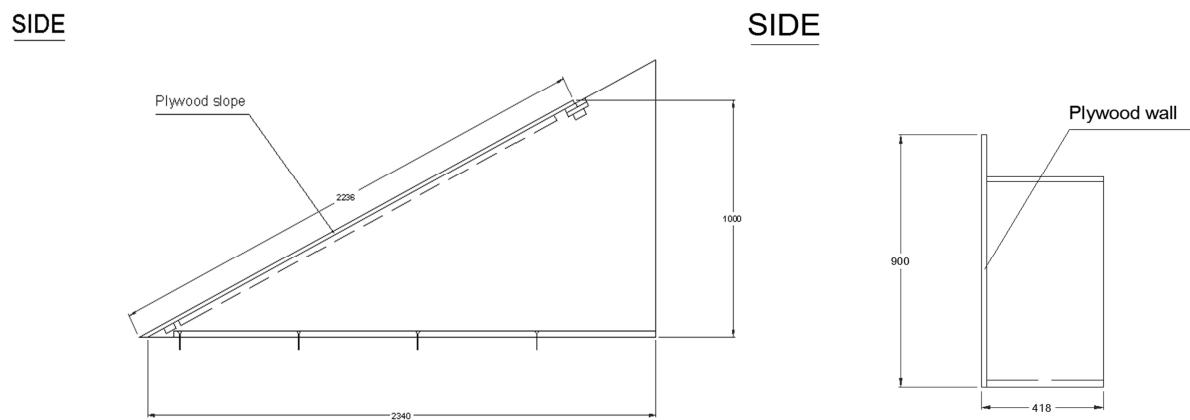




Data Storage Report

RECIPE Task 8.2: Low overtopping
discharges over sea walls and
breakwaters



Project Information

Acronym	H+ HRW JRA1_002
Title	Low overtopping discharges over sea walls and breakwaters
Location(s)	HRW
WWW link(s)	www.hrwallingford.com
Social Media	
Start date	05-08-2016
End date	29-11-2016

Project Personnel

Name	Institution	Email	ORCID-iD
Silva, Eunice	HR Wallingford	e.silva@hrwallingford.com	
Sutherland, James	HR Wallingford	j.sutherland@hrwallingford.com	0000-0003-4829-5015
Harpham, Quillon	HR Wallingford	q.harpham@hrwallingford.com	0000-0003-4252-8244

Document History

PLEASE NOTE: These experiments were conducted in advance of this Data Storage Report template. As such, the details have been retrofitted from earlier documents in order to provide a complete and current example in this data package. Where sections are incomplete, references have been included.

Date	Status	Author(s)	Reviewer	Approver
20/07/2018	Final, re-drafted to new template	Sutherland, James; Silva, Eunice	Harpham, Quillon	Harpham, Quillon

Document objective

This data storage report describes the project and how data were collected. The data are described so that others can use them.

Acknowledgement

The work described in this publication was supported by the European Community's Horizon 2020 Research and Innovation Programme through the grant to HYDRALAB-PLUS, Contract no. 654110.

Disclaimer

This document reflects only the authors' views and not those of the European Community. This work may rely on data from sources external to the HYDRALAB-PLUS project Consortium. Members of the Consortium do not accept liability for loss or damage suffered by any third party as a result of errors or inaccuracies in such data. The information in this document is provided "as is" and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and neither the European Community nor any member of the HYDRALAB-PLUS Consortium is liable for any use that may be made of the information.

License



<http://creativecommons.org/licenses/by/4.0/>

Contents

1	Introduction	5
1.1	Scientific background.....	5
1.2	Aims and Objectives	5
2	Experimental setup	6
2.1	General description of experimental setup	6
2.2	General data storage principles and organization of data files	7
2.3	Definition and application of spatial and temporal reference systems	8
2.4	Test Programme	8
3	Instrumentation – Channel 7	10
3.1	Instruments	10
3.2	Measured parameters.....	10
3.3	Experimental procedure	10
3.4	Data post-processing.....	10
3.5	Organization of data files	10
3.6	Remarks	10
4	Instrumentation – Channel 8	11
4.1	Instruments	11
4.2	Measured parameters.....	11
4.3	Experimental procedure	11
4.4	Data post-processing.....	11
4.5	Organization of data files	11
4.6	Remarks	11
5	References	12
	Appendices	13

