



A National Forest design guide

**Sustainable tourism
accommodation**



Contents

03 Introduction

- 03 Welcome to the guide
- 04 Why have a design guide?
- 04 Who is the guide for?
- 04 Why follow the sustainable design principles?
- 06 The National Forest: A great place to invest in
- 08 Emerging visitor trends

10 Sustainable design principles

- 12 Develop in harmony with the Forest character
- 16 Design for health & wellbeing
- 20 Support the Forest community & economy
- 24 Build ethically & sustainably
- 30 Promote carbon emission free holidays
- 36 Integrate with nature
- 40 Manage water wisely

44 Principles in action

46 Case studies

- 47 Puckshipton Treehouse
- 48 Stargazers Wagon
- 49 Larkhill Tipis and Yurts
- 50 Camp Glenorchy
- 51 Horseshoe Cottage Farm
- 52 Forest Holidays

54 Take the next step

56 Glossary



Welcome to the guide

In less than 30 years, the National Forest has transformed a declining industrial landscape into a vibrant destination, driven by the simple belief that life is better with trees.

It's already a success story for the Midlands but our aspiration goes further. We want the National Forest to be enjoyed, recognised and celebrated as a landmark sustainable tourism destination, responsive to the urgency of climate change and a flagship for the nation.

This guide has been produced by the National Forest Company and is a call to action to join us in creating a new wave of sustainable tourism accommodation.

Whether your development is new or retrofitted, serviced or self-catering, there is a wealth of opportunities to create truly memorable accommodation that fits the National Forest ethos.

For tourism businesses, this presents a unique opportunity: a developing destination with the potential for further growth and a sympathetic planning system, a central location with untapped audiences on the doorstep, and a green offer within a maturing natural environment.

We hope this guide inspires, signposts and stimulates ideas that make good business sense as well as being a statement of sustainability.

We believe it represents the way forward for the National Forest as a destination that is low in carbon, supports green jobs, complements the Forest landscape, and demonstrates our spirit of innovation.

If you share our vision, we'd love you to get in touch and join us in growing the future together, a future that's better with trees.

John Everitt
Chief Executive,
National Forest Company

Why have a design guide?

This design guide has been produced to help you create sustainable and profitable tourism accommodation.

It sets out a rationale for encouraging development that helps create a distinctive National Forest character and sense of place and makes a case for investing in the National Forest as a sustainable destination.

By following the design principles set out in this guide, we believe your development could benefit the local community, work in harmony with the environment and stand out from the competition.

Who is the guide for?

Anyone involved in the design and build of new or retrofitted sustainable tourism accommodation can use this guide. This includes:

- **landowners, developers, investors and operators**
- **consultants and architects**
- **local planning authority staff and councillors involved in the determination of planning applications and preparing planning policy**
- **local communities**

The principles cover new build and retrofitted developments in urban and rural settings. They also apply to all tourism accommodation types ranging from small glamping sites and cabins, through to guesthouses, pubs, hotels and self-catering cottages and conversions.

Why follow the sustainable design principles?

By exploring these principles, your development could:

- **help protect your business from the impact of climate change**
- **keep you ahead of likely future legislation changes**
- **deliver long-term savings**
- **deliver an improved return on investment**

The principles may be used as a material consideration in the determination of planning applications for tourist accommodation in the National Forest. The intention is for future local plans to align with this guide.



The National Forest: A great place to invest in

The National Forest story is one of transformation: the creation of England's largest forest at scale in 1,000 years, with woodland cover now approaching double the national average.

But it's about more than just trees. Through the planting of over 400 woodlands, the National Forest has grown into an emerging destination in less than 30 years. This has created a visitor economy that:

- grows and sustains local employment
- uses local and sustainable products and services
- provides facilities to enhance the wellbeing of communities as well as visitors



The Forest acts as a green lung for nearby cities. It's a place where families and friends can spend time together and benefit from the health and wellbeing aspects of time spent in nature.

Three reasons to invest in the National Forest



© Lesley Hextall

Become part of the green economy

Sustainable tourism aligns to the National Forest's 25-year vision for a greener future and consumer appetite for it is growing. Approached sensitively, tourism can become a vital low carbon sector at the heart of an emerging green economy.



© Nick Fell

Make the most of a flexible planning environment

Without designations such as those covering National Parks and other protected landscapes, planning policy in the National Forest can be more flexible and is generally supportive of responsible tourism development.



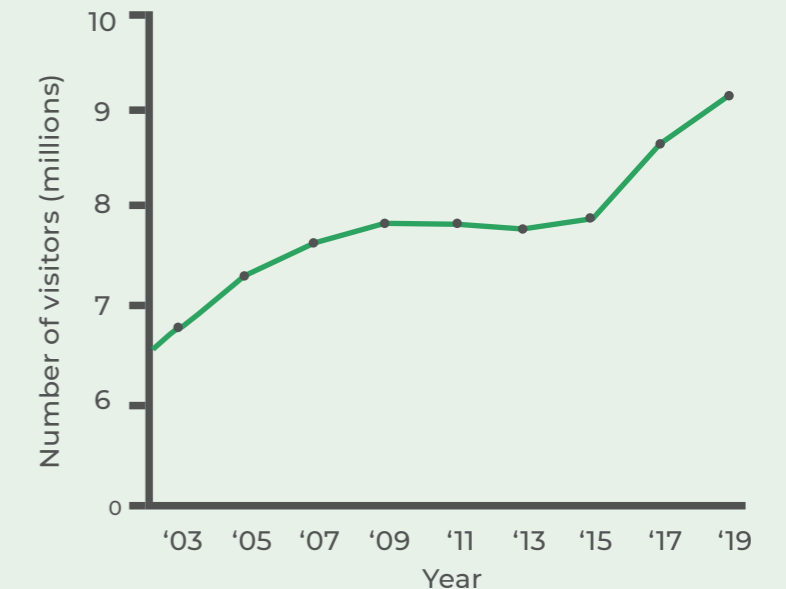
© 2020 Vision Ben Hall

Attract new customers and secure repeat visitors

The National Forest's central location means it has a large audience within a two-hour drive time. This provides excellent opportunities to attract new markets and convert existing day visitors into overnight stays.

Capitalise on the growing number of visitors

Visitor numbers have grown from 6.8 million in 2003 to just over 9 million in 2019*. Research carried out in 2019** also highlights the Midlands as one of the fastest growing areas for tourism in the UK, particularly within the glamping and outdoor accommodation sector.



