

30 Pevensey Road, Worthing BN11 5NS

Overview

Owner: Francoise Grimshaw

Open garden showcasing a range of techniques used in combination to effectively manage rain and surface water, and mitigate the associated problems. Here we can see how a holistic approach, and changes made to the outside environment in the garden surrounding the house, improved the environment inside the house enabling restoration where damage had occurred due to rising damp.

Key Features

Rain garden

Surface water management

Rainwater harvesting

Re-purposed materials

Other Features

Sustainable planting

Hügelkultur, with bug hostel and wormery

Damp proofing

Insulation and ventilation

Introduction and approach

When Francoise moved to Worthing in the summer of 2017, she soon discovered that her new home was vulnerable to the effect of surface water, given the type of clay soil the house stands in, and that the dampness problems the house was suffering from had been hidden. It all became apparent in the autumn, when returning from a few days away to discover black mould spreading throughout the back of the house, and a foul atmosphere. Contributory factors at the time had been a very wet summer, and mains water pipes leaking in 3 places outside the property.

Immediate remedial action was taken by repairing water pipes, replacing the central heating with a more efficient modern system with condensing flue boiler, and installing additional air bricks and clearing rubble and debris from existing air bricks, to improve ventilation within the property.



Francoise continued research around the issue, studying local maps, soil conditions and surface water tendencies. A flood map obtained from the Environment Agency showed a tendency for surface water to flow down the driveway and accumulate in the back garden.

Francoise visited a number of the properties in our 2018 Eco Open Houses event where surface water management was a key theme, and got to see ideas in action, including rain gardens, swales, use of different levels, deep guttering and rainwater harvesting with managed overflow.

Through research and consultation with a garden designer, a plan for major groundworks for the garden was created, which was then executed by a local gardening firm.

Groundwork

Around 20-30cm of rubble all round was removed and taken away to be used as hardcore in road construction. The drive was dug out, and rebuilt in a fashion to allow much better drainage. Foundations were repaired, soil was improved, raised beds constructed, and a swale and pond system was created in the back garden to channel and hold water in an appropriate area while allowing it to slowly drain and evaporate. A number of water butts were also installed, some with overflows channeled into the swale.

It's been a dramatic transformation to the garden, and now water is managed much more

effectively, creating a significantly more vibrant environment outside, as well as improving the environment inside the house, eliminating damp, preventing further degradation to the fabric of the building, and creating a warm, dry, healthy interior atmosphere.

Francoise has produced a wonderful document detailing the process in full, and showing many photographs, before, during and after. This document is available online on our public Google Drive, which can be accessed via the resources section of our website; ttworthing.org

Re-purposed materials

The process of improving the soil quality and drainage involved the removal of large quantities of rubble, brick, and stone from the old crazy paving. Where possible, much of this was re-used in-situ and you can see much of this stone and brickwork in the new raised beds and paved area. The contractor working on the project frequently takes waste away from projects he works on, and stores it in his yard for use in other projects. Thus, rubble that was not used here was taken away to be re-used elsewhere, and additional materials were brought in from previous projects to be re-purposed here. In addition to the rubble and masonry, planters and fencing have been built from re-purposed timber with the help of Men in Sheds.

Sustainable planting

Initially the soil in Francoise's garden was very poor, and one thing she noticed was a near complete absence of earth worms! The soil is now greatly improved and worms have been introduced, however following from such major disturbance, and soil brought in from varied sources, it will take some time for the soil to establish a natural healthy balance.

Francoise has been experimenting with planting, selecting plants particularly suited to the environment, or to benefit and encourage sustainable wildlife, particularly vital invertebrates and beneficial bugs such as the aforementioned earth worms, other decomposers, and of course pollinators! Many native species have been chosen, although not exclusively native, to reflect the modern diverse environment. She has also begun experimenting with Hügelskultur a German cultivation method involving piling soil over wood and other organic matter to create raised beds with high water retention capabilities, providing a steady supply of nutrients from the decomposing wood, and habitat for decomposers and other invertebrates. It is hoped that the new pond will attract its own inhabitants.

Some of the garden space is set to start to grow edibles, some of which will be intermingled with plants which are known to be companion plants, and will make use of the in-house composting which has been started.

Professional team and technical info

R.H. Smith staff for their expertise in rising damp.

Steve White (County Landscapes) who designed and signposted to;

Bell Gardens, where Andy Tomes and his fantastic team carried out the garden work, fencing using re-purposed timber, and including Matt who created the paving.

Claire Holyoake who helped with weeding and planting

Mick Edwards for advice, plumbing, waterbutts, and miscellaneous repairs to damaged brickwork.

Men in Sheds who created planters using repurposed timber.

