

### Getting Here

Westbrook Hay is situated on the hills to the south of the Box Moor Trust Centre on London Road, Hemel Hempstead (A4251). Westbrook Hay can be reached from the A4251 (London Road), running between Hemel Hempstead and Berkhamsted. Close to the Box Moor Trust Centre on London Road, turn into Westbrook Hay drive (signposted for the Box Moor Trust Old Barn). Follow the drive all the way to the top of the hill, then take the first track on the left (just before Westbrook Hay School entrance). This will lead you into the car park next to the Old Barn Education Centre.

### Car Parking

The car park by the Old Barn is usually open during daylight hours. An alternative car park can be found at the base of the hill, at the start of Westbrook Hay drive. Park here and walk up through the meadows to the Old Barn and the starting point for this walk.

### Users of Wheelchairs, Pushchairs or Mobility Scooters

The boardwalk is the main section of this walk suitable for wheelchair and pram users. The visitor will have to assess the suitability of the rest of the walk but this will depend on weather conditions as some of the ground is uneven with puddles and mud after rain. If the section between points (3) and (4) on the map seems unsuitable, please try continuing along to the end of the boardwalk, through the gate and into the large field. At the pond, bear right to a large gate leading back into the wood to re-join the walk at point (4). Please contact us for more advice on alternative routes. Benches are situated at several points around the route. A mobility scooter is available on loan from the Box Moor Trust Centre for use on this walk. Please ring in advance to arrange. Tel: 01442 253300.

### Safety

When carrying out the activities suggested in this leaflet, please take great care. In particular, do not enter our pond dipping areas. It should be possible to observe the ponds from outside these areas. The Box Moor Trust cannot accept responsibility for the children under your care.

### Care of the Box Moor Trust Estate

Where livestock are grazing, please keep dogs on a short lead or at heel. If your dog fouls, please bag and bin it or take it away with you. More information can be found in our leaflet 'Dogs and the Box Moor Trust'.

Please also:

- Close all gates.
- Do not leave litter or light fires.
- Do not pick plants, flowers or fungi.

# The Four Elements

**A short, easy walk for families around the woods and meadows of Westbrook Hay, including activities to investigate aspects of the natural world through the elements of earth, fire, water and air.**

These activities are designed to appeal to as wide an audience as possible. Take on as many or as few as you wish or just enjoy the walk!

**If you have enjoyed this walk, why not explore further on our Orange, Blue, Green or Red walk routes? We produce seasonal 'I-Spy' inserts for children to accompany the Orange walk.**

**Please visit our website:  
[www.boxmoortrust.org.uk](http://www.boxmoortrust.org.uk)**



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## Earth

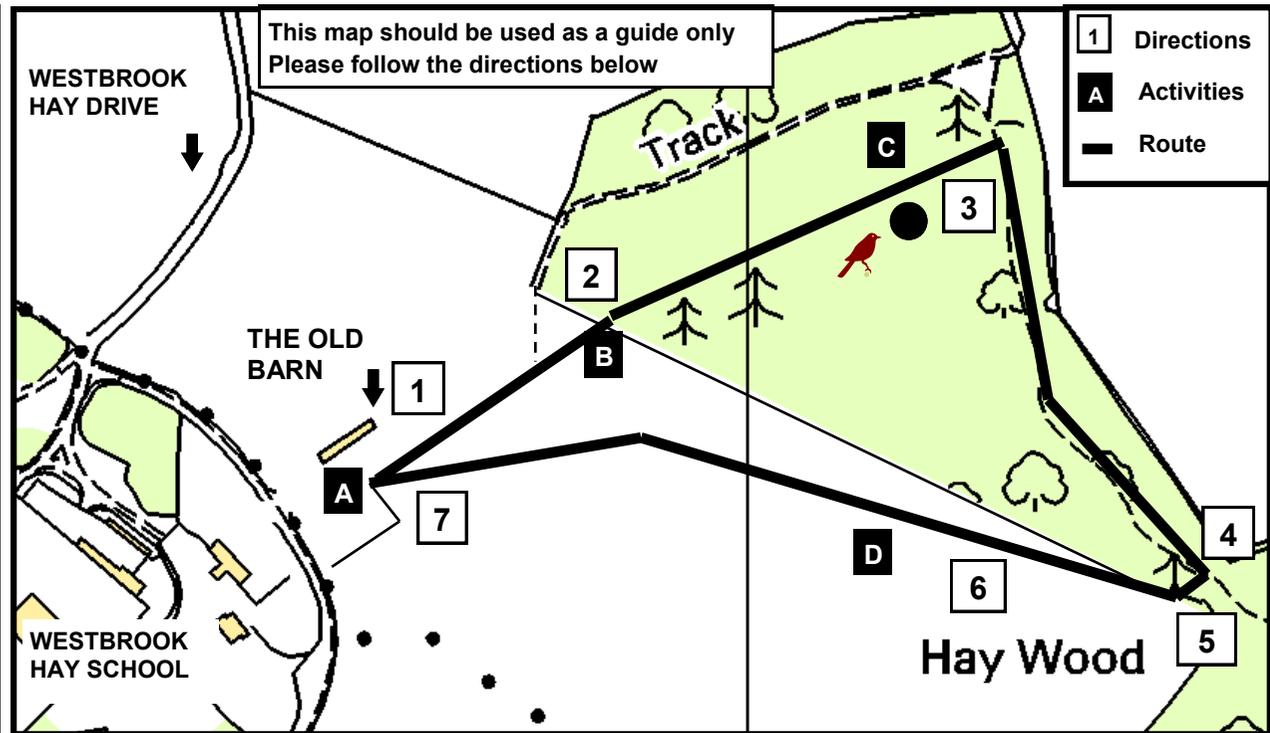
Humans have always used materials from the earth for their homes. The walls of the Box Moor Trust's Old Barn Education Centre are made of clay bricks and flint stones, and there are clay tiles on its roof. Some of these bricks could have been made over at the old Bovingdon Brickworks, now a wildlife site managed by the Box Moor Trust. Clay is dug from the ground, shaped and then baked at high temperature to make it into hard bricks. The swallows at the Old Barn also use materials from the earth to make their homes. They make their nests high up under the eaves of buildings using mud and straw. Look out for our swallow nests in the entrance to the Old Barn and in the shelter next to it. These birds spend each summer here raising their young but, in the autumn, they will fly thousands of miles to South Africa, covering up to 200 miles each day. They migrate to the Southern Hemisphere for the winter because it is much warmer and there will be many more of the insects that the swallows depend upon for their food. Other creatures live in the earth or in the leaf litter just above it, like mini-beasts (worms, woodlice, centipedes and millipedes). Some, such as rabbits, foxes and badgers, build burrows, dens and setts underground. We have all these creatures living on our land. Look out for holes on your walk.

