reflected in the forest design to enhance unity. These may be existing woodland elements, vegetation patterns, rock outcrops, buildings and other features.

- **Internal viewpoints:** identify key views from within the planning area. These might have a major effect on how people experience the area and need to be protected or incorporated into the design to enhance the visitor experience.

- **Visual detractors:** identify elements or features that detract from the landscape and consider ways in which they could either be removed or screened from sensitive viewpoints.

People

- **Accessibility:** establish how people travel to and from the area and how easy the forest or woodland is to get to or find. Record the main access roads, actual or potential access points to the woodland, and infrastructure such as railway stations, bus routes and bicycle routes.

- **Rights of Way:** record any Rights of Way and examine the wider pattern of permissible paths and routes in the surrounding landscape in case improved connections could be made.

- **Recreational use:** assess how the area is used for recreation (by whom, doing what and when) and what potential it offers according to the local, regional, or national demand. On private estates, private or commercial sporting may also be part of this survey. In urban and community woodland projects, surveys of the users can help provide an idea of the expected demand for recreation so that this can be planned from the outset.

- **Linkages:** consider how the site forms part of a pattern of a recreational or green network and how it can add to the overall offer for recreational opportunities in the region.

- **Stakeholder groups:** identify all relevant community and user groups, societies, associations and others with an interest in the area. Use interviews, questionnaires or focus groups to determine their views about the area and what they would like to see happen to the site.

- **Demographics:** carry out an assessment of the different categories of users, for example by age, gender, ethnicity or socio-economic status, and consider where the focus of each group lies in residential areas around the site. This study can contribute towards the provision of community facilities at appropriate locations.

- **Health and safety:** assess how the management status or condition of the site (including evidence of anti-social behaviour) affects the sense of safety and security experienced by users, especially women and children or people from minority ethnic groups.

- **Special local places:** contacting people in the area if there are any special local places which, if built into the forest design, could strengthen the local sense of identity – ensure that the woodland does not compromise such places.

Timber
- **Growing stock inventory:** obtain data on the trees that have been established, where available (this may be held in a GIS database), so that a stock map can be prepared showing 54 tree species composition and year of planting. Use a combination of colours and hatching to distinguish components in mixed stands, yield classes, economic felling ages, or time of stands reaching terminal height in high wind risk areas.

- **Windthrow hazard:** assess the risk of windthrow (usually determined from an assessment of soil, elevation, aspect/exposure/windiness scores). Windthrow risk may affect the choice of species and whether it is worth replanting the highest risk areas. It will also influence the layout of the forest in terms of future coupe boundaries and the development of wind firm edges. Developing 'terminal height' maps (that show when stands are likely to start blowing over) can be useful to inform decisions on layout and timing of felling.

- **Low-impact silvicultural systems:** establish the potential to apply low-impact silvicultural systems such as continuous cover forestry, rather than clear felling and replanting. This should be based on a combination of soil, species, wind risk, seed sources, presence of advance regeneration and other factors to assess which silvicultural systems are appropriate.

- **Access roads:** identify existing and proposed roads and tracks, inaccessible areas and terrain obstacles. This will help to develop the most operationally sound solution or show where difficulties lie. If a terrain assessment map exists it should be made available.

- **Seed sources:** assess the presence of seed sources, and the likely zones of natural regeneration in the vicinity of such sources, if you are planning to use natural regeneration to restock or establish a forest or woodland.

- **Existing regeneration:** map existing areas of regeneration to establish what is already developing and to build such information into the forest design.

- **Potential native woodland types:** identify NVC types to predict likely native woodland types in areas where new native woodland is being proposed or where non-native conifers are to be converted into native woodland.

- **Open areas/habitats:** assess the impact of NVC information or other surveys of vegetation, mires, heaths or acid grasslands on woodland planting (e.g. if this suggests areas should be kept open or limited to low-density woodland).

4.3   Financial Modelling Tools

As part of this project EAUC has created a suite of financial modelling tools and guidance which provides assistance in the process of understanding potential costs versus returns and a predictor analysis. It is adaptable to represent the scale of the institution using the tool and factors in annual variables and is available directly from EAUC.