1 Introduction

1.1 Scientific background

Low overtopping discharges over sea walls and breakwaters

1.2 Aims and Objectives

The design of seawalls and breakwaters is often required to achieve very low target overtopping discharges when these structures protect vulnerable infrastructure or activities. The balance between economically viable protection and performance requirements is often difficult to achieve without good knowledge on low overtopping. The paucity of data in this space and the higher uncertainty associated with existing methods, increases the challenge. The occurrence of low number of overtopping waves has the consequence that any test results are substantially more affected by the inherent variation of random waves, therefore more uncertain. Within the multi-institute project RECIPE under the HYDRALAB+ project, experimental studies for RECIPE Task 8.2 have generated new data on the response of seawalls, breakwaters and related coastal structures with the aim of improving future model testing. Tests by HRW have explored wave overtopping with contributions of data from UPORTO and LNEC. These physical model test results explore these issues and provide example data. The tests were successful in obtaining low to very low overtopping discharge test data. For low / very low overtopping discharges, these test data present considerable scatter relative to the latest empirical prediction. A number of repetitions were performed for wave conditions resulting in very low overtopping discharges, which illustrated the inherent uncertainty associated with low overtopping.

2 Experimental setup

2.1 General description of experimental setup

Within the multi-institute cooperation project HYDRALAB+ (EC Contract No. 654110), the Joint Research Action RECIPE is intended to provide new innovative and societal engaging experiments, measurement techniques, methods and protocols to ensure that physical hydraulic modelling plays its full role in solving problems of climate change mitigation and adaptation.

To address the issues of climate change adaptation, experiments in environmental hydraulics may therefore need to address interactions of hydraulics, sediment, biota, ice, and people for unsteady conditions over long time periods. This will enable a broader use of physical modelling to identify adaptation strategies that predict, with increased confidence, the impacts of climate change on coastal, estuarine and river environments.

The main objective of Task 8.2 is to develop protocols for experiments in physical models representative of extreme events (storms, floods, etc.) or sequence of such events, since these events and their frequency are strongly impacted by climate change. As one of the partners participating in Task 8.2 HR Wallingford developed wave flume experiments to test the use of Joint Probability Analysis and storm sequencing / abbreviation for wave overtopping.

The overtopping tests at HR Wallingford intended to measure overtopping volumes, wave-by-wave, and mean discharge for a simple impermeable smooth 1:2 slope and for a simple vertical wall. The tests were carried out in one of HR Wallingford's wave flumes, which is 50m long, 1m deep and 1m wide. The tests were intended to generate test data leading to the development of guidance (eventually) to simplify and accelerate model testing for analysis of wave overtopping critical coastal structures.

Wave flume overtopping tests against four structures denoted A1, A2, B1 and B2 as follows.

Table 2.1: Structure Dimensions

Structure	Description	Figure
A1	1:2 slope with crest level* 1m	A1
A2	1:2 slope with crest level* 1.2m	A2
B1	Simple vertical wall with crest level* 0.9m	B1
B2	Simple vertical wall with crest level* 1.1m	B2

Three Chutes were used with the following widths.

Table 2.2: Chute Widths

Chute	Width (m)
1	0.1
2	0.335
3	0.04

Random waves were selected using three seeds 1, 2 and 3. Each seed denotes a different set of randomly generated waves.

Three rectangular tanks were used with the following dimensions.

Table 2.3: Tank Dimensions

Tank (Rectangular)	Length (mm)	Width (mm)
B	250	112
C	870	175
D	900	185

24 wave conditions were used in the experiments as follows.

