

## A.G.A. WOOD Systems

### Reliable and environmentally acceptable materials for use in sustainable bio-engineering systems

**Hazel - Chestnut - Willow** and softwoods used by the A.G.A. Group is harvested from plantations and, as a renewable source, has no detrimental effect on the environment

#### EROSION CONTROL AND BANK RESTORATION.



At A.G.A. we have devised many erosion control and river training programs incorporating faggots. This is usually in conjunction with a range of our products that is often dictated by specific environmental considerations.

Once faggots are placed they have a very long life and become an integral part of the project, particularly where coir fibre roll and pallets are used.

#### Faggots:

- support fibre rolls or pallets at the correct water level
- protect banks and accrete silt while the vegetation establishes
- provides a safe aquatic habitat
- suitable for fast flowing waters
- meet exacting environmental standards

#### SPILLING LIVING BANK REVETMENT

Spilling bank retaining system uses live willow withies woven between osiers (live willow stakes) which are installed into the bank or river bed. This creates a viable hurdle like structure that, within months (depending on climatic conditions) will form dense root and top growth.

The characteristics of live willow may impose some restrictions to suitability in some circumstances. Our consultants will offer guidance as to the benefits or limitations of the system.



#### Spilling

- offers protection from erosion both above and below the water line.
- stabilises the embankment behind the structure
- rapidly establishes a strong root mass and vigorous top growth. Subsequent management will control growth to achieve the required finish.
- can be used in a wide variety of situations
- is self regenerating



#### SLOPE AND BANK STABILISATION

##### Osiers (*Willow stakes*)

Osiers (live willow stakes) can be used to form a key between shallow slip soil and underlying competent ground.

They provide:

- Rapid root formation to stabilise soil
- Lush vegetation transpires moisture from bank
- Improved pore water characteristics

# A G A W O O D

The A.G.A. Group provide proven, economical and long lasting solutions in a whole range of bio-engineering applications incorporating our wood products.

**A.G.A. only use FSC certified suppliers to support best management practices of the worlds forest.**

## FASCINE MATTRESSES



### Weips and brushwood

Willow fascine mattress technology, pioneered by the Dutch over the centuries, has been well proven to control erosion in tidal and fast flowing waters.



Fascine mattresses are made from bundles of willow branches known as Weips and brushwood bundles. They are constructed according to the application and usually anchored into position with rocks and or boulders.

- Extremely long lasting (Once submerged fascines can last for hundreds of years)
- All natural materials
- Can also be used in conjunction with other erosion control materials

## SUPPORTS, POST, RAILS AND FENCING

### Softwood treated posts

We selected our softwood posts from top quality slow grown timber. To reduce the possibility of twisting or warping posts are cut from large section timber which is then pressure treated.



- Sizes to suit most applications
- Machined ends for easy installation
- Chestnut posts

Because we only source suppliers who have

achieved Forest Stewardship Council (FSC) certification – this means that our chestnut products can be traced back to source.

- Chestnut very long lasting
- Strong, robust and hard wearing
- Durable in the ground and under water

The products shown here are specifically tailored to our installation techniques. They are often supplied as part of our project package.

We do however sell each product in its own right and if required, tailored to the client's own specification.

Live willow or prepared wood can often provide environmentally engineered solutions to enhance either existing or new structures.



| Supports, Rails and Fencing |                            |
|-----------------------------|----------------------------|
| Treated Softwood            |                            |
| Diameter                    | Lengths                    |
| 50 mm x                     | 1.2 m -1.8 m - 2.2 m       |
| 75-80 mm x                  | 1.2 m -1.8 m - 2.2 m       |
| 80-100 mm x                 | 1.8 m - 2.2 m              |
| Machined and Treated        |                            |
| 80-100 mm x                 | 1.8 m - 2.2 m              |
| Clefted Chestnut            |                            |
| 50-60 mm x                  | 1 m - 1.2 m                |
| 75 mm x                     | 1 m - 1.2 m - 1.6 m -1.8 m |
| Round Chestnut              |                            |
| 100 mm x                    | 1.8 m                      |
| Posts                       |                            |
| Treated softwood            |                            |
| 50 mm x                     | 1.2 m - 1.8 m - 2.2 m      |
| 75-80 mm x                  | 1.2 m - 1.8 m - 2.2 m      |
| 80-100 mm x                 | 1.8 m - 2.2 m              |
| Machined and Treated        |                            |
| 80-100 mm x                 | 1.8 m - 2.2 m              |
| Clefted Chestnut            |                            |
| 75-80 mm x                  | 1.8 m - 2.2 m              |
| 80-110 mm x                 | 1.8 m - 2.2 m              |

The A.G.A. Group installation teams operate solely within the field of aquatic and bioengineering. We operate a policy of 'Best Practice' and are bound by the Code of Conduct of both the Institute of Fisheries Management and the Society of Biology. The A.G.A. Group will quote for the supply of materials, their installation or for 'turnkey' projects.

A.G.A. is Quality assured to: ISO9001 : 2008 and ISO14001 : 2004

Registered: Achilles Utilities Vendor Database No. 705965

A.G.A. Group, MMG and MHP are trading styles of A.G.A. Bio-engineering Systems Limited



## Dedicated To The Environment



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