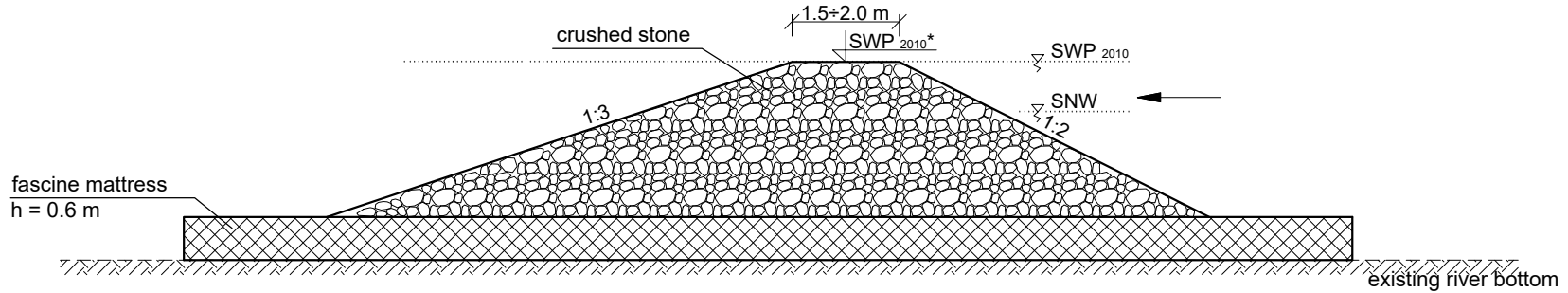


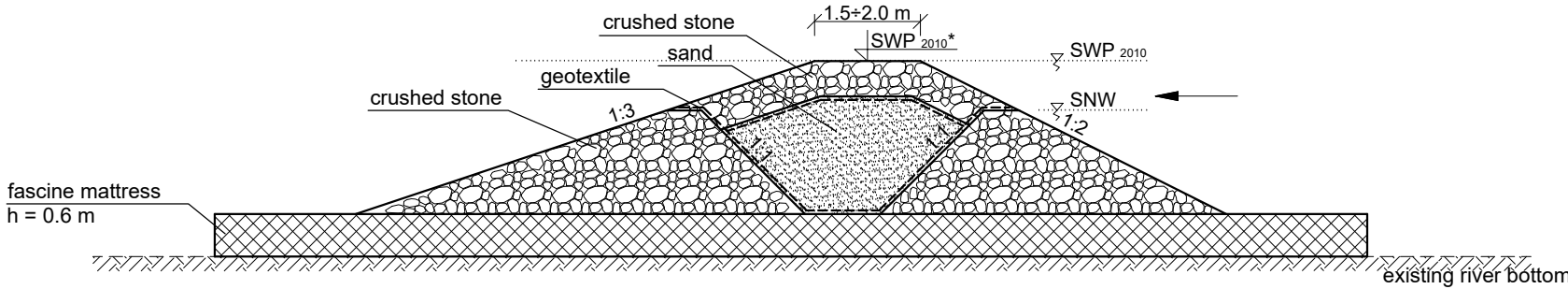
CONSTRUCTION OF NEWLY-DESIGNED GROYNES

Cross-section
Head part,
stream part - type 1
scale 1:100



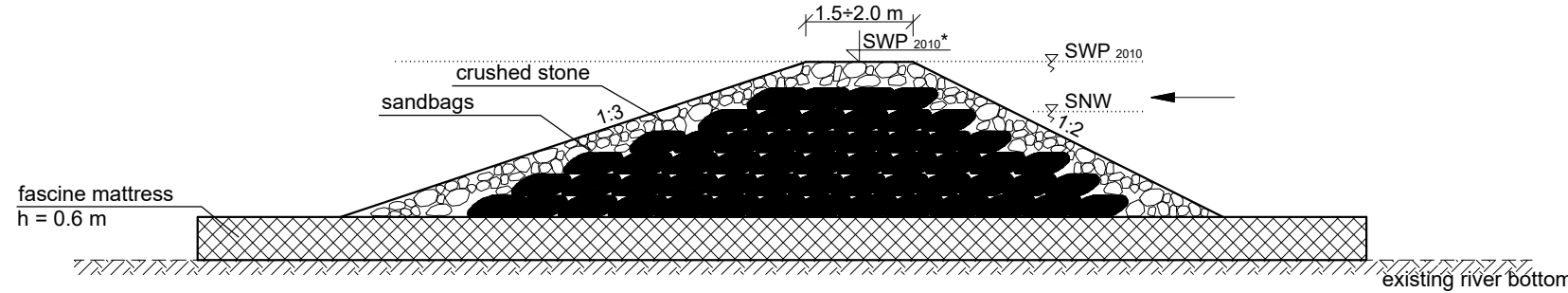
* SWP 2010; from 542.4 to 617.5 km
SWP 2010 - 0.5 m; from 617.6 to 694.0 km for KRC-W5