4.4   Project Governance

This section from the Woodland Carbon Code (Code, 2023) covers all the commitments and requirements.

The following are required:
- Signed land owner commitment
- Nominated group manager
- Signed group agreement

Further information is available from (Code, Commitment of landowners and project developers/ group managers, 2023), which is accessible at: Woodland Carbon Code 2.1.

Other Requirements:

- The landowner/project developer shall commit to the terms as specified below.
- Groups shall have a nominated Group Manager and a formal management structure between members.
- Groups shall have a Group Agreement setting out terms as specified below.

This requirement is checked at validation. If the landowner or group members/terms change, then a new commitment statement/group agreement will be required at verification.

Landowner / Project Developer Commitments:
This section brings together in one place all the commitments required of the landowner and/or project developer. Some of these commitments are referred to in more detail in other sections of the code (referred to in brackets) but are shown together here for clarity.

There may be more than one party involved in the management of a WCC project. A landowner could develop their own project or contract a third party. A Group Manager is effectively a project developer for several projects working together for validation/verification. Whichever setup applies, there are a number of commitments that each party involved in WCC projects should make.

The Landowner (or where land is tenanted, both the landowner and the tenant) shall commit to:
- Conform to this standard
- Permanent land-use change
- Manage the land as per the management plan for the establishment period and as per the longer-term management intentions for the project duration and beyond (2.3)
- Comply with the law (1.4) and conform with the UK Forestry Standard (1.5)
- Restock where projects involve harvesting (2.5)
- Replant or undertake alternative planting should woodland area be lost due to wind, fire, pests, disease or development (2.3)
- Inform future landowner(s), and where land is tenanted, future tenant(s), of the commitment to the Woodland Carbon Code and any carbon contracts (2.3)
- Monitor and maintain verification for the project duration as per WCC guidance (unless the third party project developer agrees to take this on (2.5)
- If there is a loss of woodland carbon, notify the WCC Secretariat immediately and submit a Loss Report within six months of discovery (2.3)
- Ensure the project, any PIU listings, sales to carbon buyers, and retirement for use of verified Woodland Carbon Units are accurately represented and up to date in the UK Land Carbon Registry (either in their own account or via the project/group manager's account) (2.6)
- Only sell carbon units which are validated & verified to a standard which is endorsed in the UK Environmental Reporting Guidelines (2.6)
- Make true and accurate carbon statements about the project which conform with guidance (2.7)
- Abide by the WCC logo rules of use

Commitment statements shall include the project name and be signed and dated. Where larger estates are managed by trustees, then either the landowner themselves or the legal signatory shall sign the landowner commitment statement.

The Project Developer/Group Manager shall commit to:

- Conform to this standard
- Comply with the law (1.4) and conform with the UK Forestry Standard (1.5)
- Monitor and maintain verification for the project duration as per WCC guidance (unless the landowner has agreed to take this on - 2.5)
- Ensure the project/group, any PIU listings, sales to carbon buyers, retirement for use of verified Woodland Carbon Units is accurately represented and up to date in the UK Land Carbon Registry (2.6)
- Only sell carbon units which are validated & verified to a standard which is endorsed in the UK Environmental Reporting Guidelines (2.6)
- Make true and accurate carbon statements about the project which comply with guidance (2.7)
- Make carbon buyers aware of the WCC guidance on carbon claims and ensure this is included in contracts with buyers (2.7)

- Abide by the WCC logo rules of use and make carbon buyers and landowners aware of the WCC logo rules of use

The Group Agreement:

The group needs to:
- Have a Group Manager/individual (who may be a named individual within an organisation)
- Have a formal management structure between individual woodland owners, project managers and the Group Manager
- Be legally constituted in such a manner as to allow them to enter a service contract with the validation/verification body

Once validated as a group, it is anticipated that groups will continue to work together for the duration of their projects/the Group Agreement.

