



THE BRISTOL PORT COMPANY



# CONSERVATION AND THE ENVIRONMENT

# WHEN IT COMES TO THE ENVIRONMENT...



The scarce Barn Owl is now a resident on the Bristol Port Estate



Ponds, meadows and other habitats have been created for a variety of wildlife



## ROYAL PORTBURY DOCK "GREEN" PLAN

Bristol's Royal Portbury Dock is the only port designed to integrate wildlife corridors within its operational areas. The first masterplan was drawn up in 1991 to safeguard rich wildlife habitats without compromising the ability of the port to grow commercially. Although this masterplan is voluntary and has no legal status, nonetheless, it is recognised by environmental organisations and agencies as an excellent example of how industry and wildlife can co-exist. Since 1991, the plan has been updated regularly to reflect changes in the port and in the diversity and health of the wildlife corridors, which are regularly monitored to ensure that ecological objectives are met.

## THE WILDLIFE CORRIDORS

The concept behind the port's wildlife corridors is to maintain habitats and scarce animals and plants, whilst creating green links to allow free and safe movement of mobile species. Within these extensive corridors, habitats include wetlands, reed beds, flower-rich meadows, ponds and ditches, ancient woodland, hedgerows, scrub and saltmarsh. The total area of the wildlife corridors is some 260 acres (105 hectares) with a commercial value in excess of £50 million. In addition to managing the corridors, new areas of woodland and scrub have been created. To date, some 42,000 trees and shrubs have been planted and 12 ponds have been excavated and carefully profiled for maximum wildlife interest.

## CONSERVATION PROJECTS

### Owls

All UK species of owl are now resident with many wintering within the port estate, including the scarce barn owl. To encourage breeding further, a 31 acre (12 hectare) area of farmland adjacent to the port was purchased and covenanted for the protection and development of wildlife. It is managed for small mammals, which provide food for the owls and has become known locally as 'Vole City'. Owl nesting boxes have been erected within 'Vole City' and the port's wildlife corridors. With barn owls and little owls nesting in the port, also short-eared and long-eared owls visiting in the winter, this conservation programme is most unusual and highly successful.

### Water Voles

Parts of Royal Portbury Dock's drainage system provide an ideal habitat for the now nationally scarce water vole. However, potential use of this habitat by voles was prevented by the presence locally of its key predator, mink, which appeared in the 1980s. The mink have now been removed and a water vole release programme



Water Vole release programme carried out in conjunction with Bristol Zoo

has been undertaken, in conjunction with Bristol Zoo. After four years, the breeding success of the water vole is outstanding.

## Further Conservation Schemes

Our environmental consultants have undertaken a wide variety of habitat creation and enhancement projects in the Port, including the following:

- Twelve ponds have been created, eight for great crested newts.
- Badger and otter passes have been installed under roads in Portbury Dock.
- Exclusion areas are being established during the peregrine falcon nesting season.
- Operational areas adjacent to the estuary have been surfaced with gravel providing nesting habitat for ringed plover and oystercatcher.
- There are plans to construct a nesting cliff for sand martins and kingfishers.
- Log-pile habitats will be created which support most British species of reptile, including lizards, grass snakes, slow-worms and adders.