* Global Tourism Solutions STEAM Economic Impact Assessment 2003 - 2019.

** Barclays 2019.

Emerging visitor trends

Key trends to be aware of as you develop your accommodation development plans.

Trend	Sustainable & low impact holidays	Wellness & nature	Year-round short breaks	Experiential holidays	Celebrating local	Smart systems	Flexible & accessible accommodation
Rationale	Growing awareness of the climate crisis is changing behaviour, with visitors wanting to minimise the impact of their holidays, reduce the number of flights they take each year and buy into experiences and services that reflect their green values.	Many visitors want to invest in their own health and wellbeing. They want to disconnect from daily life, escape into nature and enjoy sensory experiences e.g. yoga retreats, outdoor spas, long-distance walks and forest bathing.	The trend for holidaying in the UK continues to grow. It's likely to be boosted further in the foreseeable future by the continuing effects of COVID-19 and the rise in popularity of shorter, one or two night, year-round 'micro breaks'.	Visitors are increasingly looking for experiences that shape and stay with them – from interacting more with locals and learning a new skill, to contributing something back to the places they visit.	Many visitors like to connect deeply with a place and its people and will appreciate the Forest's story and feeling they are part of it.	Digital 'everywhere and always on' has transformed how visitors search, plan and book trips, and how visitors communicate and find information during their stay.	Offering spaces that cater to different needs including pet friendly and accessible accommodation can hugely increase your booking potential. There's also a growing market for families looking for flexible accommodation for multigenerational getaways.
Action	Highlight your sustainability credentials in your marketing. Offer facilities like e-bike and cycle hire, bike storage and boot rooms. Promote local trails and activities to reduce the need for unnecessary car travel.	Consider all the ways you can integrate the Forest and nature into your guests' experience.	Offer your guests the flexibility of booking shorter stays and make your space as attractive in the winter as in the summer.	Team up with local operators such as woodland craft makers or wellbeing providers to offer your guests a distinctive and memorable National Forest experience.	Help your guests immerse themselves in the Forest story using creative interpretation and interior design.	Make your business more efficient by offering flexible and simple booking systems. Introduce features such as keyless access and the opportunity to book additional services with a smartphone.	Consider features such as accessible wet rooms, and larger indoor and outdoor communal spaces to socialise.

Introduction to the

Sustainable design principles

The following seven design principles describe key aims and strategic approaches for you to develop exemplary sustainable tourism accommodation in the National Forest.


Design principles that cut through the greenwash

Sustainability is made up of a complex and diverse set of issues, but we believe these principles make it easier to make a significant positive difference to help avert the climate crisis. It's therefore important to consider all the points noted under each principle and aim to include as many as possible.

Although they're all important, they're also scalable. Think of them as a menu of options. Use them according to the needs of your project and in line with your level of ambition and budget.


The principles have been developed to complement other technical sustainability standards including BREEAM and the Living Building Challenge. We recommend reading the design guide alongside these other sustainability standards as well as existing national and local planning policies.

Alongside each principle we've included links to further information. We've also included case studies that demonstrate how the sustainable design principles have been implemented, as indicated by the relevant icons.

 **Develop in harmony with the Forest character**


 **Design for health & wellbeing**

 **Support the Forest community & economy**

 **Build ethically & sustainably**

 **Promote carbon emission free holidays**

 **Integrate with nature**

 **Manage water wisely**





Develop in harmony with the Forest character

The creation of the National Forest is changing the character of the area from a post-industrial landscape to one full of young woodlands, trees, wildlife, trails and new tourism developments.

The emerging Forest character acts as the thread that knits together all the special qualities of the National Forest, helping to create a distinctive sense of place and raising the profile of the area.

New tourism developments should contribute towards this emerging Forest character through careful design and setting of new buildings in the landscape.

ENJOY THE VIEW



Design to enhance the Forest character

When designing new tourist accommodation consider how the emerging Forest character can be incorporated and supported by your development. Tree or woodland planting should be included in new developments as part of the continuing creation of the National Forest.

When considering any new built form, the visible use of timber should be incorporated, whether that be green oak beams or timber cladding. This reinforces the sense of being in a forest environment. Green roofs and green walls also contribute towards this character and have wider biodiversity benefits.

Conversions of existing buildings should be done with sensitivity to their historic features while incorporating aspects of the emerging National Forest character where possible. Extensions and ancillary structures may provide the best opportunity for this.

Site buildings sensitively

When developing new tourist accommodation, consider the character of your site and its setting. Where possible, site your development where it can take advantage of existing trees and woodlands.

Take care spacing out your development so privacy between units is maintained - your site should feel tranquil and natural. You can enhance this quality further by locating car parking away from the accommodation and out of direct view.

Within woodlands, buildings and structures should be carefully sited to avoid tree roots and minimise ground disturbance. Consider micropile foundations rather than concrete strips or pads.

When siting buildings in more open areas, consider how existing trees can be the focal viewpoint or how new planting could be incorporated to increase privacy and help buildings blend into the landscape.

Engage with local history and vernacular design

Incorporate aspects of the local environment such as the history of its places, people and traditional buildings as part of your development. Look for ways to make connections with this history to maintain continuity and reinforce a sense of local identity.

In some parts of the National Forest (within Conservation Areas or when working with listed buildings) preserving and reinforcing local character takes precedence over contributing to an emerging National Forest character.

Consider the stories that make up the history of your site and its local area and imagine your development as the latest chapter in this story.

Bring nature into interior designs

When considering design, bring a sense of place to the interior as well as the exterior. Use wood and other natural materials for fixtures and fittings and prominent pieces of furniture. Open up interiors with natural light and views of the natural world.



Above images: © Canopy and Stars



Further information

Historic England: historicengland.org.uk

National Forest guide for developers & planners: nationalforest.org

Right: © Crown & Canopy



♡ Design for health & wellbeing

The planting of millions of trees in the National Forest is providing many new and accessible opportunities for people to connect with nature.

Spending more time outdoors in natural settings is known to be a universal cure for the stresses and strains of daily life, particularly when more people than ever are living in cities.

Your accommodation can help to support the wellbeing of your guests through their engagement with the Forest's woodlands either within or near to your development site.