Table 2.4: Wave Conditions

Wave condition	Water level (m)	H _s (m)	T _m (s)	T _p (s)	s _m (-)
01	0.800	0.080	1.20	1.32	0.036
02	0.800	0.110	1.40	1.54	0.036
03	0.800	0.040	1.60	1.76	0.010
04	0.800	0.070	2.10	2.31	0.010
05	0.750	0.140	1.20	1.32	0.062
06	0.750	0.080	1.20	1.32	0.036
07	0.750	0.185	1.40	1.54	0.060
08	0.750	0.110	1.40	1.54	0.036
09	0.750	0.240	1.60	1.76	0.060
10	0.750	0.140	1.60	1.76	0.035
11	0.750	0.040	1.60	1.76	0.010
12	0.750	0.240	2.10	2.31	0.035
13	0.750	0.070	2.10	2.31	0.010
14	0.750	0.140	3.00	3.30	0.010
15	0.700	0.140	1.20	1.32	0.062
16	0.700	0.080	1.20	1.32	0.036
17	0.700	0.185	1.40	1.54	0.060
18	0.700	0.110	1.40	1.54	0.036
19	0.700	0.040	1.60	1.76	0.010
20	0.700	0.140	1.60	1.76	0.060
21	0.700	0.240	1.60	1.76	0.036
22	0.700	0.240	2.10	2.31	0.036
23	0.700	0.070	2.10	2.31	0.010
24	0.700	0.140	3.00	3.30	0.010

2.2 General data storage principles and organization of data files

These data are essentially very simple responses presented as time series, in all instances the vocabulary and terminology are consistent with: EurOtop2, CIRIA Rock Manual(2007), and HYDRALAB III, 2007 Guidelines for physical model testing of breakwaters: rubble mound breakwaters.

Data are stored at a maximum of three levels:

1. L0 as raw as the instruments allow (all data);
2. L1 with standard instrument filtering/processing (only usable data, i.e. measurements with incorrect settings, test bursts etc. removed), including (reference to) processing tools and settings

3. L2 (optional) with advanced processing, e.g. combining multiple data sources or statistics, sub-sampled for interesting relevant periods (fully processed), including (reference to) processing tools and settings

All data given in the final package is Level 1, saved as csv files. Up to two results have been included for each test:

- one for the wave gauge measuring the water level (m) inside the overtopping tank (Ch7, Channel 7)
- one for the wave gauge measuring the water level (m) at the crest of the structure (Ch8, Channel 8).
The results file names (e.g. "HR01415-WC10No500_Sp-J3.3_St-A1_Ch3_TD_Ch7.csv") are constructed using the test conditions as follows:

- Initials 'HR' for HR Wallingford.
- A unique test number e.g '01408'.
- Wave Conditions used e.g. 'WC08'.
- Number of waves used in the test (500 or 1000) e.g. 'No1000'.
- Spectra Type e.g. 'Sp-J3.3'.
- Structure used in the test (A1, A2, B1, or B2) e.g. 'St-A1'.
- Chute used in the test (1, 2 or 3) e.g. 'Ch2'.
- Tank used in the test (B, C or D) e.g. 'TB'.
- Channel to which the measurements relate (7 or 8) e.g. 'Ch8'.

In each csv file the timeseries of results is given by the columns 'Model Time' (units s) and 'Calibrated Data' (units m). Other columns can be disregarded.

2.3 Definition and application of spatial and temporal reference systems

No spatial or temporal reference systems were used. All spatial data is given relative to flume. All temporal data is given in 'Model Time'.

2.4 Test Programme

The test programme undertaken is given in the table below.

