

### Brushwood box on the sandbank Kleinensieler Plate



#### Key Data

Measure-ID	Uwe055li_01_01
Estuary	Weser
Waterway	Lower Weser (5298)
Chainage	Km 54.60 - 54.85
Bank side	Left

#### Contact

WSA Weser-Jade-Nordsee, branch office Blexen  
Tel. 0471-4835-0

#### Available documentation

Inspection reports, images

#### DESCRIPTION OF THE MEASURE

##### Dead wood protection measure

Brushwood box toe protection

##### Measure with live material

Reed beds

##### Reason for implementing the measure

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

Promotion: development of reed

##### Bank protection required due to:

Ship waves, wind waves, storm surge, current loads

##### Development and maintenance of measure

Maintenance of approx. 250 m requires 8 days with 9 persons working, plus watercrafts. As the brushwood box proved successful in the first test, the structure was enlarged.

Bank protection was effective. The maintenance interval required for the measure is 1-2 years; the replacement interval is 6-10 years.

#### MATERIAL

##### Material input

180 m<sup>3</sup> of fascine material; 1,900 m of piles

##### Live materials used

Reed beds

Origin: from own reed grown

##### Fascine material

Willow, pine, birch, spruce

Origin: regional

##### Pile material

Pine, spruce

Origin: regional

#### EXPENDITURE

Work days/person	8
Number of persons	9
Construction period	2018 to August 2021

### Boundary conditions

#### CHARACTER OF WATER BODY

**Type of water body**

Main water channel

**Characteristic water levels\***

Mean tidal range	3.98 m
Mean high water	1.93 m
Mean low water	- 2.05 m

**Classification as moderately saline\*\***  
mesohaline

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

\*\* from measurements for the period 01.01.2008-31.12.2017 at the Nordenham measuring station

#### CHARACTER OF THE RIPARIAN ZONE

**River bend**

Undercut bank

**Slope inclination**

Not specified

**Dominating soil type**

Silt

**Pollutant load**

Unknown

**Natural structures below mean high water**

Creeks, inlets with low flow velocities

**Natural structures above mean high water**

Natural bank wall/aggradation, natural dead wood

**Vegetation**

Reed

**Land use**

No Grassland use

Compensation area

#### PROPERTY DATA

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

#### NATURE CONSERVATION

**Special Protection Area**

No

**Special area of conservation under Habitats Directive**

Lower Weser (DE2316331)

**Natural habitat type under Habitats Directive**

Estuaries (1130), mudflats and sandflats not covered by seawater at low tide (1140)

**Nature conservation area**

Tidal Weser (ni\_NSOG WE 00315)

**Legally protected biotopes**

(Bundesnaturschutzgesetz)

Brackish tidal flats, Beds of reed canary grass, Estuarine sandbank/sand beach, Brackish-water reed

**Specially protected flora species**

Unknown

**Specially protected fauna species**

Various bird species

#### SHIPPING TRAFFIC

**Navigation by ships**

Cargo vessels, recreational ships

**Location in relation to navigation channel**

Facing the navigation channel

**Speed limit**

No speed limit

**Shipping traffic parameters\***

Number of ships/year	11,702
Mean distance between passing ships	420 m
Ship dimensions**	Length > 144 m Width > 24 m

\*source: AIS data analysis from 2019

\*\*10 % of the largest passing ships