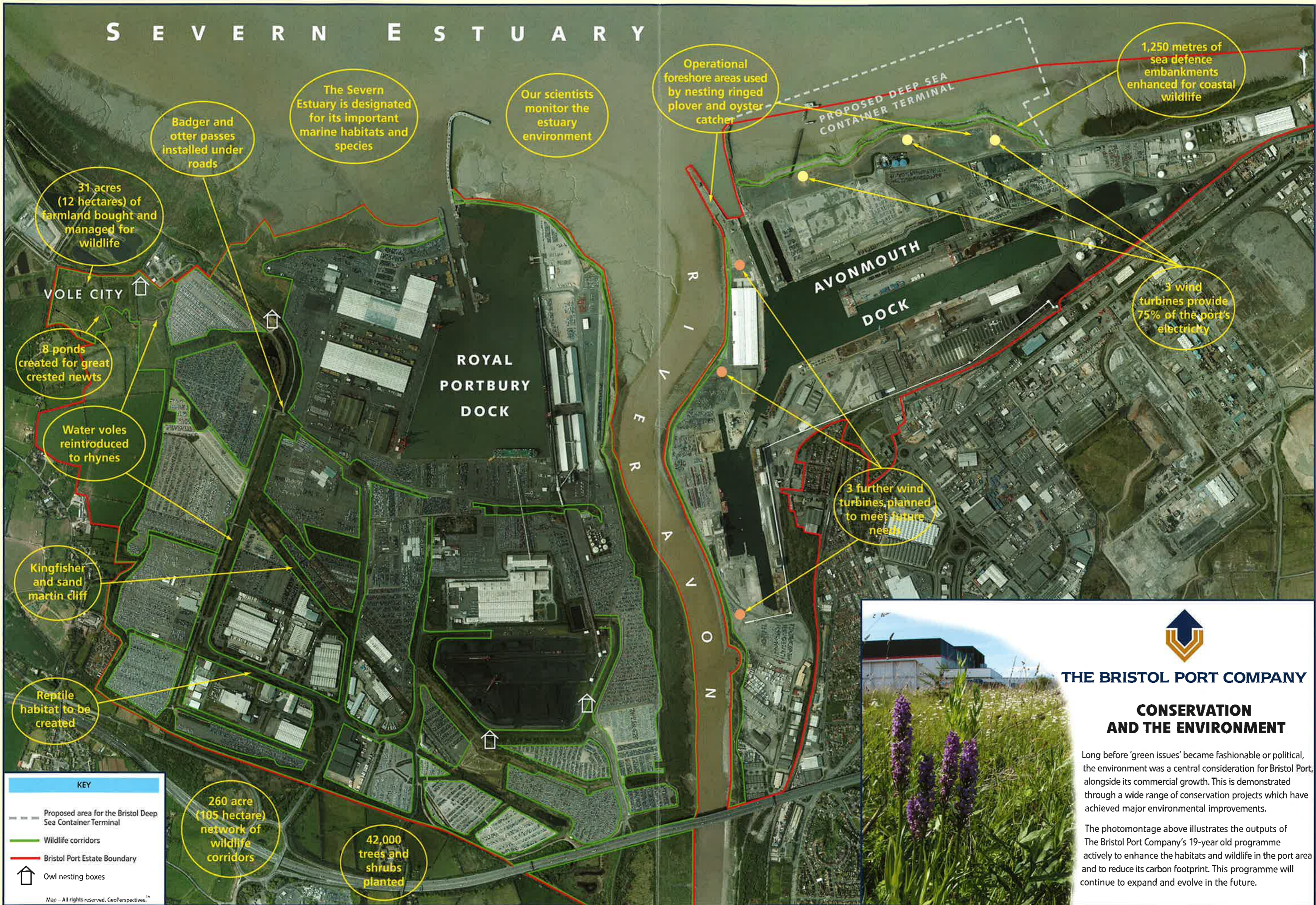
## SUSTAINABLE DEVELOPMENT

Bristol Port has expanded significantly over the last two decades, which has created pressures on some green areas. In order to "offset" any loss of green land, the port purchased an area of some 116 acres (47 hectares) of arable land to the south of the port. If an area is required for development at Royal Portbury Dock, which cannot be achieved without affecting the wildlife corridor network, then appropriate land is withdrawn from intensive agricultural use and converted for wildlife conservation. So far, some 76 acres (31 hectares) have been committed to nature conservation in this way, and more large areas of wetlands created.

## AVONMOUTH DOCK ESTATE

The port inherited a legacy of Victorian docks at Avonmouth in which no wildlife corridors can be created. However, there are still opportunities for enhancement. An example is the sea defence embankments. These earth bunds have been designed and planted to create foreshore wildlife-rich areas. Some areas support a diverse flora and provide habitat for insects, small mammals and birds.

# SEVERN ESTUARY



Badger and otter passes installed under roads

The Severn Estuary is designated for its important marine habitats and species

Our scientists monitor the estuary environment

Operational foreshore areas used by nesting ringed plover and oyster catcher

1,250 metres of sea defence embankments enhanced for coastal wildlife

31 acres (12 hectares) of farmland bought and managed for wildlife

VOLE CITY

8 ponds created for great crested newts

Water voles reintroduced to rhynes

Kingfisher and sand martin cliff

Reptile habitat to be created

ROYAL PORTBURY DOCK

AVONMOUTH DOCK

3 further wind turbines, planned to meet future needs

3 wind turbines provide 75% of the port's electricity

260 acre (105 hectare) network of wildlife corridors

42,000 trees and shrubs planted

**KEY**

- Proposed area for the Bristol Deep Sea Container Terminal
- Wildlife corridors
- Bristol Port Estate Boundary
- Owl nesting boxes

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## THE BRISTOL PORT COMPANY

### CONSERVATION AND THE ENVIRONMENT

Long before 'green issues' became fashionable or political, the environment was a central consideration for Bristol Port, alongside its commercial growth. This is demonstrated through a wide range of conservation projects which have achieved major environmental improvements.