The **Group Agreement between the landowners**, land managers of constituent projects (if there are any) and the Group Manager shall, as a minimum, set out:

- The name of the group, its size and geographic scope and any other limitations on membership.
- The name and contact details of the Group Manager and the arrangements for replacing the Group Manager should this be necessary.
- The name and contact details of the constituent landowners (and land managers if there are any).
- Details of the projects covered by the agreement (unique IDs, project names, locations and areas).
- Each projects liability for the group's carbon rights and commitments (including consideration of whether the carbon is sold collectively or individually).
- The group's management structure and any other group rules.
- If not specified separately, the commitments of each landowner and the group manager as outlined above.
- Signatures of the Group Manager, all the landowners (and land managers if there are any).
- The roles and responsibilities of the Group Manager and the group members as below:

The **Group Manager** shall:

- Maintain a register of members of the group and the individual planting projects covered by the group scheme.
- Ensure the requirements of the contract between the Group Manager and the constituent group members are adhered to.
- Establish and implement a system of document control and record keeping, holding copies of documents as required by the WCC.
- Act as the main point of contact with the WCC Secretariat, the validation/verification body and the UK Land Carbon Registry.
- Register the projects in the group on the UK Land Carbon Registry and coordinate the project-group design.
- Lead on project-group validation and ongoing verification including addressing corrective actions for non-conformities.

- Inform group members of relevant developments.
- Deal with complaints relevant to WCC validation/verification.
- Revise the Group Agreement (as necessary) with any changes to the group membership or terms.
- Commit to the other terms for project developers as detailed above.

Group members shall:

- Abide by the Group Agreement.
- Inform successor landowner(s) of their commitment to this group.
- Allow the Group Manager to apply for WCC validation/verification on their behalf.
- Supply information required by the group manager and agree to internal audit by the group manager.
- Take any corrective action required by the group manager to address non-conformities.
- Commit to other terms for landowners as detailed above.
- Group Agreements shall be signed and dated.

The Woodland Carbon Code offers a variety of project developers to provide further guidance in grouping projects with a consortium of smaller projects to increase the efficiency and impact of woodland initiatives. For more information on the various project developers, visit the Woodland Carbon Code Project Developers.

Figure 5 below provides a streamlined summary of requirements at the Project Governance Stage including documents, considerations and actions.
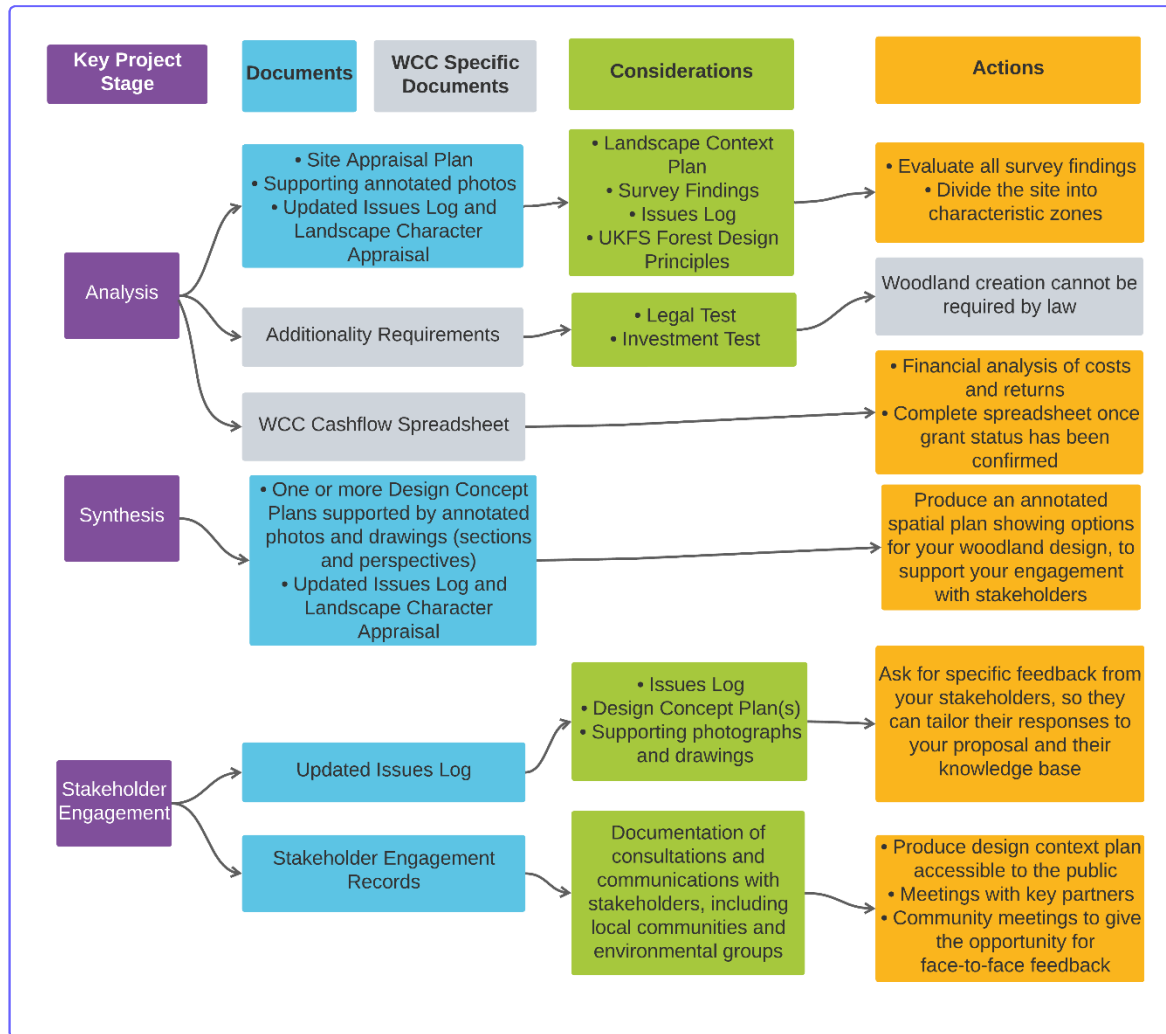
Figure 5: Streamlined Requirements at Project Governance Stage

