

### Test stretch 1 on the River Wümme



#### Key Data

Measure-ID	Wue017li_01_01
Estuary	Weser
Waterway	Wümme (5301)
Chainage	Km 17.31 - 17.39
Bank side	Left

#### Contact

WSA Weser-Jade-Nordsee, branch office Farge  
Tel.: 0421-69212-210

#### Available documentation

BfG „Technisch-biologische Ufersicherung an drei Versuchsstrecken an der Wümme“,  
September 2019

#### DESCRIPTION OF THE MEASURE

##### Dead wood protection measure

Brushwood box toe protection, brushwood mattress

##### Measure with live material

Reed beds

##### Reason for implementing the measure

Bank protection: bank erosion with erosion edge reaching up to vegetation border  
Dike protection: dike toe

##### Bank protection required due to:

Current loads

##### Development and maintenance of measure

After 6-10 years the area needs to be reworked. In order to restore 10-15 m of the structure, 4-7 persons per day are required to work under tidal conditions. The installation of a brushwood box on the riverside and a brush mattress off the bank prevented erosion of the bank and the reed edge. Vegetation increased from 60 % to 85 % and plant diversity grew from 9 to 12 species. The maintenance interval required is 6-10 years; the replacement interval is 6-10 years.

#### MATERIAL

##### Material input

525 m of piles: length = 3.5 m, diameter = approx. 10 cm; 205 m<sup>2</sup> of brushwood material: length = 2.5-3 m; 71.15 kg wire (galvanised, 5 mm), 3.43 kg staples (galvanised)

##### Live materials used

Reed beds  
Origin: from own locally grown reed

##### Fascine material

Willow, birch, oak, rowan, ash, hazel, beech, mixed hardwood  
Origin: regional

##### Pile material

Spruce, larch, fir, mixed softwood  
Origin: local, regional

##### Other construction materials

Steel wire and staples for fixing  
Origin: national

#### EXPENDITURE

Work days/person	5
Number of persons	5-6
Construction period	February 2014 (7 days)

## Boundary conditions

### CHARACTER OF WATER BODY

#### Type of water body

Main water channel

#### Characteristic water levels\*

Mean tidal range	2.14 m
Mean high water	1.99 m
Mean low water	- 0.15 m

#### Classification as moderately saline\*\*

Not specified

\*from measurements for the period 01.04.2009-31.03.2019 at the Niederblockland gauge

\*\* not specified

### CHARACTER OF THE RIPARIAN ZONE

#### River bend

Undercut bank

#### Slope inclination

1:3 or flatter

#### Dominating soil type

Silt

#### Pollutant load

No pollutant load

#### Natural structures below mean high water

Not specified

#### Natural structures above mean high water

Not specified

#### Vegetation

Reed, tall forbs

#### Land use

No Grassland use

### PROPERTY DATA

Land owner (bank)	German Federal Waterways and Shipping Administration (WSV)
Land owner (foreshore)	Federal State
Lease	No

### NATURE CONSERVATION

#### Special Protection Area

Blockland (DE2818401)

#### Special area of conservation under Habitats Directive

Lower Wümme (DE2819301)

#### Natural habitat type under Habitats Directive

Unknown

#### Nature conservation area

Lower Wümme (ni\_NSGLÜ 00164)

#### Legally protected biotopes

(Bundesnaturschutzgesetz)

According to § 30 (2) no.1: near-natural zones of flowing inland waters incl. their riparian zones

#### Specially protected flora species

Not specified

#### Specially protected fauna species

European songbirds: among others, reed- and ground-nesting birds

### SHIPPING TRAFFIC

#### Navigation by ships

Recreational ships

#### Location in relation to navigation channel

Facing the navigation channel

#### Speed limit

8 km/h

#### Shipping traffic parameters\*

Number of ships/year	42
Mean distance between passing ships	23 m
Ship dimensions**	Length > 27 m Width > 7 m

\*source: AIS data analysis from 2019

\*\*10 % of the largest passing ships