Table 2.5: Test Programme

Lab	UniqueTest ID	Number of Waves	Wave Condition	Spectra type	Structure		Chute	Tank	Post Processed Results File Name .csv (plus Ch7 or Ch8 denuding channel)	Seed (Set of randomly generated waves)
					A, B	1,2	1,2,3	B,C,D		
HR	00103	500	20	J3.3	A	1	1	C	HR0103-WC20Nb500_Sp-J3.3_St-A1_Ch1_TC	1
HR	01304	500	24	J3.3	A	1	1	C	HR01304-WC24Nb500_Sp-J3.3_St-A1_Ch1_TC	1
HR	01305	500	15	J3.3	A	1	1	C	HR01305-WC15Nb500_Sp-J3.3_St-A1_Ch1_TC	1
HR	01408	500	09	J3.3	A	1	1	C	HR01408-WC09Nb500_Sp-J3.3_St-A1_Ch1_TC	1
HR	01410	1000	06	J3.3	A	1	2	C	HR01410-WC06Nb1000_Sp-J3.3_St-A1_Ch2_TC	1
HR	01412	1000	18	J3.3	A	1	2	C	HR01412-WC18Nb1000_Sp-J3.3_St-A1_Ch2_TC	1
HR	01711	1000	23	J3.3	A	1	2	C	HR01711-WC23Nb1000_Sp-J3.3_St-A1_Ch2_TC	1
HR	01414	1000	16	J3.3	A	1	2	B	HR01414-WC16Nb1000_Sp-J3.3_St-A1_Ch2_TB	1
HR	01415	500	10	J3.3	A	1	3	D	HR01415-WC10Nb500_Sp-J3.3_St-A1_Ch3_TD	1
HR	01716	500	10	J12	A	1	3	D	HR01716-WC10Nb500_Sp-J12_St-A1_Ch3_TD	1
HR	01717	500	10	J01	A	1	3	D	HR01717-WC10Nb500_Sp-J01_St-A1_Ch3_TD	1
HR	01818	500	10	J06	A	1	3	D	HR01818-WC10Nb500_Sp-J06_St-A1_Ch3_TD	1
HR	01819	500	05	J3.3	A	1	3	D	HR01819-WC05Nb500_Sp-J3.3_St-A1_Ch3_TD	1
HR	01820	500	05	J12	A	1	3	C	HR01820-WC05Nb500_Sp-J12_St-A1_Ch3_TC	1
HR	01821	500	05	J01	A	1	3	C	HR01821-WC05Nb500_Sp-J01_St-A1_Ch3_TC	1
HR	01822	500	05	J06	A	1	3	C	HR01822-WC05Nb500_Sp-J06_St-A1_Ch3_TC	1
HR	01823	500	05	J06	A	1	3	C	HR01823-WC05Nb500_Sp-J06_St-A1_Ch3_TC	1
HR	01824	500	05	J02	A	1	3	C	HR01824-WC05Nb500_Sp-J02_St-A1_Ch3_TC	1
HR	01825	500	14	J3.3	A	1	3	C	HR01825-WC14Nb500_Sp-J3.3_St-A1_Ch3_TC	1
HR	01827	1000	13	J3.3	A	1	2	C	HR01827-WC13Nb1000_Sp-J3.3_St-A1_Ch2_TC	1
HR	01928	1000	04	J3.3	A	1	2	C	HR01928-WC04Nb1000_Sp-J3.3_St-A1_Ch2_TC	1
HR	01929	500	01	J3.3	A	1	2	C	HR01929-WC01Nb500_Sp-J3.3_St-A1_Ch2_TC	1
HR	01930	500	02	J3.3	A	1	1	D	HR01930-WC02Nb500_Sp-J3.3_St-A1_Ch1_TD	1
HR	01931	1000	03	J3.3	A	1	2	B	HR01931-WC03Nb1000_Sp-J3.3_St-A1_Ch2_TB	1
HR	02532	500	21	J3.3	A	2	3	C	HR02532-WC21Nb500_Sp-J3.3_St-A2_Ch3_TC	1
HR	02533	1000	17	J3.3	A	2	1	C	HR02533-WC17Nb1000_Sp-J3.3_St-A2_Ch1_TC	1
HR	02534	1000	20	J3.3	A	2	1	C	HR02534-WC20Nb1000_Sp-J3.3_St-A2_Ch1_TC	1
HR	02535	1000	24	J3.3	A	2	1	C	HR02535-WC24Nb1000_Sp-J3.3_St-A2_Ch1_TC	1
HR	02536	500	22	J3.3	A	2	1	C	HR02536-WC22Nb500_Sp-J3.3_St-A2_Ch1_TC	1
HR	02537	1000	15	J3.3	A	2	1	C	HR02537-WC15Nb1000_Sp-J3.3_St-A2_Ch1_TC	1