## Fire

Our sun is a huge ball of hot gas, more than 15 million degrees centigrade at its core. Without the sun, there would be no life on our planet. Plants use the sun's energy to make food in their leaves in a process called photosynthesis. So, without light, they die. As you walk along the boardwalk from the meadow and into the wood, notice the change from light to dark. What exactly makes it so dark in the wood compared to the meadow? Look at how many plants and the different kinds of plants you can see in the meadow and the wood. Is there a relationship between the amount of sunlight and the number of plants? The wood is a much lighter place in winter and spring. Woodland plants have special adaptations to deal with the low light levels - many, like bluebells, grow quickly in early spring and flower during April and May, before the new leaves on the trees have developed fully.

## Water

Further along the boardwalk you will find one of our ponds. This pond is a habitat (home) to many different creatures because it provides food, water, shelter and air (dissolved oxygen), the four things that are essential for survival. However, within a pond habitat are many different 'micro-habitats', for example, the deep open water in the centre, the shallow, warmer water at the edges, the surface of the water, under reeds and plants at the sides and in the mud at the bottom of the pond. If you were a pond creature, where would you like to live and what would you eat? Some of these creatures, like water boatmen and pond skaters, spend all their time in the pond whilst others, like frogs, newts and dragonflies, only spend their immature (egg and larval) stages in the pond and leave when they are adult, returning to lay their eggs in the water.



## Directions

From the Old Barn (1), proceed along the boardwalk and follow it into the wood (2). Enter the wood and continue along the boardwalk as it winds its way through the trees. To the right, you will pass a bird feeding station and, a little further along, a woodland pond. Shortly afterwards, turn right onto the bridleway that crosses the boardwalk (3). *From this point on, the terrain may be subject to changing weather conditions and a flat, stable surface cannot be guaranteed. Please see the back page of this leaflet for an alternative route avoiding this bridleway.* Follow the bridleway through the woods until it crosses a second path at right angles (4). Turn right and pass through the gate into the meadow beyond (5). Bearing right, walk uphill, keeping to the edge of the wood (6). After a time, you will see the Old Barn. Go through the black metal gate into the car park (7).

## Air

Do you suffer from hay fever? If you do, then you probably have tree and grass flowers to blame! All plants produce pollen (male sex cells) as part of reproduction. To make new seeds, this pollen has to reach the female part of another flower on a different plant. How does it get there? Some plants, with brightly coloured flowers, hitch a ride for their pollen from insects as they travel between flowers, hunting for nectar. Other plants, like many trees and grasses, use the wind to blow their pollen to other plants. As the chance of this pollen reaching its target is very low, wind pollinated plants must produce millions of pollen grains - which get up our noses! These pollen grains are specially designed to blow through the air easily; they are very smooth and light. As you walk through the meadow, look on the trees for any flowers or seeds forming. Also look closely at the grass flowers (on top of the grass stalks). Even though they are not coloured like insect pollinated flowers, there are still many different types and they are very beautiful.