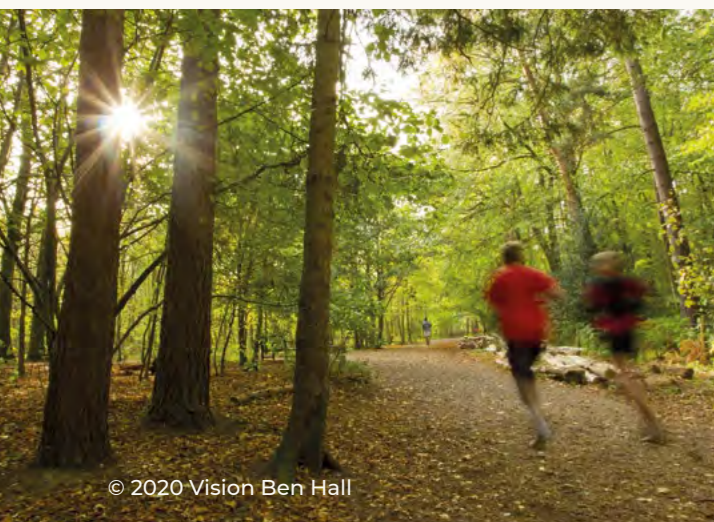
Encourage active lifestyles

Develop accommodation that encourages your guests to explore local green spaces and enjoy the Forest environment. This helps to enhance the overall experience of staying in the National Forest.

Get to know local footpaths and cycling trails. Find out if walking guides already exist for your area or create your own. Where possible, include improved access to the wider Forest for your guests.

You could also create footpath and cycle links to existing networks nearby or (if your site is larger) private woodland walks with suitable signage and paths.

Incorporate features such as drying rooms and communal outdoor spaces. Consider purchasing bikes (and secure storage) for guests to use or hire.



© 2020 Vision Ben Hall

Support mental wellbeing

Create peaceful places with generous access to woodland and green spaces to support the mental wellbeing of your guests. Seek to create spaces where people can be alone in nature, while also feeling safe and secure.

Encourage a connection with others

Consider how you can create shared social spaces and communal seating areas as part of your development to provide an authentic setting for socialising.

Strengthen connections with the Forest

Blur the boundary between the exterior of your accommodation buildings and the Forest by incorporating tactile natural materials into building finishes. Consider how you could introduce wildlife features such as ponds, bug hotels or bird boxes to encourage nature-connectedness.

Prompt your guests to pause for a moment by positioning seating around inspiring views of the Forest. Integrate natural play features to encourage children to enjoy the Forest as an outdoor playground.

Ensure comfort for everyone

Design buildings to provide sufficient ventilation, appropriate levels of daylight and easy to use building controls. Consider the impact building materials can have on the comfort of the user. Opt for non-toxic, natural building materials that are breathable and have a connection to the Forest environment (such as natural timber).

Make the Forest accessible

The National Forest is a forest for everyone, and although all development should meet legal accessibility standards as a minimum, consider how you can exceed these.

Think about the entrances to buildings and how easily (or not) your guests would be able to enter and leave your tourist accommodation.

Consider design elements such as flush floor levels at building thresholds, access ramps or platform lifts where steps are unavoidable, lower-level counters and appliances in kitchens, and ensure the paths within your development are even.

When done correctly, any accessible adaptations you incorporate will not compromise the design of your accommodation for your guests.

Right: © NFC Jacqui Rock



Further information

International WELL Building Institute: wellcertified.com

UK Green Building Council: ukgbc.org/health-and-wellbeing

VisitBritain: visitbritain.org/business-advice/make-your-business-accessible



Support the Forest community & economy

Securing a sustainable future for communities, businesses and the environment is central to the National Forest's 25-year vision.

Your development can become part of a network of like-minded people and businesses putting the National Forest at the heart of what they do.

You'll help to provide new jobs for Forest communities and to increase visitor spend, which in turn supports other Forest enterprises and the wider economy.



Create connections with your neighbours

Your project is more likely to be successful if you involve your neighbours early on in the process. Get to know the people and places around you. Alleviate concerns and form links with other businesses.

Become part of a tourism network

Collaborate and form a network with other tourism businesses to build an enhanced tourism offer greater than the sum of its parts. Support and promote local independent businesses, Forest makers and local food and drink producers so your guests feel connected to the local area.

Tell the National Forest story

Consider how you can bring the Forest story to life as part of your development - the transformation of the National Forest can be inspiring to people who don't know the area.

Create a meaningful experience by including images of the Forest as part of your interior design, using local place names to name rooms and creating on-site interpretation.

Inspire guests through sustainable design

Tell your guests about the sustainability features you've included and why it means their holiday has less impact on the environment. Inspire them to use these principles in their own lives.

Host Forest activity groups

Enhance your guests' experience of the National Forest by engaging with local experts who can provide authentic Forest experiences. Collaborate with local businesses, wildlife enthusiasts, green woodworkers, charcoal makers and forest bathing practitioners.



Further information

Tourism networks:

Enjoy Staffordshire: enjoystaffordshire.com/trade
 Leicester & Leicestershire Place Marketing Team: visitleicester.info/good-to-know/contact-the-team
 Leicestershire Promotions: lpltourism.com
 Marketing Peak District & Derbyshire: visitpeakdistrict.com/industry
 The National Forest: nationalforest.org



Build ethically & sustainably

To achieve the sustainability ambitions for the National Forest, it is crucial all new and retrofitted development takes a conscientious approach to construction and the sourcing of materials.

We need to accelerate the transition from a linear economy that takes, makes and throws away, to a local and circular economy that eliminates waste and supports the continual use of resources.

Your decisions on materials, types of construction and the products and services you use to operate your tourist accommodation are vital to achieving sustainable development.





Use low carbon construction

Look for the lowest embodied carbon products for your development. Reduce or eliminate the use of steel and concrete. Where concrete is unavoidable, ask for cement replacements to lower the carbon emissions. Consult the Institute of Civil Engineers (ICE) Embodied Carbon Database to compare the emissions associated with different materials.

Use natural materials

Prioritise natural materials and those with the least amount of processing as these generally have the lowest emissions. Wood and plant-based building products are especially favourable as they have sequestered atmospheric carbon while growing which will remain safely locked in the building.

Source materials responsibly

Look closely at the materials and products you're considering for your development. Find out how sustainably produced they are by undertaking research and talking to manufacturers.