The photomontage above illustrates the outputs of The Bristol Port Company's 19-year old programme actively to enhance the habitats and wildlife in the port area and to reduce its carbon footprint. This programme will continue to expand and evolve in the future.

# ... ACTIONS SPEAK LOUDER THAN WORDS



*Industry and nature working side by side*

## RENEWABLE ENERGY

At Bristol Port we are aware of the need to reduce our carbon footprint and to tackle climate change. Since August 2007, most of the electricity required by the port has been provided by three 'Ecotricity' wind turbines in Avonmouth Dock. Each wind turbine is capable of generating two megawatts of electricity, and together they meet 75% of the port's needs which is the equivalent of around 4,700 homes. By choosing renewable energy rather than conventionally generated power, the Bristol Port Company will save over 15,000 tonnes of carbon emissions every year. The port plans to construct three more wind turbines within the Avonmouth Dock estate which will meet the port's current and future needs.

## RESOURCE MANAGEMENT

Using resources efficiently brings economic as well as environmental benefits. The Bristol Port Company monitors and, where possible, reduces our consumption of resources and we apply the "reduce, re-use, recycle" approach to managing our wastes. The port's actions to make our use of resources more sustainable include the following:

- We ensure that energy is used with the optimum efficiency, for example, by fitting low energy lighting in all our offices and controlling our warehouse and area lighting with photocells. In addition, office heating systems have been upgraded and fitted with optimiser controls.
- Our utilities, such as electricity and water, are continuously monitored using smart meters to allow us to identify and eliminate waste. Examples of this include, switching off machinery when not required and immediately repairing water leaks to conserve water.
- We seek to re-develop our brown-field sites in order to maximise the efficient use of commercial land in the port.
- Materials from demolition works are re-used in our new building and maintenance activities, particularly recycled aggregate that avoids the requirement to excavate and transport new material from quarries.

- Our existing infrastructure is maintained in a sustainable manner, for example we use timber from renewable sources to repair our lock gates and fenders.
- Sustainable Drainage Systems are installed in the port, which reduce flooding, protect water quality and provide wildlife habitat.
- Port employees make an important contribution to recycling a wide range of office and operational wastes, from paper and print cartridges to car batteries and used motor oil/hydraulic fluid.
- Over 70% of garbage waste landed by EU ships in the port is recycled, including paper, glass, metal and plastic.

## THE MARINE ENVIRONMENT

The Severn Estuary has one of the highest tidal ranges in the world and its extensive mud and sand flats regularly support internationally important migratory bird populations. The conservation interest of the estuary's habitats and species is recognised in their designation under national, European and international law. The port is committed to take account of nature conservation in all of our functions and we manage our operations in a responsible manner. The environment in which the port operates is monitored by our scientists in order to improve understanding of the estuary regime and to support effective decision making.

Over the past decade, we have worked in partnership with statutory bodies and nature conservation agencies to implement a management scheme for the Severn Estuary European Marine Site (designated under the EU Habitats and Birds Directives). The port is also working in partnership to implement the EU Water Framework Directive and is a member of the liaison panel for the Severn River Basin. This panel advises on future river basin planning in the Severn region, promoting the protection, improvement and sustainable use of the water environment.

## SAVING ROAD MILES AND CARBON EMISSIONS

The environmental benefits of The Bristol Port Company are felt not only in our immediate dock estates, but also more widely across the UK as Bristol is the closest deep water port to the population as a whole. Forty five million people can be reached within a 300km radius from the port.

Compared to other deep water ports, this saves millions of road miles every year (and the resultant emissions) when transporting freight to its ultimate destination. This makes Bristol Port the green choice for cost and environmental savings.



*Turbines now generate 75% of the port's energy requirements and will provide more in the future.*

*A ringed plover nesting in the port.*



*"The idea of industry co-existing so perfectly with wildlife may seem alien to some, but I have witnessed the two working side by side within the confines of The Bristol Port Company estate. Whether one looks at the important grasslands that harbour a diversity of small mammals and insects, or the nationally rare owls that breed on the estate, it is clear that sensitive environmental management has allowed both wildlife and business to flourish simultaneously.*

*We remain concerned about the bio-diversity of our fragile planet, yet we should be reassured that these new areas for wildlife, created within working industrialised areas, such as Royal Portbury Dock and Avonmouth docks, prove that the Bristol Port Company is playing its part by thinking globally and acting locally."*

**Chris Sperring MBE, Hawk and Owl Trust**



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