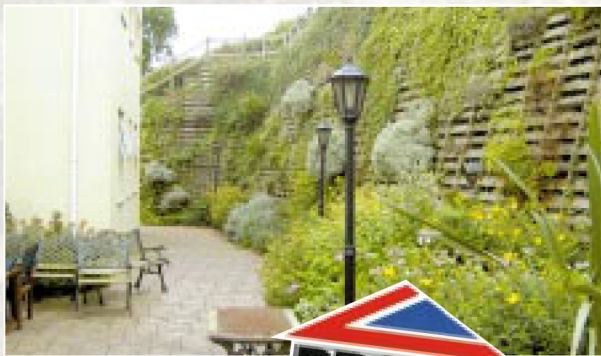




Permacrib Timber

# Walling System



**Phi  $\Phi$  Group**

engineering for the environment



# The Natural Choice

## Description

Permacrib is a structurally engineered walling system, utilising the long established gravity wall concept. The patented lightweight interlocking crib components form a series of open cell modules. These are then filled with well graded stone to create the mass required to counteract the earth pressures and surcharge loadings. Structural integrity is achieved through the interaction of the crib elements and the granular infill.

## Application

Uses include simple landscaped walls and major civil engineering retaining structures. Additionally Permacrib can be used to provide a landscaped and aesthetically pleasing face to reinforced earth or soil nailed structures. It can also act as a facing to sheet piling or concrete retaining walls, as well as creating vertical acoustic barriers.

## Composition & Manufacture

Permacrib is manufactured from selected Radiata Pine softwood from managed, cultivated, renewable forest resources. This ensures that environmental concerns for the conservation of resources and a sustainable future are met. Manufacturing is carried out to an approved Q.A. system ensuring a high level of dimensional accuracy. All machining is completed before treatment.

## Durability

All components are pressure treated to BS.8417:2003 using High Concentration Copper Azole preservative. Complete cell penetration is achieved to give full protection. All Permacrib components carry a 60 year guarantee.

## Economical & Flexible Design

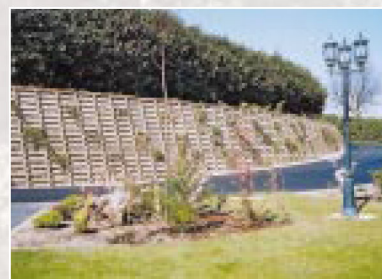
Design versatility of the 8 readily available models enables header sizes to be mixed within the same structure for maximum economy or in major structures double or triple skin walls can be created for maximum support. Face profiles can be varied to form benches to assist landscaping and enhance architectural appeal. Angle changes are easily formed and radii followed.

## Delivery

Permacrib is delivered to site in either standard component packs or in special packs tailored to suit particular structures or construction sequence requirements.

## Technical Approval

British Board of Agrément Certificate No 95/3115 issued in 1995.





# Environmentally Friendly

## **Mitigation of Greenhouse Effects**

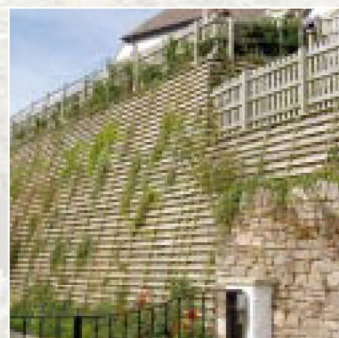
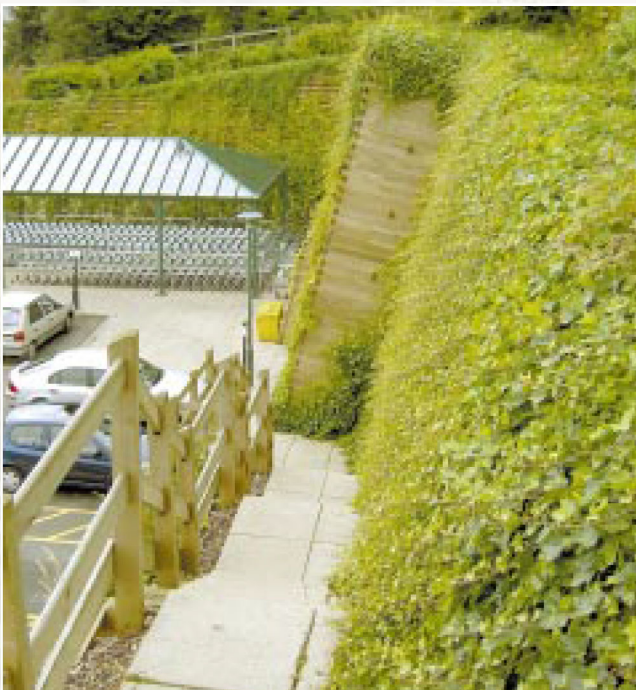
Trees are the lungs of the earth - absorbing CO<sub>2</sub> and converting it to oxygen. Mature trees absorb less CO<sub>2</sub> therefore by harvesting and re-planting with young specimens a constant cycle of CO<sub>2</sub> absorption is ensured. Manufacture and construction are very simple and requires very low levels of energy.