Look for products with an independent certification such as Environmental Product Declarations (EPDs), Forest Stewardship Council (FSC) and Cradle to Cradle (C2C). Ask manufacturers about their energy use, waste management and sourcing of raw materials.

Wherever possible, source building materials in the local area before looking elsewhere in the UK or further afield to Europe as a last resort. Don't compromise on the quality of the products or the sustainability policies of the manufacturers.

Reuse and reclaim existing materials

Value buildings or materials that already exist on your development site. Look for ways to reuse these, either directly or by deconstructing and repurposing them. Consider retrofitting an existing building before creating anything new.

Make the most of reclaimed materials. Floorboards, bricks, slates and more, are often saved and sold on from salvaged material suppliers.

If you're unable to use reclaimed materials, consider sourcing new materials that have a high recycled content, where the manufacturer has used waste materials in their production. By choosing these products you're stimulating the market for more of these to become available in the future.





Assess your project's life cycle

Consider the whole life cycle of your development from construction, through use, maintenance and deconstruction, thinking about ways of avoiding environmental impacts at each stage.

Ask your architect or a specialist assessor to make a whole life carbon calculation for your development. Where that calculation shows net carbon emissions from your development, consider a tree planting scheme of a sufficient size to draw down the carbon as quickly as possible.

The lifespan of your buildings may last for many decades and they'll therefore have to face significant effects of the climate crisis. Design buildings to be well adapted for summer heatwaves, flooding and other severe weather events.

Design for disassembly and longevity

Design your buildings to last and weather well using durable, high quality materials.

Construct buildings using techniques that allow for future adjustment and disassembly. For example, avoid glues and use screws and bolts instead, so your buildings can more easily be adapted for future needs.

A building that can be deconstructed can also be moved to a new location, sold to a new user, and its parts reused or recycled at the end of its life. Robust materials last longer, holding their value and usefulness. They're also better suited to deconstruction, reconstruction, maintenance and alteration.

Reduce construction waste

Avoid waste arising from every stage of your building's life. Choose products and materials based on what offcuts could be recycled or composted without contamination. Design with specific product sizes in mind so offcuts are reduced or used elsewhere.

Consider upfront how your building would be disposed of at the end of its life. This ensures it can be taken apart so that different types of materials can be separated for future reuse or recycling.

Invest in professional support

Seek professional assistance from architects, designers, building engineers and contractors. Look for professionals with training and experience in ecological building principles, such as Passivhaus accreditation.

Further information

Cradle to Cradle products:
[c2ccertified.org](https://www.c2ccertified.org)

Environmental Product Declarations:
[environdec.com](https://www.environdec.com)

Forest Stewardship Council: [fsc.org](https://www.fsc.org)

ICE Embodied Carbon Database:
[circularecology.com](https://www.circularecology.com)

The International Living Future Institute:
[living-future.org](https://www.living-future.org)

Opalis reclaimed materials directory:
[opalis.co.uk/en](https://www.opalis.co.uk/en)

Passivhaus Trust: [passivhaustrust.org.uk](https://www.passivhaustrust.org.uk)



Promote carbon emission free holidays

To address the climate crisis, the world needs to reach net zero carbon emissions.

An increasing number of consumers understand this and are seeking ways to holiday while minimising their carbon footprint.

Your guests will use a range of services including heating, lighting and cooking, as well as indirect services such as laundry and cleaning.

By making responsible choices you can help the environment and your customers by offering a carbon emission free stay.



Lower the energy use of your buildings

Improve the thermal performance of your building and reduce operational energy usage by applying good design and systems specification.

Orientate your building to make best use of the sun and take advantage of solar gain. Maximise insulation and airtightness so that space heating requirements are reduced.

More highly insulated buildings are habitable for longer periods of the year without needing to heat the space. The longer you intend to use your tourist accommodation into the colder seasons the more critical the thermal performance becomes. When building a new development, consider timber clad insulated structures instead of canvas. This will enable you to use them throughout the year and achieve a higher thermal performance.

Build structures that meet or exceed Building Regulations or higher standards such as Passivhaus or the RIBA 2030 Climate Challenge.

Specify low energy appliances and encourage your guests to moderate their energy consumption during their stay.

Thermal retrofit

When working with existing buildings, consider ways in which these may be retrofitted with internal or external insulation, improved airtightness and new or upgraded windows to provide much better thermal performance.

Consider the methods and standards certified by organisations such as Passivhaus, Enerphit or the Association for Environment Conscious Building.

Use or generate your own renewable electricity

The UK electricity grid has become significantly greener in recent years with renewable energy sources growing to 43.1% of total output*. Where your development has access to the national grid, source all its energy needs from a 100% renewable supplier.

Space heating and hot water can also be produced on site from renewable electricity using air, ground or water-source heat pumps. If your development doesn't have access to grid electricity, install your own photovoltaic panels or a wind turbine.

Talk to your neighbours about collaborating on building a larger system and share the energy, as larger systems are proportionally more effective.

Battery storage adds costs upfront but allows you to store energy to use later and improve your financial return by buying less electricity from the grid. Seek advice from the Energy Saving Trust.



* assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1006819/DUKES_2021_Chapter_6_Renewable_sources_of_energy.pdf



Minimise carbon emissions for secondary space heating

Where national grid electricity is unavailable, consider wood fuel for heating as preferable to gas or oil systems. Wood burners can be used to provide a secondary heat source which will not only heat the space but also add to the experience of a stay in the National Forest.

Source locally grown logs that meet government moisture content regulations and ensure that the stove itself meets sustainable design regulations. Buying locally sourced National Forest grown wood can help to support the management of young woodlands which is beneficial for wildlife as well as the longevity of the woodland.

Follow the National Forest Company's latest guidance on burning wood to minimise emissions and particulate matter.

Buy low carbon products

Look at all the items you may purchase to set up and run your tourist accommodation development, including furnishings, linens, cleaning products and food. Consider using products which have the lowest carbon emissions. These are likely to be plant-based and sourced locally from natural materials.

Encourage low carbon transport

Encourage your guests to reach your tourist accommodation by low carbon means such as public transport and bicycles or by offering collection from nearby train stations.

You may have an opportunity to site your development in a location which is better connected in this way than others. If not, consider whether you can improve the access to public transport, cycle and walking routes by talking to the National Forest Company, your local authority or by working in partnership with your neighbours.

Also consider providing storage for bicycles and electric car charging facilities to encourage guests to reach you by these means.