Cross-section
Stream part - type 2
scale 1:100



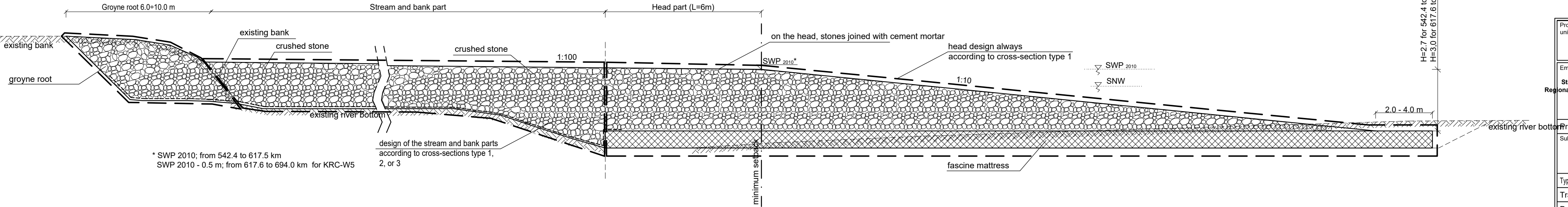
* SWP 2010; from 542.4 to 617.5 km
SWP 2010 - 0.5 m; from 617.6 to 694.0 km for KRC-W5

Cross-section
Stream part - type 3
scale 1:100



* SWP 2010; from 542.4 to 617.5 km
SWP 2010 - 0.5 m; from 617.6 to 694.0 km for KRC-W5

Longitudinal section
scale 1:100
[dimensions in m]; [elevations in mKr]



* SWP 2010; from 542.4 to 617.5 km
SWP 2010 - 0.5 m; from 617.6 to 694.0 km for KRC-W5

design of the stream and bank parts
according to cross-sections type 1,
2, or 3

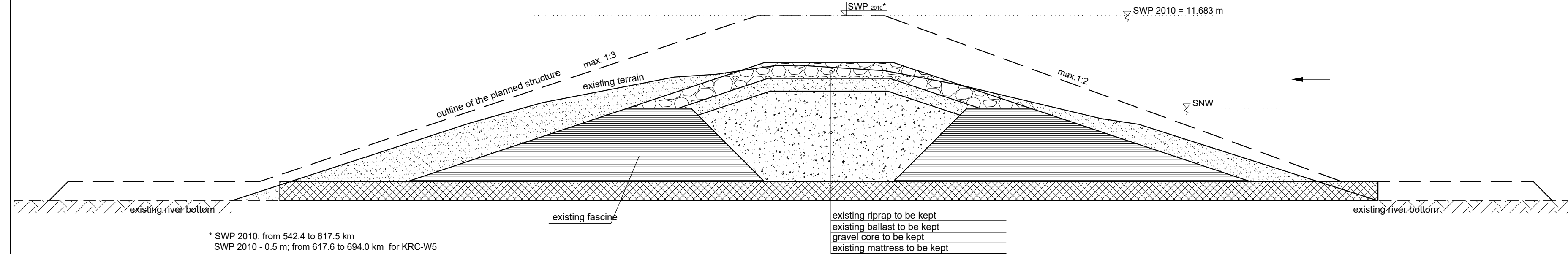
- COMMENTS:
1. The type of construction of the stream part will depend on the availability of building materials.
 2. The surface of the groyne crest may be constructed as a paved structure for all three types.

Project unit: SWECO		Sweco Consulting Sp.z o.o. 60-829 Poznań, ul. Franklina Roosevelta 22; Tel. (0-61) 864 93 00; Fax. (0-61) 864 93 01	Sweco Consulting Sp.z o.o. Office in Szczecin 71-641 Szczecin, ul. Łyskowskiego 16; Tel. 605 071 242
Employer: State Water Management Polish Waters Regional Water Management Authority in Szczecin ul. Tama Pomorzaska 13a 70-030 Szczecin	Project title: Odra-Vistula Flood Management Project Contract 5.4: Design and Construction Supervision for works, Project Management, Technical Assistance and Training Technical Support for the Project and Strengthening of PIU's Institutional Capacity for RZGW in Szczecin	Project No.: 353688	
Subject of document: 1B.2 Modernisation works on border Odra, Stage I: Modernisation works on border Odra to enable winter icebreaking Stage II: Reconstruction of river control infrastructure			
Type of document: EMP	Figure title: Construction of newly-designed groynes	Fig. No.: 1	
Trade: Hydro engineering	Date: 04.2020	Scale: 1:100	
Function:	Title, full name	Licence No., speciality	Signature
Chief designer:	mgr inż. Witold Samolong	82/Sz/76 <small>Special building qualifications hydrotechnical construction No. 875 from 48 § 11</small>	
Designer:	mgr inż. Łukasz Gontarz	ZAP/0004/POOK/11 <small>Engineering licence in construction and structures</small>	
Checked by:	mgr inż. Marek Chmielewski	ZAP/0001/POOK/14 <small>Engineering licence in construction and structures</small>	
Prepared by:			