## **Treatment**

Permacrib is treated and cured at U.K. plants which are subject to stringent environmental health controls and checks.

## **Landscaping**

Permacrib walls can be fully landscaped with a variety of plants, which enhance its natural appearance, helping the wall blend into its surroundings.





# The Complete Package

From concept to construction, the Phi Group philosophy is to provide a complete service. With a broad range of products and over 20 years of practical experience, Phi Group's dedicated and specialised commitment to engineering excellence will ensure that the structural, aesthetic and economic aspects of your project are handled efficiently, serving to create a design that will inspire confidence and gain client approval.

## Design

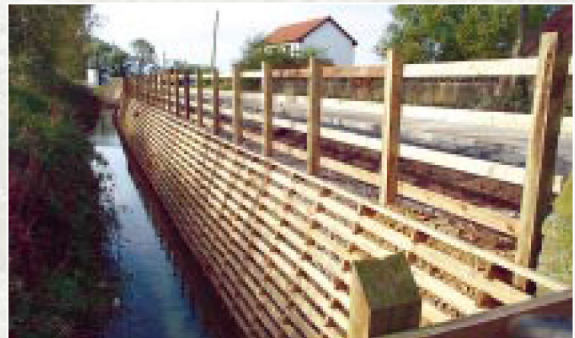
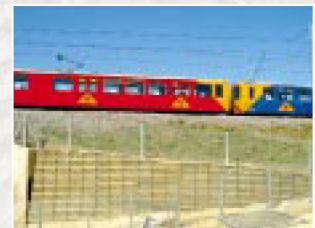
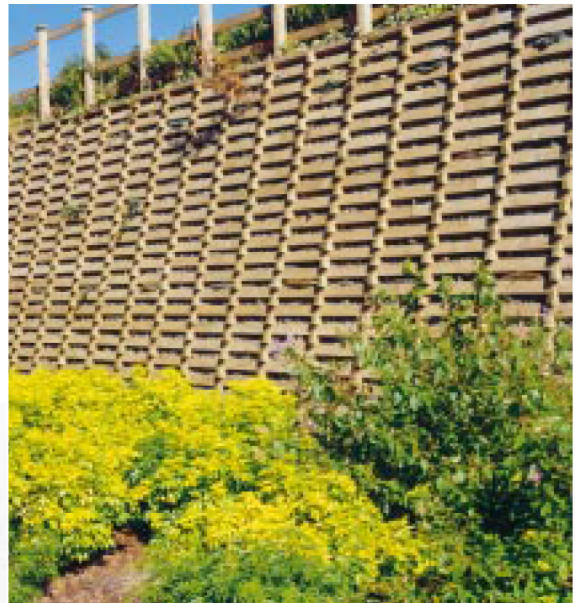
Phi Group offer a full design, supply and construction service. From feasibility to construction drawings, every step is closely monitored by Chartered Engineers and backed up by full Professional Indemnity Insurances.

## Construction

Phi Group's own experienced construction teams, operational nationwide, complete Phi Group's total design, supply and build package. Thus affording, client and contractor alike, optimum peace of mind and minimum risk.



Phi Group has full Link-up accreditation, enabling the company to provide engineering solutions to the Railway sector.



engineering for the environment



## Geo-Coastal Engineering Ltd

Tel: 087-6281871

Email: [info@geo-coastal.ie](mailto:info@geo-coastal.ie)

Website: [www.geo-coastal.ie](http://www.geo-coastal.ie)