HR	02538	500	07	J3.3	A	2	1	C	HR02538-WC07Nb500_Sp-J3.3_St-A2_Ch1_TC	1
HR	02639	500	12	J3.3	A	2	3	C	HR02639-WC12Nb500_Sp-J3.3_St-A2_Ch3_TC	1
HR	02640	500	09	J3.3	A	2	1	C	HR02640-WC09Nb500_Sp-J3.3_St-A2_Ch1_TC	1
HR	02641	1000	05	J3.3	A	2	1	C	HR02641-WC05Nb1000_Sp-J3.3_St-A2_Ch1_TC	1
HR	02642	1000	05	J06	A	2	1	C	HR02642-WC05Nb1000_Sp-J06_St-A2_Ch1_TC	1
HR	02643	1000	05	J12	A	2	1	C	HR02643-WC05Nb1000_Sp-J12_St-A2_Ch1_TC	1
HR	02644	1000	05	J01	A	2	1	C	HR02644-WC05Nb1000_Sp-J01_St-A2_Ch1_TC	1
HR	02645	1000	05	J02	A	2	1	C	HR02645-WC05Nb1000_Sp-J02_St-A2_Ch1_TC	1
HR	02746	1000	10	J3.3	A	2	1	C	HR02746-WC10Nb1000_Sp-J3.3_St-A2_Ch1_TC	1
HR	02747	1000	10	J12	A	2	1	C	HR02747-WC10Nb1000_Sp-J12_St-A2_Ch1_TC	1
HR	02748	1000	10	J06	A	2	1	C	HR02748-WC10Nb1000_Sp-J06_St-A2_Ch1_TC	1
HR	02749	1000	10	J01	A	2	1	C	HR02749-WC10Nb1000_Sp-J01_St-A2_Ch1_TC	1
HR	02750	1000	10	J01	A	2	1	C	HR02750-WC10Nb1000_Sp-J01_St-A2_Ch1_TC	1
HR	02751	500	14	J3.3	A	2	1	C	HR02751-WC14Nb500_Sp-J3.3_St-A2_Ch1_TC	1
HR	02752	500	12	J3.3	A	2	3	C	HR02752-WC12Nb500_Sp-J3.3_St-A2_Ch3_TC	1
HR	02753	1000	08	J3.3	A	2	2	B	HR02753-WC08Nb1000_Sp-J3.3_St-A2_Ch2_TB	1
HR	02754	1000	18	J3.3	A	2	2	B	HR02754-WC18Nb1000_Sp-J3.3_St-A2_Ch2_TB	1
HR	10255	1000	06	J3.3	A	2	2	B	HR10255-WC06Nb1000_Sp-J3.3_St-A2_Ch2_TB	1
HR	10256	1000	02	J3.3	A	2	2	B	HR10256-WC02Nb1000_Sp-J3.3_St-A2_Ch2_TB	1
HR	10257	1000	01	J3.3	A	2	2	B	HR10257-WC01Nb1000_Sp-J3.3_St-A2_Ch2_TB	1
HR	10359	1000	18	J3.3	A	2	2	B	HR10359-WC18Nb1000_Sp-J3.3_St-A2_Ch2_TB	1
HR	11160	1000	14	J3.3	A	2	1	C	HR11160-WC14Nb1000_Sp-J3.3_St-A2_Ch1_TC	1
HR	11161	1000	14	J3.3	A	2	2	B	HR11161-WC14Nb1000_Sp-J3.3_St-A2_Ch2_TB	2
HR	11162	1000	14	J3.3	A	2	2	B	HR11162-WC14Nb1000_Sp-J3.3_St-A2_Ch2_TB	2
HR	11163	1000	14	J3.3	A	2	2	B	HR11163-WC14Nb1000_Sp-J3.3_St-A2_Ch2_TB	2
HR	11164	1000	18	J3.3	A	2	2	B	HR11164-WC18Nb1000_Sp-J3.3_St-A2_Ch2_TB	2
HR	11465	1000	06	J3.3	A	2	2	B	HR11465-WC06Nb1000_Sp-J3.3_St-A2_Ch2_TB	2
HR	11568	1000	23	J3.3	A	1	2	B	HR11568-WC23Nb1000_Sp-J3.3_St-A1_Ch2_TB	1
HR	11569	1000	23	J3.3	A	1	2	B	HR11569-WC23Nb1000_Sp-J3.3_St-A1_Ch2_TB	2
HR	11570	1000	13	J3.3	A	1	2	B	HR11570-WC13Nb1000_Sp-J3.3_St-A1_Ch2_TB	2
HR	11571	1000	13	J3.4	A	1	2	B	HR11571-WC13Nb1000_Sp-J3.4_St-A1_Ch2_TB	2
HR	11572	1000	03	J3.5	A	1	2	B	HR11572-WC03Nb1000_Sp-J3.5_St-A1_Ch2_TB	1