5. Phase 3

5.1 Documents

Necessary documents to undertake:
- Site appraisal plan
- Supporting annotated photographs
- Updated issues log
- Updated landscape character appraisal
- Design concept plan
- Stakeholder engagement records

5.2 Design Concept Plan

This is determined by the Site Appraisal Plan with an annotated map showing one or more options for the design of the woodland, as a tool to support stakeholder engagement and consultation. Scale 1:5000 – 1:10,000, or smaller scale if required to illustrate detail sufficiently (Commission, Practice Guide, Design techniques for forest management planning, 2014).

The Design Concept Plan should be sent to all stakeholders noted in the identification process as well as all other stakeholders who have input into the survey stage. Record recipients and their responses in a table, example given below. All stakeholder engagement communication from this stage and the survey stage must be attached to the Woodland Creation plan as an appendix (The recommended format is Appendix 4a, 4b, 4c, e.g., where each sub-appendix relates to all the engagement with an individual stakeholder). Holding a stakeholder meeting can be a more effective method than having one-to-one meetings.

Table 3: Design Concept Plan

Organisation/ individual	Date contacted	Response	Mitigation agreed / action required	Appendix no.

5.3 Stakeholder Engagement

- **Identifying Stakeholders:** determine who will be affected by or have an interest in the woodland creation project. This group can include local residents, environmental organisations, local authorities, and users of the woodland.
- **Engagement Strategy:** develop a plan for engaging with the identified stakeholders. This could involve public consultations, meetings with local community groups, or working with environmental experts.

- **Incorporating Feedback:** use the stakeholder engagement process to gather input and address concerns. This feedback can be crucial in shaping the project to ensure it meets both your objectives and the needs or expectations of the wider community.

According to Forestry Commission (Commission, A guide to planning new woodland in England, 2021) stakeholder engagement should follow the method below:

- The method of stakeholder engagement should reflect the size of your woodland creation proposal, extent of operations and sensitivities on your site, and the potential to impact on other people's interests.

- If you will be holding a public meeting, schedule it for early in the process to allow people time to respond. Offer your stakeholders enough information to let them consider the issues raised by your proposed new woodland. Provide them with a short summary of your key proposals, your management objectives, potential timber transport access points and detail of proposed public access together with accompanying maps and plans.

- It may also be helpful to provide them with a copy of your issues log. The information you give to your stakeholders must be clear and understandable.