RECONSTRUCTION OF THE EXISTING GROUYNE

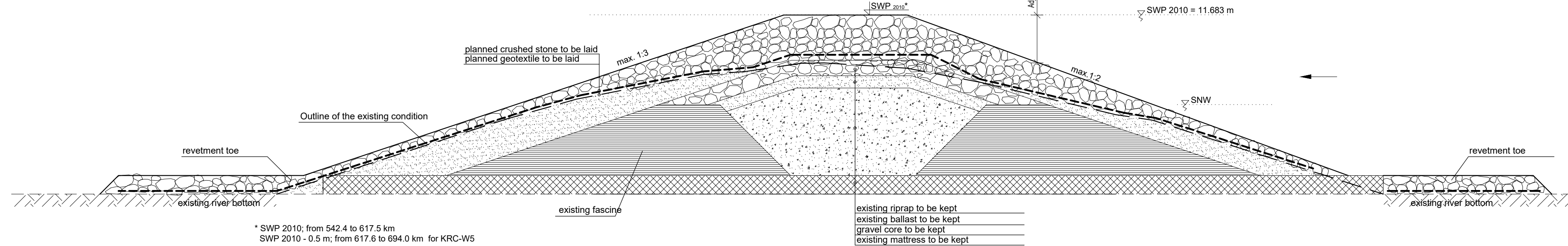
EXISTING GROUYNE Cross-section

scale 1:50
[dimensions in m]; [elevations in mKr]



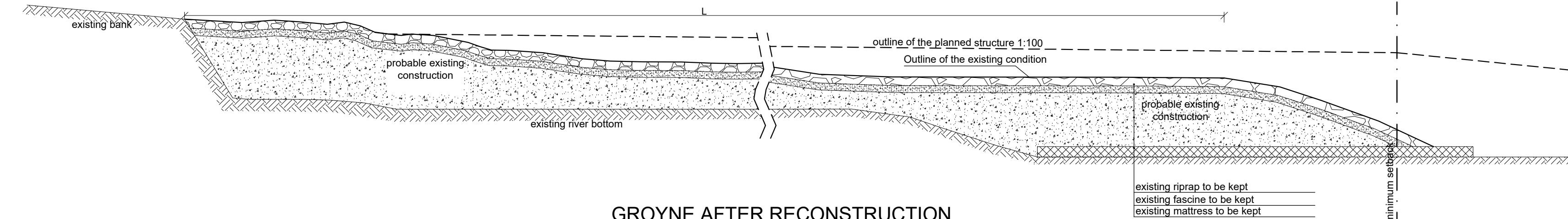
GROUYNE AFTER RECONSTRUCTION Cross-section

scale 1:50
[dimensions in m]; [elevations in mKr]



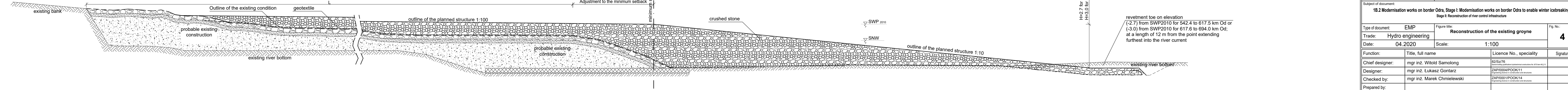
EXISTING GROUYNE Longitudinal section

scale 1:100
[dimensions in m]; [elevations in mKr]



GROUYNE AFTER RECONSTRUCTION Longitudinal section

scale 1:100
[dimensions in m]; [elevations in mKr]



Comments:

1. Adaptation to the minimum setback consists in extending or shortening the groyne.
2. Adaptation to the regulatory elevation consists in raising or lowering the elevation of the groyne crest.
3. If the groyne crest elevation is lowered or raised by $h < 50$ cm, the surface of the existing groyne should be demolished to a depth that will enable the laying of new riprap

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Employer: State Water Management Polish Waters Regional Water Management Authority in Szczecin ul. Tama Pomorzanska 13a 70-030 Szczecin	Project title: Odra-Vistula Flood Management Project Contract 5.4: Design and Construction Supervision for works, Project Management, Technical Assistance and Training Technical Support for the Project and Strengthening of PIU's Institutional Capacity for RZGW in Szczecin				
Project No.: 353688	Subject of document: 1B.2 Modernisation works on border Odra, Stage I: Modernisation works on border Odra to enable winter icebreaking Stage II: Reconstruction of river control infrastructure				
Type of document: EMP	Figure title: Reconstruction of the existing groyne	Fig. No.: 4			
Trade: Hydro engineering	Scale: 1:100				
Date: 04.2020					
Function: Title, full name	Licence No., speciality		Signature		
Chief designer: mgr inż. Witold Samoląg	82/Sz/76				
Designer: mgr inż. Lukasz Gontarz	ZAP/0004/POOK/11				
Checked by: mgr inż. Marek Chmielewski	ZAP/0001/POOK/14				
Prepared by:					