HR	11573	1000	03	J3.6	A	1	2	B	HR11573-WC03Nb1000_Sp-J3.6_St-A1_Ch2_TB	2
HR	11774	1000	23	J3.3	A	1	2	B	HR11774-WC23Nb1000_Sp-J3.3_St-A1_Ch2_TB	2
HR	12375	500	15	J3.3	B	1	1	C	HR12375-WC15Nb500_Sp-J3.3_St-B1_Ch1_TC	1
HR	12377	500	24	J3.3	B	1	1	C	HR12377-WC24Nb500_Sp-J3.3_St-B1_Ch1_TC	1
HR	12378	500	20	J3.3	B	1	1	C	HR12378-WC20Nb500_Sp-J3.3_St-B1_Ch1_TC	1
HR	12380	1000	18	J3.3	B	1	1	C	HR12380-WC18Nb1000_Sp-J3.3_St-B1_Ch1_TC	1
HR	12381	1000	16	J3.3	B	1	2	B	HR12381-WC16Nb1000_Sp-J3.3_St-B1_Ch2_TB	1
HR	12382	1000	19	J3.3	B	1	2	B	HR12382-WC19Nb1000_Sp-J3.3_St-B1_Ch2_TB	1
HR	12383	1000	23	J3.3	B	1	2	B	HR12383-WC23Nb1000_Sp-J3.3_St-B1_Ch2_TB	1
HR	12484	1000	11	J3.3	B	1	2	B	HR12484-WC11Nb1000_Sp-J3.3_St-B1_Ch2_TB	1
HR	12485	1000	13	J3.3	B	1	2	B	HR12485-WC13Nb1000_Sp-J3.3_St-B1_Ch2_TB	1
HR	12487	1000	06	J3.3	B	1	1	B	HR12487-WC06Nb1000_Sp-J3.3_St-B1_Ch1_TB	1
HR	12590	500	05	J12	B	1	3	C	HR12590-WC05Nb500_Sp-J12_St-B1_Ch3_TC	1
HR	12591	500	10	J3.3	B	1	3	C	HR12591-WC10Nb500_Sp-J3.3_St-B1_Ch3_TC	1
HR	12592	500	10	J01	B	1	3	C	HR12592-WC10Nb500_Sp-J01_St-B1_Ch3_TC	1
HR	12593	500	10	J12	B	1	3	C	HR12593-WC10Nb500_Sp-J12_St-B1_Ch3_TC	3
HR	12594	500	14	J3.3	B	1	3	C	HR12594-WC14Nb500_Sp-J3.3_St-B1_Ch3_TC	1
HR	12595	500	08	J3.3	B	1	1	C	HR12595-WC08Nb500_Sp-J3.3_St-B1_Ch1_TC	1
HR	12996	1000	15	J3.3	B	2	2	B	HR12996-WC15Nb1000_Sp-J3.3_St-B2_Ch2_TB	1
HR	12998	1000	18	J3.3	B	2	2	B	HR12998-WC18Nb1000_Sp-J3.3_St-B2_Ch2_TB	1
HR	12901	1000	17	J3.3	B	2	2	B	HR12901-WC17Nb1000_Sp-J3.3_St-B2_Ch2_TB	1
HR	12903	500	21	J3.3	B	2	1	C	HR12903-WC21Nb500_Sp-J3.3_St-B2_Ch1_TC	1
HR	13004	500	12	J3.3	B	2	1	C	HR13004-WC12Nb500_Sp-J3.3_St-B2_Ch1_TC	1
HR	13005	1000	09	J3.3	B	2	1	C	HR13005-WC09Nb1000_Sp-J3.3_St-B2_Ch1_TC	1
HR	13006	1000	12	J3.3	B	2	1	C	HR13006-WC12Nb1000_Sp-J3.3_St-B2_Ch1_TC	1
HR	13007	1000	05	J3.3	B	2	2	B	HR13007-WC05Nb1000_Sp-J3.3_St-B2_Ch2_TB	1
HR	13008	1000	05	J01	B	2	2	B	HR13008-WC05Nb1000_Sp-J01_St-B2_Ch2_TB	1
HR	13009	1000	05	J12	B	2	2	B	HR13009-WC05Nb1000_Sp-J12_St-B2_Ch2_TB	1
HR	13110	1000	08	J3.3	B	2	2	B	HR13110-WC08Nb1000_Sp-J3.3_St-B2_Ch2_TB	1
HR	13211	1000	10	J3.3	B	2	2	B	HR13211-WC10Nb1000_Sp-J3.3_St-B2_Ch2_TB	1
HR	13312	1000	10	J01	B	2	2	B	HR13312-WC10Nb1000_Sp-J01_St-B2_Ch2_TB	1
HR	20113	1000	10	J12	B	2	2	B	HR20113-WC10Nb1000_Sp-J12_St-B2_Ch2_TB	1
HR	20115	1000	07	J3.3	B	2	1	B	HR20115-WC07Nb1000_Sp-J3.3_St-B2_Ch1_TB	1