- Review stakeholder responses. Record the issues raised through stakeholder engagement on your issues log. This will be used to establish the relevance of the issue and your strategy to resolve it. When you are ready to finalise your plan, you should send a copy of the updated issues log to your FC Woodland Officer along with a copy of any responses received, to help us make our regulatory and funding decisions about your proposal.

- Make an objective assessment (with respect to the UKFS) of the likely impact that each issue could have through the creation and management of the woodland, or on the existing land use. This should recognise and highlight areas of potential conflict between the various objectives of stakeholders and the proposed management objectives.

- You may also find it useful to update the site appraisal plan and design concept plans with any new information after completing stakeholder engagement.

- Agree the main issues and identify the need for any further stakeholder engagement with your FC Woodland Officer. They will decide if stakeholders who respond have a material interest with respect to the UKFS and we will subsequently make final decisions on relevant concerns. The issues log should be used to record how issues have been resolved and those that have been identified but are not expected to be resolved. It can also be used as a prompt for follow up action.

- Give an outline of any additional surveys to be undertaken as a result of your stakeholder engagement. It may not always be possible to resolve every issue raised while still delivering the management objectives for your woodland creation proposal. Where this is the case, a rationale for your response should be provided and discussed with your FC Woodland Officer.

6. Phase 4

6.1 Produce Final Woodland Creation Design Plan

- Produce final woodland creation design plan
- Produce project design plan
- Management plan

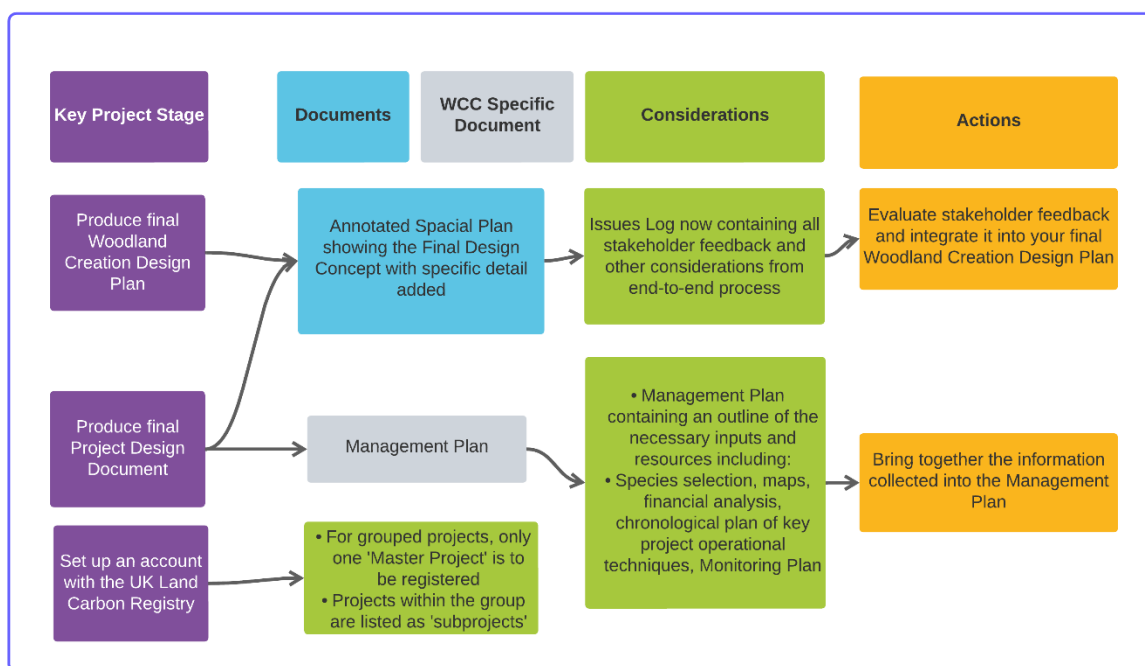Figure 6 below provides an overview of project phase 4.

Figure 6: Streamlined Requirements of Project Phase 4

The below list gathered from (Commission, Practice Guide, Design techniques for forest management planning, 2014) identifies the information that should be attached to the Woodland Creation Design Plan to support and evidence the information that has been provided.

