



## TRADITIONAL PRECAUTIONS

- Terps
- Houseboats
- Floodable basements



## HOTSPOT ZUIDPLASPOLDER PROJECT



THE 1.3 METER PLAN  
Ann Karina Lassen  
Andy van den Dobbelaars  
Michiel Fremouw

Results

Assessment

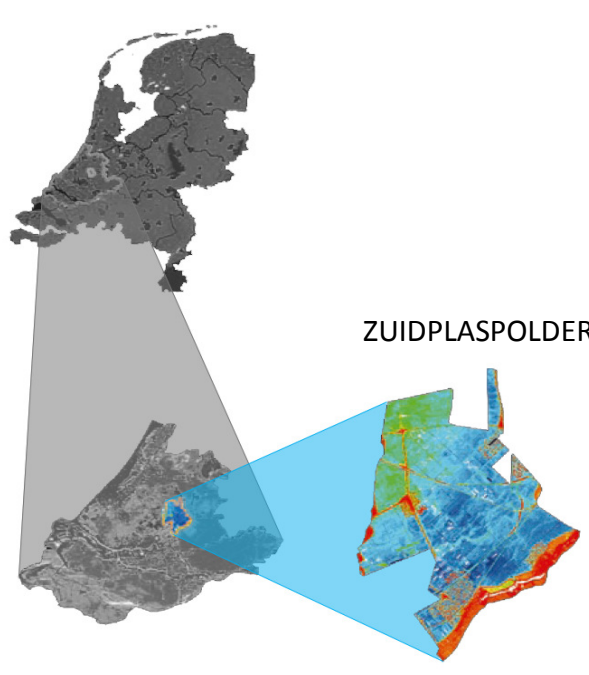
Method

The task

Introduction

**TU Delft**  
Building Technology

# ZUIDPLASPOLDER



THE 1.3 METER PLAN  
Ann Karina Lassen  
Andy van den Dobbelaars  
Michiel Fremouw

Results

Assessment


Method

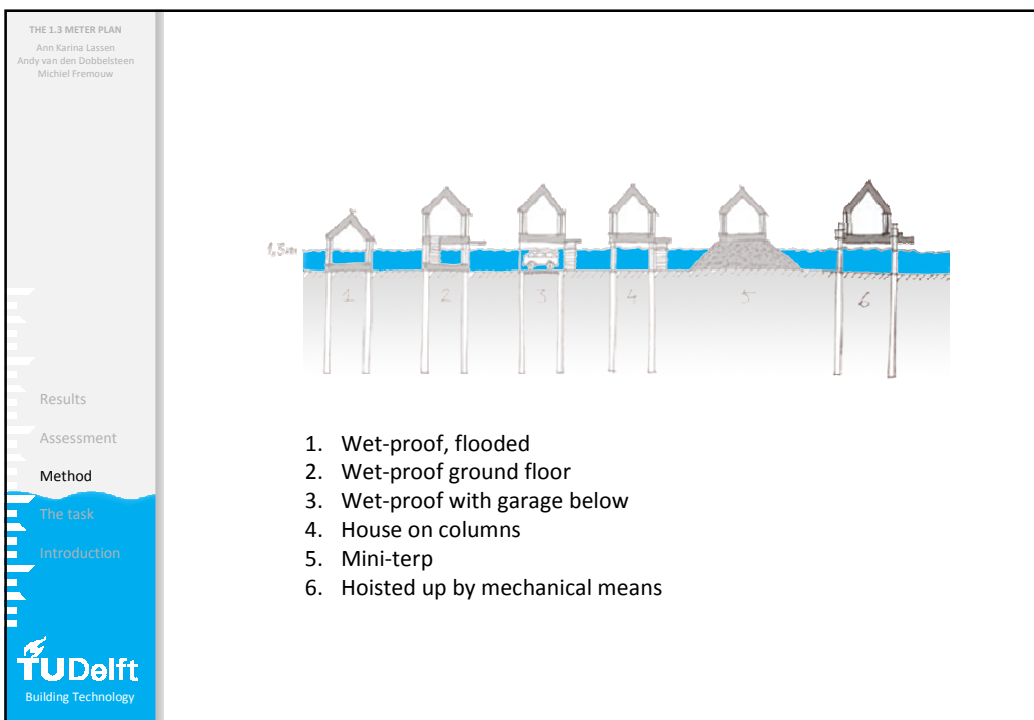
The task

Introduction

**TU Delft**  
Building Technology

# THE 1,3 M PLAN, MOORDRECHT

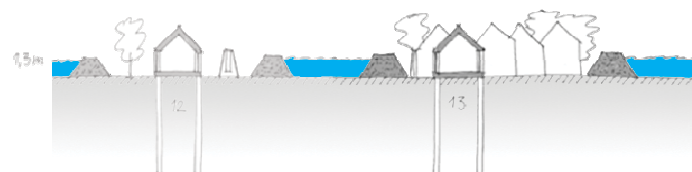




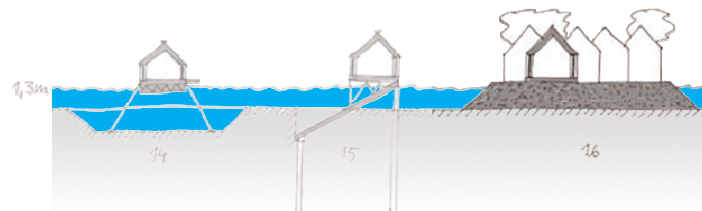




- 7. Dry-proof with watertight wall up to 1.3m
- 8. ... with aquarium glass windows
- 9. Minipolder with garden wall
- 10. Amphibious: floats up, anchored
- 11. Lifted by hydraulics