Further information

Association for Environment Conscious Building: aecb.net

Energy Saving Trust: energysavingtrust.org.uk

National Forest wood fuel guidance: nationalforest.org

Passivhaus Trust: passivhaustrust.org.uk

RIBA 2030 Climate Challenge: architecture.com



Integrate with nature

The National Forest offers a network of different habitats within a growing woodland landscape which is restoring and enhancing biodiversity. Your development can support this through tree planting, managing existing habitats and making space for nature. Guests will be drawn to stays where they can feel close to nature, and see, hear and sense the presence of wildlife.



Understand your local environment

Get to know the ecosystem surrounding your site: its landscape, plants and animals. Find out what lives there and what could live there with a little support. Information from local people, organisations, books and online research will help you understand the biodiversity on your site and how you could go about protecting and enhancing it.

Seek advice from a professional ecologist to find out whether their services are suitable for your project – bear in mind that some ecological assessments may be essential to secure planning permission.

Get in touch with the National Forest Company to find out about biodiversity and management grants which may help you fund improvements to your local environment.

Promote space for nature

A mix of different habitats and wildlife corridors are vital to the health of the Forest environment and provide a beautiful, nature-rich place for your guests to enjoy.

Consider low-density grazing schemes as part of your development with hardy or unusual breeds. These will help create both wildlife-rich spaces and provide an enhanced experience for your guests.

Preserve or enhance features like ponds, meadows and hedges, and keep to a minimum, areas of regularly mown grass which require considerable upkeep and are not wildlife friendly. Even small areas of wilder space can help species survive and thrive.

Plant more trees

Trees planted in the right place and managed correctly are an excellent way of increasing biodiversity through providing valuable habitat and food sources. They also draw down carbon from the atmosphere, improve air quality, can provide a food source for your guests to enjoy (depending on species), provide welcome shade on hot sunny days and can be used to screen your development in the wider landscape.

Develop a plan for how to plant more trees on your site as well as manage those that already exist. The plan may be simpler or more complex depending on the scale of your site and development. Get in touch with the National Forest Company to let us know about your tree planting plans and to find out whether any grants are available. Consider talking to an arboriculturist to find out if their services are suitable for your project or are an essential requirement for securing planning permission.



© NFC Chris Beech

Build for wildlife

Consider how the buildings in your development can fit considerably into the wildlife habitats around them.

Explore how the design of walls and roofs could also include habitats for insects and small mammals, and think about installing bird, bat and owl boxes to provide nesting and roosting habitats.

Introducing sedum roofs, hedgehog holes and pollinator friendly plants are also good ways of providing habitat and enhancing your guests' enjoyment of nature.

Design lighting and windows to prevent light pollution, especially where these would illuminate and disturb habitat for wildlife such as bats. Consider how to separate sensitive habitat areas from places your guests frequent in order to minimise noise impacts.

Further information

Buglife: buglife.org.uk

Building with Nature: buildingwithnature.org.uk

National Forest grants: nationalforest.org

Rewilding Britain: rewildingbritain.org.uk

RSPB: rspb.org.uk

The Tree Council: treecouncil.org.uk

The Wildlife Trusts: wildlifetrusts.org

Woodland Trust: woodlandtrust.org.uk



Manage water wisely

Water is a precious resource, essential to all forms of life, and one that is very easily taken for granted. There are many steps that can be taken during the design and operation of your tourist accommodation that can provide for a more sustainable future for water, benefiting people and wildlife alike.



Use mains water sparingly

Potable water is a valuable resource that requires energy, processing and transportation to bring it from local rivers and reservoirs to your development site. Consider how your development can use water efficiently so that you and your guests' needs can be met without wasting water carelessly.

New buildings - and replacement kitchens and bathrooms in existing buildings - should be designed to incorporate efficient and low-flow fittings that use less water but work just as well.

Look carefully at the product specifications of showers, dishwashers, dual flush toilets and taps. Use an online water calculator to predict water use per person based on the water fittings you'll use.

Current Building Regulations state that developments should achieve 125 litres per person per day, but more ambitious sustainable design standards such as the RIBA 2030 Challenge aim for 95 litres per person per day.

Several organisations such as the Energy Savings Trust and the Association for Environment Conscious Building publish guidance on how to lower potable water usage, both during the design stage of a development and when in use.

Change water use habits

Installing efficient fittings can go some way to reducing water use. The bigger challenge is understanding how you can encourage guests to use less water during their stay, and how you could redesign back of house guest service functions so they also use less water.

Undertake an audit of all the water uses associated with the running of your tourist accommodation and consider how you might reduce overall usage. Encourage guests to reduce their water consumption during their stay by promoting responsible water use in kitchens and bathrooms.

Use rainwater for irrigation

On average people use 10% of their total domestic potable water outdoors for use such as watering plants. Eliminate unnecessary water consumption as part of your development by connecting low-tech water butts to your rainwater downpipes. These are low in cost, easy to install and often provide ample supply for watering plants.

* [gov.uk/government/publications/state-of-the-water-environment-indicator-b3-supporting-evidence/state-of-the-water-environment-indicator-b3-supporting-evidence](https://www.gov.uk/government/publications/state-of-the-water-environment-indicator-b3-supporting-evidence/state-of-the-water-environment-indicator-b3-supporting-evidence)

Consider on-site wastewater treatment

The UK relies upon an imperfect infrastructure to transport and process sewage before releasing it back into local rivers. Tragically, water quality in British rivers is poor, with just 14% rated as having a good ecological standard*. This poor water quality is often a direct result of inadequate sewage processing that occurs when excess water surcharges the system.

Some development sites may not have access to a mains sewer, but even those that do should consider whether an on-site system such as reed bed filtration might be suitable. To eliminate a significant portion of your wastewater output, assess how dry toilet systems might be incorporated into your site.

In all cases, especially where old infrastructure exists, it's essential rainwater is not piped to the sewer as this is the most common cause of polluting surcharge events.

Manage foul water sustainably

Choosing the right system can help you to manage your foul water in the most sustainable way.

If your site is off grid, opt for dry systems such as compost or incineration toilets which do not require water. A compost toilet is preferable - it means no energy is required to run the system and a secondary product is produced in the compost.

If your site has water access but not mains sewerage, consider a package sewage treatment plant. This is preferable to a septic tank as it treats effluent to a higher standard.