3 Instrumentation – Channel 7

3.1 Instruments

Wave gauge inside overtopping tank.

3.2 Measured parameters

Water Level (m) above tank base.

3.3 Experimental procedure

See paper given in references, below.

3.4 Data post-processing

See paper given in references, below.

3.5 Organization of data files

- Format: text/csv
- column separator: ,
- type of data: numeric
- units of data: m
- structure of file content: In each csv file the timeseries of results is given by the columns 'Model Time' (units s) and 'Calibrated Data' (units m). Other columns can be disregarded. The first two rows give metadata and column headings.
- Directory "PostProcessedResults" where the file name ends in "Ch7".

3.6 Remarks

4 Instrumentation – Channel 8

4.1 Instruments

Wave gauge situated on the crest of the structure.

4.2 Measured parameters

Water level at crest of structure.

4.3 Experimental procedure

See paper given in references, below.

4.4 Data post-processing

See paper given in references, below.

4.5 Organization of data files

- Format: text/csv
- column separator: ,
- type of data: numeric
- units of data: m
- structure of file content: In each csv file the timeseries of results is given by the columns 'Model Time' (units s) and 'Calibrated Data' (units m). Other columns can be disregarded. The first two rows give metadata and column headings.
- Directory "PostProcessedResults" where the file name ends in "Ch8".

4.6 Remarks

The Channel 8 Wave Gauge operated as an event detector, indicating an occurrence of overtopping.

5 References

The data package described by this document can be found here:

- Silva, Eunice, Sutherland, James, & Harpham, Quillon. (2018). Low overtopping discharges over sea walls and breakwaters [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.1197274>.

The paper produced as a result of these experiments can be found here:

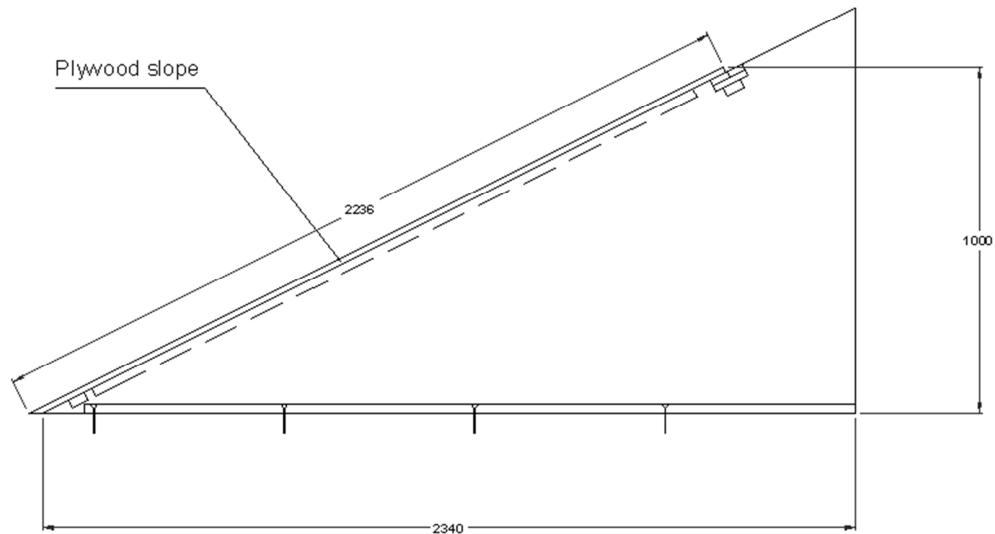
- Silva, E. and Allsop, W. and Riva, R. and Rosa Santos, P. and Taveira Pinto, F. and Mendonça, A. and Teresa Reis, M. The Conundrum of Specifying very low Wave Overtopping Discharges. ICE Coasts, Marine Structures and Breakwaters 2017, 5-7 September 2017, Liverpool, UK (2017).

