

Sustainable Construction – Forestry England



The Visitor Hub

The new Forestry England Visitor Centre is designed to have minimal impact on the environment around it and to achieve net zero in operation. A single, step-free building will occupy the same footprint as the multiple separate older buildings.

A fit-for-purpose, visually attractive and spacious structure where visitors with a range of accessibility and other needs will be able to find information about the forest; make use of modern standard toilets and Changing Places facilities and enjoy a warm, bright café – all under one roof.

During the works, temporary offers will be made available where required to ensure that forest users experience minimal disruption to their visit.

Heating and cooling systems will be fed by a ground source heat pump and solar panels.



Clad in British timber.

Rainwater collection – also used for toilet flushing.



Designed to provide voids and roosting opportunities for various species of bats.

Apex roof windows to help maintain temperature within the building.



Hedgerow and native fruit planting around the car park and picnic areas.



Front of building shaded by awning to keep the interior cool.

Conceptual images only.

Forestry England is investing in low-carbon and renewable energy sources and changing how they do things.

A forest centred approach

Constructing a new Forest Holidays location

Nature sensitive cabins

Cabins gently blend into the forest offering those staying in them a rich connection with the natural world. Using a forest-centred approach to development, design and integration, the creation of a Forest Holidays location uses extremely low impact and ecologically sensitive methods and techniques. This helps to retain and enhance the woodland, its wildlife and their habitats.

Cabin locations are sustainably designed and constructed in a unique way with a pioneering design which blends with the forest, using a technique which allows cabins to be carefully assembled between the trees.

Cabins are created using modular and prefabrication methods. This is when components are built in one place off-site, creating less waste, less noise and using less energy. This light touch construction method ensures that no large-scale excavation or reshaping of the land is required. Low impact piles are used to create the foundations for cabins. A lightweight micro pile system is installed with simple portable tools, making it ecologically sensitive. This process protects the forest floor, ensures that nearby trees are unaffected, soil movement is minimised, and allows rainwater to drain into the forest floor naturally.

To preserve Dark Skies and protect nocturnal wildlife, Forest Holidays use no external upward lighting and the minimum lighting required for the location to operate safely.

Managing surface water

Forest Holidays cabins are designed differently to your homes. Cabins are designed without gutters or downpipes and all run-off is discharged directly to ground assisted by small infiltration strips beneath the eaves.

Cabins are set above the ground allowing surface water to continue its natural flow path. Through research and development carried out over numerous locations, including two National Parks, a mini piling system is used to create the foundations. No surface water is collected on site and the cabins have large overhanging eaves which allow rainwater to fall to the forest floor maintaining the balance of hydrology. This enables the continuation of a natural drainage process by maintaining uniform infiltration rather than a central point of discharge (e.g. soakaways). As the ground surface around the cabins remains natural and undeveloped, surface water is allowed to continue its natural runoff regime.

This low impact method has been used for many years at locations similar both in the proportion of the cabins and the environment in which they are set. Many of Forest Holidays locations are situated in high rainfall areas such as those in North Wales and in the Loch Lomond and the Trossachs National Park in Scotland. This method of discharge across all of these forest locations has a proven track record.

Materials

When choosing materials, Forest Holidays evaluate the environmental impact of each product using their sustainable procurement strategy. All the timber used is either PEFC or FSC accredited (this means it's sustainably sourced) and Forest Holidays is working with Crown in Britain to increase the amount of home grown timber used.



No gutters so rainwater drains into the forest floor naturally.



Delamere Forest - one year after opening to guests.

Cabin being erected within scaffolding.



Low impact foundations completed ahead of floor installation.



Low impact piling system for foundations, which do not disturb tree roots.



New roads at locations.



64 cabins beneath the tree canopy - this image was taken 18 months after the location was created.



The cabins are designed to integrate into the woodland setting and any tracks, pathways and car parking spaces created by the proposals would be constructed with the same finish as the existing Forestry England tracks in the nation's forests using permeable materials.

Sensitive construction

Go Ape Design and Build

A partnership that enables visitors to connect with forests in a whole new dimension

Each Go Ape course design is bespoke to the individual forest and takes care to use the environment and topography. Courses are not 'off the shelf'. Trees and woodland are carefully managed to ensure their health into the future.

The ropes course will look similar to existing Go Ape facilities around the UK. Natural materials such as timber will be used which will help the course blend in with its surroundings.

To position the cabin and course requires no loss of mature trees. The high ropes course itself will consist of treetop platforms, crossings and 7 zip wires and landing sites with a section crossing the Bedburn Beck.

As part of the course construction all trees in the area will be dead-wooded where necessary for safety reasons and all platform bearing trees will be crown lifted to platform height in order to prevent unauthorised access.



Partnering with world leaders in ropes course design and construction Altus - www.altuspro.com

Altus and Go Ape regard the safety of their courses as paramount and were both involved in establishing the European Standard EN 15567 which dictates the level required for both constructing and operating ropes courses.



The reception cabin is modest in size and clad in timber to compliment the woodland setting, finished using a water based protective sealer for a weather protective natural look.



Trees within the course are rigorously inspected to check that they are fit for purpose by a qualified arboriculturist. Once a tree is approved, the majority of the build is done by hand and with no heavy machinery. Our trees are then inspected annually, and tree growth is noted. If a tree has grown significantly, then braces and platforms can be altered to give the tree more room.



The tree top platforms are braced to the trunks of the course trees. None of the cabling or braces come into contact with the trees but are held away from the bark.

The majority of the course is high up in the trees.