Take particular care in understanding where and how the effluent will discharge so as to protect the nearby land and watercourses, and comply with Environment Agency standards.

Manage rainwater equitably and sustainably

Rainwater is an intrinsic part of the hydrology of any site and is essential to the plants and animals that live there. It's therefore important to consider their needs when assessing the impact your proposed development will have upon the fall and flow of rainwater across and into the ground.

Assess your needs for plant irrigation and collect a suitable amount while allowing the rest to infiltrate back into the ground.

Consider how you can incorporate open basins, ponds or channels within your development. These not only give wildlife access to water, but also help to slow the flow of rainwater and reduce flooding downstream during significant rainfall events.

With appropriate planting you could also consider creating a rain garden. Further details about sustainable rainwater drainage systems can be found from the Susdrain organisation.

Further information

Association for Environment Conscious Building:
[aecb.net](https://www.aecb.net)

Centre for Alternative Technology:
[cat.org.uk](https://www.cat.org.uk)

Energy Saving Trust:
[energysavingtrust.org.uk](https://www.energysavingtrust.org.uk)

Environment Agency:
[gov.uk/government/organisations/environment-agency](https://www.gov.uk/government/organisations/environment-agency)

RIBA 2030 Climate Challenge:
[architecture.com](https://www.architecture.com)

Susdrain:
[susdrain.org](https://www.susdrain.org)

Principles in action

Buildings nestled in between existing trees.

Buildings spaced apart and screened from one another for privacy with communal gathering areas in between.

Rainwater collected from roofs and used for irrigation or flushing toilets.

Green roof to create habitat for wildlife.

Curved wall or roof shapes convey a harmony with natural forms.

Rooftop photovoltaic panels generating renewable electricity.

Bird and bat boxes integrated into buildings.

Bicycle and walking access with cars parked elsewhere.

A ramp and stable ground surfaces used to ensure the buildings remain accessible to those with reduced mobility.

Logs left to decay to create new habitats for insects.

Wood shingle cladding suits the National Forest character.

A pond providing habitat for wildlife and a focal point for guests to gather.

Structure raised on stilts to preserve the forest floor and offer beautiful views into the trees.

Foundations engineered to protect tree roots.



Case studies

We've selected case studies to show how the design principles work in practice.

Each case study explores how the space came to be developed, what sustainable credentials it demonstrates (as indicated by the icons), and an approximate idea of the revenue it can generate.

They include a mix of accommodation types (including serviced and non-serviced) any of which would complement the emerging National Forest character.

Find out more about each example by following the web link included within each case study.

Image: Crafted from natural materials that reflect their surroundings, Puckshipton Treehouse is suspended above the woodland floor. From the fluted walkway entrance to the sleeping pod and open air lounge area, the entire space delivers an authentic canopy experience.

© Canopy and Stars



Puckshipton Treehouse Wiltshire, UK

Puckshipton Treehouse offers an authentic treehouse experience. The site is entirely off-grid and with no vehicle access within three miles of the site, guests are encouraged to hike or cycle the six miles from the train station.

The beautiful timber structure is made up of a sleeping pod, decked area and mini lounge all suspended in the trees and reached by a fluted walkway. A compost toilet, outdoor shower, cooking hut and firepit are at ground level and guests collect their own firewood from the woodland. Water for washing and cooking can be heated over the open fire. Eco-toiletries are provided to ensure no chemicals enter the system, and lighting is provided in the form of solar power and candles.

The owner, James, is an arboriculturist, who is passionate about sustainability and woodlands. He built Puckshipton Treehouse, creating an experience that's truly wild and truly self-sufficient. The treehouse blends into the woodland and there is limited phone signal, leaving guests to experience nature in its fullness, whether that's by lying in a hammock listening to the wind in the trees or cooking over an open fire.

Treehouse for two from £82 per night.

canopyandstars.co.uk/britain/england/wiltshire/treehouse-at-puckshipton/puckshipton-treehouse



Stargazers Wagon Herefordshire, UK

Renovated from its early circus days into a luxurious living space, Stargazers Wagon is an excellent example of a repurposed structure.

The whole site (including two timber cabins and the owner's cottage) is entirely off-grid, and the wagon is inherently low impact and well insulated which reduces energy use.

The 27-foot wagon sits within a five-acre ancient wildflower meadow. It's grazed just once a year to enhance biodiversity and the rest of the site is kept wild to provide plenty of space for nature.

Native tree planting and hedgerow management creates habitat for small mammals and birds. Fruit trees provide food sources for birds as well as humans, and the log piles dotted around are great for reptiles and mammals.

Solar energy powers the low wattage LED lights indoors. To minimise the impact on bats and other wildlife, and enhance the dark sky experience for guests, there's no outdoor lighting.

Prices from £98 - £165 per night.

herefordshirehideaways.co.uk



Images: The experience of the trailer extends outside with rustic timber decking, seating and hot tub offering long views of the open countryside. The minimal interior is true to the nature of trailer living, offering a back-to-basics appeal for visitors.

© Canopy and Stars



Larkhill Tipis and Yurts Ceredigion, UK

Having lived off-grid for over twenty-five years, the owners of Larkhill Tipis and Yurts take sustainability seriously. Harnessing wind, water and solar power to generate their electricity, they promote low carbon holidays in their colourful tipis and yurts.

The site is completely organic. All cleaning products are ethically sourced and eco-friendly (as are the complimentary guest toiletries). No fertilisers (other than homemade compost) or insecticides are used on the land. There are compost toilets as well as flushable ones with a reed bed system used to naturally filter foul water from the septic tank. And with all food waste turned into compost to grow their vegetables, recycling is made easy.

The site is nestled beautifully within the forest and wildlife is well looked after. From woodland and hedgerow planting to pond creation and leaving deadwood, there's plenty of space for nature to flourish and a flock of rare breed sheep help to manage the land.

