



Institution St Joseph  
Mesnières en Bray



**Leonardo**



## **e.manual**

### **Fiche n°1 :the near nature technics of management : willow weaving**

#### **The aims of the project :**

Realise a work using near nature management around a pond,like willow weaving, in the weber parc of St Aubin le Cauf (Normandie,France).The aim is so to mixed disabled persons with students of the college to work in the same project.

Create a new garden « solidaire » using willow weaving and land art methods in the parc of Mesnières casstle

**Target public :** The classroom of seconde générale et technologique (STAV)  
The disabled adults of the Weber parc (APEI)

#### **Technical presentation :**

The goal of the near nature management is to use live plants or a part of the plant( roof,seed,cutting...) to resolve some mecanic problems in management, as protection and regeneration of the soil or erosion problematics( Lachat B 1995)

The vegetal management must be a true and efficient management with hight expectations, wich use principally the vegetal to built and create a work.

This technique takes part to a sustenable development, green economy and biodiversity preservation.

The aim is to use principally the raw matériel of the local territory.

The techniques can be mixed with traditional works of civil ingeenering.

#### **History :**

The near nature methods which try « to look like the nature and accelerate its work »goes back a long way..

We found some willow weaving works dated of the VII century in the Jura Suisse (lachat B;1999) .

During the XVII,XVIII and XIX th centuries,we used also this method to fight landslides or to avoid the river side erosion. In France, a special organisation (the Restoration of Mountain Lands) did a lot of studies all along the XIX and the XX th centuries. (Demontzey,1878).

Today all the technical near nature methods find a new development , because of the new scientific knowledges, new machineries of civil ingeenering, new materials as geotextile and a new conception of the sustenable and integrated managements.

## The plants :

The rule is to look like nature and to use raw material as indigenous species. The plants must be in their ecologic field and be able to answer to the technical expectations(regeneration,flexibility, sustainability...). It 's better to mix 3 or 4 different tree species because of health reasons.The most important tree is willow . But be careful some of them aren't so good ! for instance Salix Caprea as a poor regeneration.

## Willow weaving methods (1) :



Willow branches

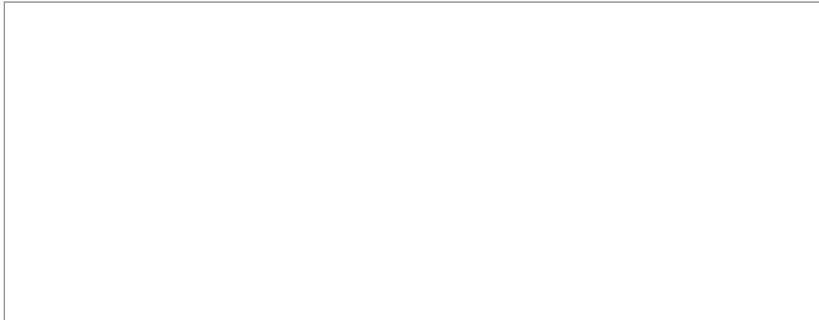
Willow weaving in landscaping



Willow weaving to protect  
The toe of a river bank

## **Définition :**

The willow weaving is a special natural methods to protect the toe of the banks, to fight soil erosion or the water streaming down of the soil. It is built with willow branches weaving around stakes (dead or in live),driven in mechanically.This management is functional as soon as the creation



Detail of construction

## **Sphere of activities:**

- The protection of the toe of thebanks with slow dynamic or small width (< to 15 m) rivers.
- This technique must be done with other vegetal managements in the middle and the top of the bank (plantation,cutting...)
- The implementation of vegetal terrace in landscaping in a erosion context
- The vegetal creation of landart

## **Realisation :**

After you prepared a good station,you have to sink a line of stakes in a mechanical way. You can use willow or other species as chestnut tree or acacia ( 7 à 10 cm in diameter,and more than 150 cm long ; one stake every 60-80cm in the river side). If you work in landscaping , you can change the size !

Weaving the willow branches alive (1,5 to 3 cm of diameter and more than 200 cm long). The extremity of the branches must be put on the downstream. You have to use 10 or 12 branches for each meter.

To get a good and compact work, you have to press down all the branches. If you want an alive work take care to put each branche in the soil of the bank.

To complete the binding and to press more the branches, you can link the stakes with wire of 3 mm of diameter.

Bank up behind the work with local ground and gravel and be careful to cut properly each stake after the last driving in.

## **Commentaries:**

To have success with a river side work,, take care to put it in the middle level of the water stream

### **Exemple of réalisation :**

Willow weaving around a pond in the Weber parc of St Aubin le Cauf .

The Weber parc is a touristic and ecologic garden . It 's managed and cleaned by the disabled adults people.

Willow weaving is so used in the parc of Mesnières' castle in landscaping and land art !

In the web site of St Joseph Institution

-Video FR3 2014

-flyer about willow weaving

-photos album

### **Bibliography and sitography:**

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#### **In english :**

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River and riverside land in the Kent downs lanscape.

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