Brushwood training wall Warflether Sand

Key Data

Measure-ID	Uwe024li_01_01
Estuary	Weser
Waterway	Lower Weser (5298)
Chainage	Km 23.5 - 24.9
Bank side	Left

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

Available documentation
Daily reports, photographic documentation

DESCRIPTION OF THE MEASURE

Dead wood protection measure
Brushwood training wall

Reason for implementing the measure
Bank protection: beach protection, sediment trap

Bank protection required due to:
Ship waves, current loads

Development and maintenance of measure
The bank protection has been in place for several decades and its year of installation is unknown. In 2020 general repair work was carried out. After 3-5 years the area needs to be reworked. In order to restore 10-15 m of the training wall, 6-8 persons per day are required to work under tidal conditions. Ongoing maintenance of the structure is necessary to ensure lasting protection of the nature-based bank design.
The maintenance interval required is 3-5 years; the replacement interval is also 3-5 years.

MATERIAL

Material input
7,670.40 m³ of brushwood: length = 1,400 m, width = 3.20 m, height of the structure = 0.20-1.60 m

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

Pile material
Spruce, larch
Origin: local, regional

Other construction materials
Steel wire and staples for fixing
Origin: national

EXPENDITURE

Work days/person	141
Number of persons	6-14
Construction period	March 2020 to June 2021

Boundary conditions

CHARACTER OF WATER BODY

Type of water body
Main water channel

Characteristic water levels*

Mean tidal range	3.88 m
Mean high water	2.25 m
Mean low water	- 1.64 m

Classification as moderately saline**
oligohaline

* from measurements for the period 01.04.2009-31.03.2019 at the Farge gauge
** from measurements for the period 01.01.2007-31.12.2016 at the Farge measuring station

CHARACTER OF THE RIPARIAN ZONE

River bend
Straight bank

Slope inclination
1:5

Dominating soil type
Sand

Pollutant load
No pollutant load

Natural structures below mean high water
Not specified

Natural structures above mean high water
Natural bank wall/aggradation

Vegetation
Near-natural floodplain forest, mixed forest, reed, rushes, tall forbs

Land use
No grassland use
Use of the beach by tourists

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
Side arms of the River Weser with the island Strohauser Plate and the peninsula Juliusplate (DE2516331)

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_NSG WE 00315)

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
Sheep's-bit *(Jasione montana)*, small cudweed *(Filago minima)*, Early Hair-grass *(Aira praecox)*

Specially protected fauna species
European songbirds: among others, reed- and ground-nesting birds

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	11,275
Mean distance between passing ships	148 m
Ship dimensions**	Length > 127 m Width > 21 m

*source: AIS data analysis from 2019
**10 % of the largest passing ships