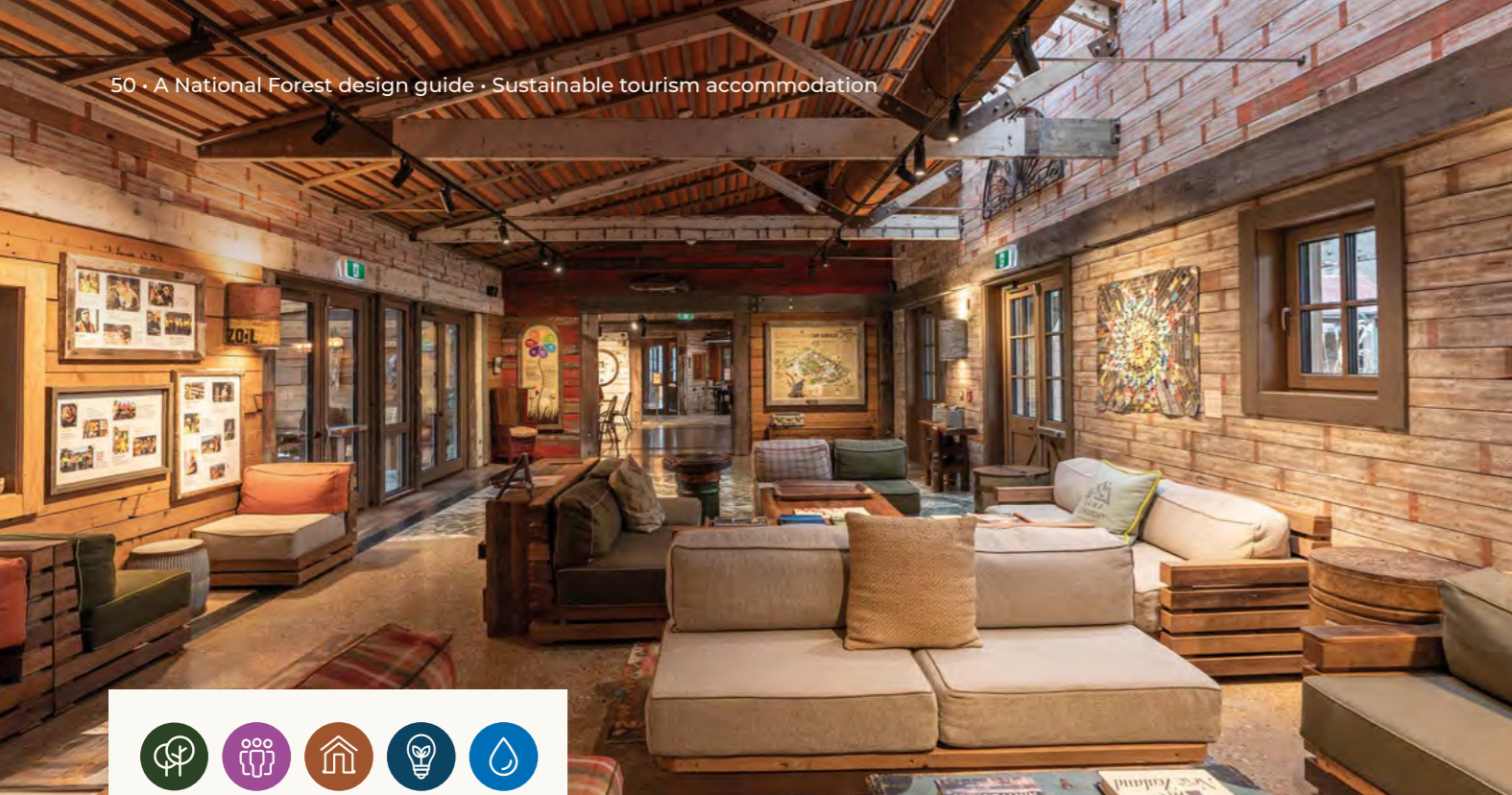
Prices from £80 - £85 per night for a yurt for four.

larkhilltipisandyurts.co.uk



Image: Truly immersed within the forest, the tipis offer a unique experience for guests looking to spend time in nature.

© Larkhill Tipis and Yurts



Camp Glenorchy New Zealand

Camp Glenorchy is New Zealand's first net zero energy hotel and campground, built according to the Living Building Challenge standard. The hotel uses 50% less energy and water than comparable resorts by relying on its solar garden, smart lighting and an advanced on site energy and water management system.

The camp is designed to celebrate and protect New Zealand's spectacular scenery, through buildings designed with non-toxic construction materials, native planting around the site and creative touches from local artists and craftspeople.

Each unit contains an odourless composting toilet and modern technological features (including an in-room tablet that enables guests to monitor their energy use).

Guests can enjoy free sustainability tours where they learn about how 105% of their energy is generated on site over the year, and their commitment to creating a healthy relationship with the natural environment. It's a place where people feel comfortable, healthy and inspired.

**Prices from £134 per night
for a two-person cabin.**

campglenorchy.co.nz/about-us/sustainability

masonandwales.com/work/camp-glenorchy

Image: Buildings constructed from non-toxic materials use natural light and creative touches from local artists to create calming spaces that celebrate the local environment and where people feel comfortable, healthy and inspired.

© Camp Glenorchy



Horseshoe Cottage Farm Leicestershire, UK

Horseshoe Cottage Farm in the National Forest is a sympathetically restored 200-year-old farmhouse that takes green travel seriously. Part of Responsible Travel and Wild and Green Escapes, it prides itself on being an award-winning, environmentally friendly, luxury B&B.

The barn conversion was carried out to preserve and celebrate the local history of the area, with many original features retained, including exposed stone walls in some of the rooms.

Energy use is minimised through their 4KW rig of solar PV panels, excellent insulation and a biomass boiler. They also champion local produce, using locally sourced seasonal food for their meals, and locally produced organic toiletries in the bathrooms. They use eco-friendly cleaning products and have an electric car charging point for guests. Garden and kitchen waste is composted, and roof water collected for growing vegetables in the greenhouse and garden.



Horseshoe Cottage Farm is passionate about the local area and encourages walking and cycling by providing advice on local walks and rides. It also provides secure lockable areas for bikes, puncture repair kits and pumps, hosing down facilities, drying rooms and sinks. Spare trekking poles and maps marked with routes and places of interest are also offered.

Here, guests can enjoy a stress free, environmentally friendly holiday which both celebrates and enhances the local area.

**Prices from £110 for two people B&B
and £70 single occupancy per night.**

horseshoecottagefarm.com

Images below: © Horseshoe Cottage Farm





Images: Timber built cabins with pile foundations nestle into the forest environment in a low impact manner, while spacious outdoor decking and large window panels integrate the outdoor and indoor spaces. Images right and left ©Forest Holidays



Forest Holidays UK wide

Forest Holidays offers cabin holidays in 11 locations across the UK. For 45 years it has worked in partnership with Forestry England, Forestry and Land Scotland, and Natural Resources Wales to provide authentic experiences in British forests.