Appendix 1   Context Mapcon
Appendix 2   Site Appraisal Plan - this should be annotated
Appendix 3   Design Concept Plan – this should be annotated
Appendix 4   Final Woodland Creation Design Plan
Appendix 5   Priority Habitat Map and report (magic)*
Appendix 5a   Priority Species Map and report (magic)*
Appendix 6   ESC reports – baseline, 2050 and 2080
Appendix 7   Report from Biological Records Centre
Appendix 8   Landscape Character Analysis (including photographs)
Appendix 9   Historic Landscape Character
Appendix 10   Historic Environment

Appendix 11   LIS maps - water quality and flooding, acidification of surface water, keeping rivers cool *

Appendix 12   Other Maps / correspondence related to water sensitivities (as set out in Stage 1)

Appendix 13   Survey Documentation, organised individually (Appendix 13a, 13b etc.) for each survey/consultee contacted for information at this stage (Phase 2 habitat survey, species survey, NE, EA, NP, AONB, archaeological survey). Please add additional appendices here for any survey undertaken not mentioned above, including any paid for with Supplementary Payment.

Appendix 14   Final consultation / stakeholder engagement notification and responses (e.g. RSPB, CPRE, local historic environment/archaeology service, Historic England, local interest groups, neighbours and those contacted above at survey stage).

* Denotes that a map/record of search should be included to identify whether or not a feature or target area is present. The relevant layers need to be visible in the key so that it can be demonstrated that the dataset has been interrogated.

Other requirements:
- **WCC Carbon Calculation Spreadsheet:** A document using the WCC's template to calculate and predict the carbon sequestration potential of the woodland.
- **Management Plan for Woodland:** A detailed plan outlining the management strategies for the establishment and long-term care of the woodland.
- **Proof of Land Ownership or Tenure:** Legal documents proving ownership or the right to develop the land for woodland creation
- Project Design Plan
- Group Agreement
- Contract
- **Stakeholder Engagement Records:** Documentation of consultations and communications with stakeholders, including local communities and environmental groups.

Environmental Impact Assessment (EIA) Report (if required): Assessment of the potential environmental impacts of the woodland creation project.

1. **UK Forestry Standard (UKFS) Compliance Document:** A statement or report demonstrating how the woodland creation plan adheres to the UKFS guidelines.

2. **Landscape Context Plan:** Analysis of how the proposed woodland fits into the broader landscape, including visual and ecological impacts.

3. **Issues Log:** A dynamic document tracking and addressing any issues or challenges that arise during the planning and implementation stages.

4. **Risk Assessment:** Detailed evaluation of potential risks, including natural disturbances and species suitability.

5. **Site Map:** Geographic representation of the proposed woodland area, showing boundaries and key features.

6. **Woodland Carbon Code Registration Forms:** Necessary paperwork for registering the project with the Woodland Carbon Code.

7. **WCC Carbon Calculation Spreadsheet:** A document using the WCC's template to calculate and predict the carbon sequestration potential of the woodland.

8. **Grant Application Forms (if applying for funding):** Applications for relevant grants like the Woodland Creation Planning Grant or the England Woodland Creation Offer.

9. **Stakeholder Engagement Records:** Documentation of consultations and communications with stakeholders, including local communities and environmental groups.

10. **Management Plan for Woodland:** A detailed plan outlining the management strategies for the establishment and long-term care of the woodland.

11. **Legal and Contractual Documents (if relevant):** Any legal agreements or contracts relevant to the woodland creation, including land ownership or lease documents.

12. **Monitoring and Maintenance Plan:** A plan for ongoing monitoring and maintenance of the woodland, as required by the Woodland Carbon Code.

13. **Project Progress Reports:** Regular updates on the project's development, particularly for verification purposes under the Woodland Carbon Code.