It contains additional background information, photographs, technical information and conclusions.

Appendices

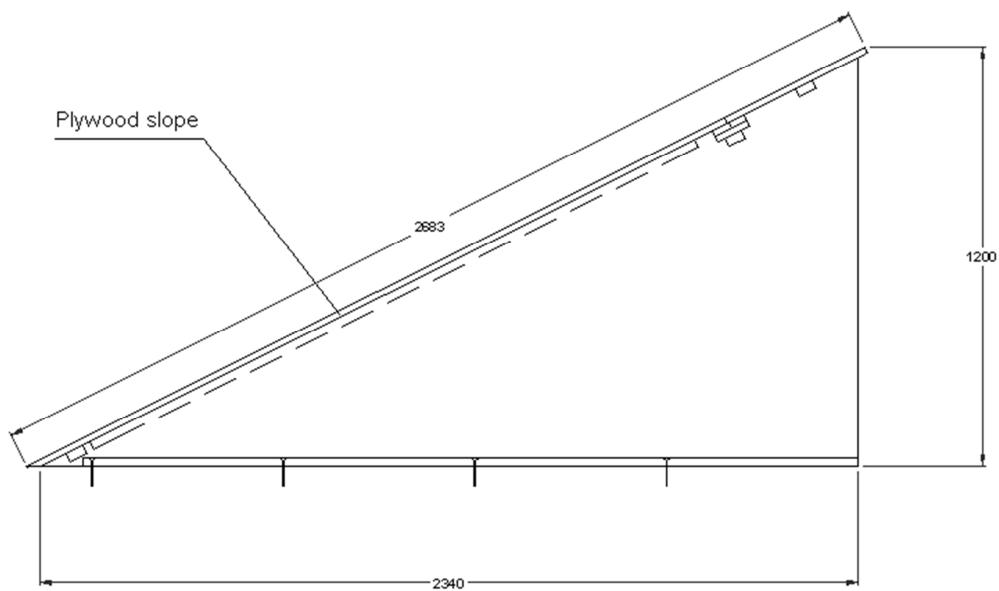
Structure A1

SIDE



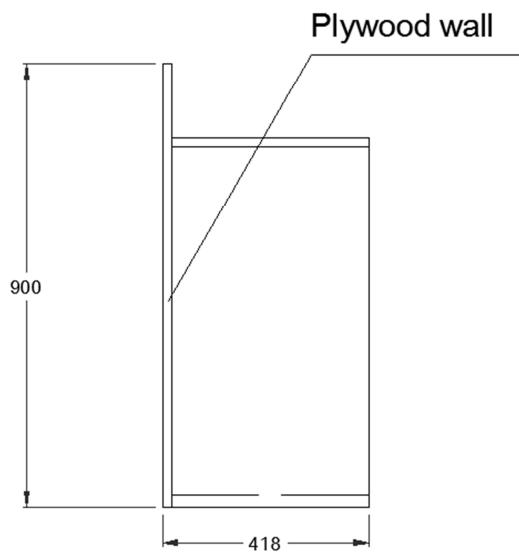
Structure A2

SIDE



Structure B1

SIDE



Structure B2

SIDE