Nature is central to its business ethos. Forest Holidays' revenue helps sustain the forests and its Conservation Fund supports around 30 UK wide conservation projects.

It's committed to improving the biodiversity of sites and carries out extensive monitoring and enhancement programmes with its Forest Rangers and local Wildlife Trusts.

On-location education programmes led by trained Forest Rangers encourage guests of all ages to learn about the forest and wildlife around them.

Wellbeing is also a key part of the Forest Holiday experience. It's the only holiday company in the UK with team members trained in the ancient Japanese art of shinrin-yoku or forest bathing.

Forest Holidays is the first self-catering holiday company of its type to have a bespoke BREEAM scheme with BRE. Cabins are built with health and wellbeing in mind, with plenty of natural light and space, and everything is done to minimise impact on the forest and the wider environment.

From £183 per night for a cabin for two people.

forestholidays.co.uk

Take the next step

The success of the National Forest has been possible because it struck the right chord – the right solution at a critical moment in time. We're now at another critical moment.

We need you, our landowners, developers, local authorities and communities to act now and support this bold, new vision for sustainable tourism accommodation in the National Forest.

This design guide sets out starting points for considering sustainable design, while the National Forest Company can offer help and support as you explore your plans. Whether you're keen to make a start, have a concept to discuss or simply want to ask a few questions, we're here to help bring your ideas to life.

We look forward to hearing from you.

nationalforest.org



Glossary

Biodiversity

The variety of plant and animal life in the world or in a particular place or habitat. Biodiversity refers to every living thing, including plants, animals and humans. A high level of biodiversity is essential to a thriving natural world.

Carbon emissions

The release of carbon dioxide into the air as well as other greenhouse gases that are causing climate breakdown.

Carbon footprint

The total greenhouse gas emissions caused by an individual, event, organisation, service, or product, expressed as an equivalent amount of carbon dioxide that would have the same effect on the atmosphere.

Circular economy

A business model that aims to eliminate waste and conserve natural resources by using waste from one organisation as the inputs to another. These systems emulate the natural world whereby waste from one organism becomes food for another in a continuous cycle. This can generally be described through three main

principles; design out waste and pollution, keep products and materials in use, and regenerate natural systems.

Conservation area

A geographical area designated by local councils that covers protected green spaces or areas of land with a higher level of environmental or ecological value, and areas containing buildings and places of special architectural and historic interest. These areas have tighter planning restrictions for new development.

Ecosystem

A community of living things interacting with one another and with non-living components through nutrient cycles and energy flows. They are often considered within the boundary of a geographic area such as the ecosystem of a particular lake or forest.

Embodied carbon

The carbon footprint (see above) of a particular material or product defined by all the emissions generated during its production.

Green roofs and walls

A roof or wall covering that incorporates a growing medium for plants. They may also include waterproof membranes, root barriers and irrigation systems.

Habitat

An environment such as a heathland, grassland or woodland that supports the life of a particular animal or organism.

Hydrology

The ways in which water occurs and moves across and beneath the surface of the earth, interacting with living beings and material components of the environment.

Linear economy

The common business model of modern society that extracts natural resources, uses them for a period (that is often deliberately short to encourage sales), and then throws them away as waste. This is often summarised as 'take-make-waste'. See circular economy for contrast.

Low carbon holidays

A holiday that has been designed to have a minimum carbon footprint arising from the accommodation, travel, food, and other activities it provides.

Micro-pile foundations

A method of supporting building or other structures that uses a minimum amount of material in the ground so as to avoid disturbing trees, plants and other biological activity in the soil.

Operational energy

The energy used on a day-to-day basis for heating, cooling, hot water, cooking, lighting and other appliances in a building.

Potable water

Water that has been extracted from the natural environment and treated to a level that it is safe to drink according to national standards.

Renewable electricity

Electricity that has been generated by a source that is continuously renewed – such as the sun or wind – without the production of carbon emissions.

Sense of place

The idea that a place has a richness of character that people can identify with in a meaningful and enjoyable way.

Sequestered carbon

The way in which certain biological processes absorb carbon dioxide from the atmosphere and retain the carbon in a solid form, the most common example being carbon sequestered as trees grow.

Slow travel

An approach to travel that emphasises connection to local people, cultures, food and music. It is meant to educate and have an emotional impact for the traveller whilst remaining sustainable for local communities and the environment.

Solar gain

The radiation that a building receives from the sun – predominantly through windows but also through the rest of the building fabric – that contributes to warming the interior.

Sustainable

The capacity for human civilisation and all life on earth to continue to exist indefinitely.

Thermal performance

The capacity of a building to remain at a comfortable temperature inside without the need for heating or cooling systems, usually through the use of well-designed insulation and glazing.

Vernacular architecture

Building design that reflects local traditions and cultures using materials and skills indigenous to a particular region.

Whole life carbon calculation

An assessment of the carbon emissions associated with a building over its whole life cycle: from manufacturing of building products, construction, in use and maintenance, to its end of life and future re-use or recycling.



Anyone planning to develop sustainable tourism accommodation should also engage with their local planning authority (LPA) through the formal pre-planning application advice service. This will assist you in preparing a proposal for submission and avoid any unnecessary delays.

National Forest LPAs

Charnwood Borough Council
charnwood.gov.uk

East Staffordshire Borough Council
eaststaffsbc.gov.uk

Hinckley and Bosworth Borough Council
hinckley-bosworth.gov.uk

Lichfield District Council
lichfielddc.gov.uk

North West Leicestershire District Council
nwleics.gov.uk

South Derbyshire District Council
southderbyshire.gov.uk

Publication authors

Edward Busby
Tom Raymont

Hannah Welsh
Andrew Hedger



arboreal

crownandcanopy.co.uk

arborealarchitecture.com

Publication design



Common Ground Communication



THE NATIONAL
FOREST

Registered Charity Number 1166563.
© The National Forest Company 2021.

Every effort has been made to ensure the accuracy of the information within at the time of printing. The National Forest Company cannot be held responsible for any errors, omissions or subsequent changes.

National Forest Company
Bath Yard, Moira, Swadlincote,
Derbyshire, DE12 6BA

Email: enquiries@nationalforest.org
Telephone: 01283 551211

nationalforest.org



Printed with 100%
renewable energy and
vegetable based inks

