

Brushwood Mattress on the River Pinnau



Key Data

Measure-ID	Pin007li_01_01
Estuary	Elbe
Waterway	Pinnau (3601)
Chainage	Km 6.75 - 7.00
Bank side	Left

Contact

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Available documentation

Photographic documentation, construction journal, system sketches, cross-sectional surveys

DESCRIPTION OF THE MEASURE

Dead wood protection measure

Brushwood mattress

Reason for implementing the measure

Dike protection: dike toe

Bank protection required due to:

Failure of material, current loads

Development and maintenance of measure

An average of 15 running metres of brushwood mattress were built per day. Maintenance work is required every 10-12 years with staff requirements of 15 person days. The structure silted up within a short period and has been stabilised by the roots of the growing vegetation (reed). The maintenance interval required for the measure is > 10 years; the replacement interval is > 10 years.

MATERIAL

Material input

Fascine rolls: Length = 3.0 m, diameter = 30 cm, stacked pattern of Layers with a total thickness of approx. 50 cm and with 1,0 m pattern for the piles (piles length = 3.0 m, diameter = 12-15 cm), covering a slope of approx. 7.20 m

Fascine material

Willow

Origin: regional

Pile material

Pine

Origin: regional

EXPENDITURE

Work days/person	25
Number of persons	3
Construction period	May to July 2018

Boundary conditions

CHARACTER OF WATER BODY

Type of water body

Main water channel

Characteristic water levels*

Mean tidal range	2.23 m
Mean high water	1.71 m
Mean low water	- 0.51 m

Classification as moderately saline**

Not specified

* from measurements for the period 01.09.2009-31.08.2019 at the Uetersen gauge

** not specified

NATURE CONSERVATION

Special Protection Area

No

Special area of conservation under Habitats Directive

No

Natural habitat type under Habitats Directive

No

Nature conservation area

No

Legally protected biotopes

(Bundesnaturschutzgesetz)

Not specified

Specially protected flora species

Not specified

Specially protected fauna species

Not specified

CHARACTER OF THE RIPARIAN ZONE

River bend

straight bank

Slope inclination

1:3

Dominating soil type

Clay

Pollutant load

No pollutant load

Natural structures below mean high water

Not specified

Natural structures above mean high water

Not specified

Vegetation

Reed

Land use

Grassland use: Not specified

SHIPPING TRAFFIC

Navigation by ships

Recreational ships

Location in relation to navigation channel

Facing the navigation channel

Speed limit

No speed limit

Shipping traffic parameters*

Number of ships/year Not specified

Mean distance between passing ships Not specified

Ship dimensions** Not specified

*source: AIS data analysis from 2019

**10 % of the largest passing ships

PROPERTY DATA

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