14. **Proof of Land Ownership or Tenure:** Legal documents proving ownership or the right to develop the land for woodland creation

6.2 Student and Community Engagement and Wider Sector Benefits

There are many co-benefits that can be integrated within your project to benefit your students and wider community. Below are some examples of how to do this:

Student Engagement
- Student engagement can be integrated throughout the project in various ways. It is up to the institutions on how this is carried out, students could either get involved at an early stage with the woodland planting, data and monitoring or at a later stage.
- On-going student woodland monitoring would be beneficial to recognise project aspects such as the tree growth rate, biodiversity net gain, soil analysis etc.
- The project could also be used as a base for student research projects such as PhDs or undergraduate/postgraduate dissertations or as part of relevant courses to give real life experiences as part of a living lab.
- Provide educational signage and tree labels.
- Provide access to nature.
- Improving health and wellbeing.

Green Skills
- Engage students and staff with framework design and research to develop skills for the green economy and providing a living lab real world experience for students.

- Develop the necessary skills required for the wider UK green economy and increase employability.

Biodiversity
- A focus on biodiversity and public access will create nature spaces for young people to engage and learn from increasing their knowledge and understanding of the natural environment.
- Linking the project to the Department for Education Nature Parks initiative would bring schools, colleges and universities together to create a network of nature corridors.

Community engagement
- Provide maximum access available to the projects for students, staff and the public, where possible.
- Provide educational signage and tree labels.
- Provide access to nature.
- Improving health and wellbeing.
- Work with other key stakeholders such as schools, colleges, universities and woodland and wildlife trust to develop larger-scale projects.

Research and learning
- Engage students and staff through research in support of the thriving plants and wildlife target.
- Maximise learning outcomes through student engagement and availability of project grounds for research endeavours.

6.3   Tree Planting

Once WCC registration is complete, permissions are granted relating to all previous phases and your documentation the planting phase commences. This is another opportunity to involve key stakeholders.

7.   Phase 5

7.1   After Planting

- WCC monitoring
- On-going woodland monitoring including verification (verification shall take place 5 years after woodland planting and be repeated every 10 years). Self-assessment is an alternative option
- On-going optional biodiversity monitoring
- A superb project to learn from is the successful University of Leeds Gair Woods project - https://leaf.leeds.ac.uk/gairwood/
- Information on other WCC project statistics so you can make comparisons
- Apply for a Nature Positive Green Gown Award - https://www.greengownawards.org/green-gown-awards-uk-ireland

References

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Further Reading and Useful Sources of Information

Online Publications
- The UK Forestry Standard (FCFC001)
- Forestry Commission Map Browser and Land Information Search
- Woodland Carbon Code Standard Guidance
- Woodland Carbon Code Carbon Prices

Other Publications
- Design for outdoor recreation (Taylor & Francis)
- Designing sustainable forest landscapes (Taylor & Francis)
- Elements of visual design in the landscape (Spon Press)
- Guidelines for landscape and visual impact assessment (Spon Press)
- Practical forestry for the agent and surveyor (Alan Sutton Publishing)
- Protected trees: a guide to tree preservation procedures (Department for Communities and Local Government)
- The design of forest landscapes (Oxford University Press)
- The history of the countryside (Phoenix Press)
- Trees and woodland in the British landscape (Phoenix Press)

Relevant Websites
- Forestry Commission – www.forestry.gov.uk/ukfs
- Environment Agency – www.environment-agency.gov.uk
- Scottish Environment Protection Agency – www.sepa.org.uk
- Natural Resources Wales – www.naturalresourceswales.gov.uk
- Northern Ireland Environment Agency – www.doeni.gov.uk/niea
- Community Forests: https://englandscommunityforests.org.uk/

Legislation

Legislation and other regulatory information that should be considered during the forest management planning process can be found at www.forestry.gov.uk/ukfs or in full at www.legislation.gov.uk.

Maps
- Example maps for project Phase 3:
  https://mer.markit.com/br-reg/public/project.jsp?project_id=104000000027992

Sector Initiatives and policies
- Department for Education Sustainability and Climate Strategy
- Nature Positive
- Hedgehogs Friendly Campus
- Student for Trees
- National Education Nature Park
- Climate Leaders Awards
- Woodland Trust – Plant trees with your school
- Trees for cities - Trees for schools
- Wilding Campuses
- Farming for Carbon and Nature

This guidance has been developed by EAUC, in partnership with MyCarbon, as part of the Environment Agency NEIRF project – Universities and Colleges Land for Carbon.

For full details please visit https://www.eauc.org.uk/university_and_college_land_for_carbon