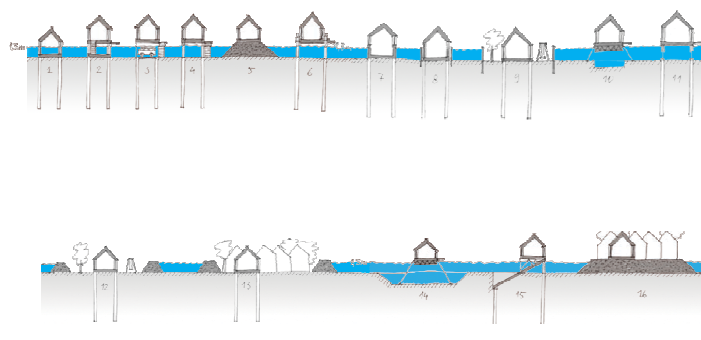


- 12. Minipolder
- 13. Local polder



- 14. Floating house on artificial lake
- 15. Hoisted by mechanical means along rails
- 16. Raised land / Large terp

## FLOOD PROOF BUILDING STRATEGIES



## TPOLOGY









**Amphibic** - floating up during flooding (AB)

**Raised** - on mini-terps (C)  
- on columns (D)

**Wet proof** - flooding accepted in non-habitable rooms (E)

**Dry proof** - watertight houses (F)  
- “mini-polders” with cofferdams (G)

## ANALYSIS

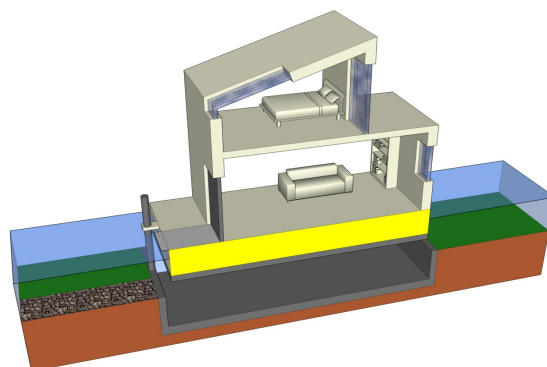
		Description	Advantages	Disadvantages	Suitable for	Special care
FLOATING	AB	 Amphibious house floats up along piles.	No mechanics needed.		Ground floor access, positioning without access from raised access road.	Water & sewage access during flooding, stability, guidance during vert. movement.
	C	 Terp	Ground floor access, simple, well tried, no need for pilings.	Displaces water, unless in combination with AB.	Positioning visually near widened canal.	
RAISED	D	 House on columns. (1/2 flight up)	If positioned adjacent to raised access road can have full HC access at all times.			Stability.
	E	 Wet-proof split level with garage	Direct access, also during flooding, car easily evacuated			Water resistant materials. Sanitation and electrical outlets.
WET-PROOF	F1	 Split level with waterproof wall & aquarium glass windows.	Direct access, also during flooding.			Extra pilings for anchorage. Waterproof constr. & aquarium window. Sanitation and electrical outlets.
	F2	 Split level with waterproof wall up to 1.3m	Direct access, also during flooding.			Extra pilings for anchorage. Waterproof constr. Sanitation and electrical outlets.
DRY-PROOF	G1	 Mini-polder with garden wall all around	Suitable for small gardens. No roof garden needed.	Displaces water. Danger of accumulated water during heavy rains or seepage from below.	Ground floor access.	Dry proof gate. Access during flooding. Backup: pump / drain / rainwater storage. Sanitation and electrical outlets.
	G2	 Mini-polder with garden wall on 3 sides. Split level.	Direct access. Suitable for townhouses, small gardens. No roof garden needed.	Displaces water. Danger of accumulated water during heavy rains or seepage from below.		Backup: pump / drain / rainwater storage. Water resistant matr. recommended. Sanitation and electrical outlets.

## CONSIDERATIONS



- Access
- Gardens
- Sanitation, electricity
- Guiding of vertical movement
- Foundations for hydrostatic updrift
- Dry-proof constructions

## TYPE AB: AMPHIBIAN HOUSE





Results

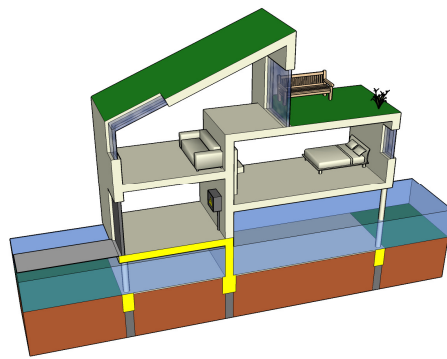
Assessment

Method

The task

Introduction

## TYPE E: WET-PROOF SPLIT-LEVEL WITH GARAGE



Results

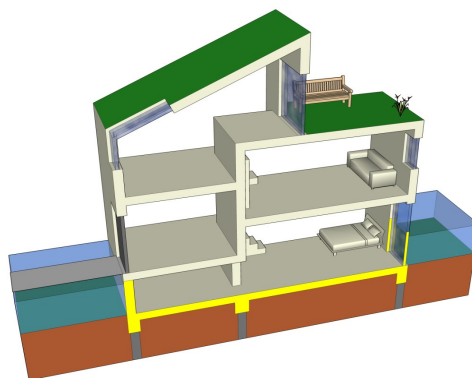
Assessment

Method

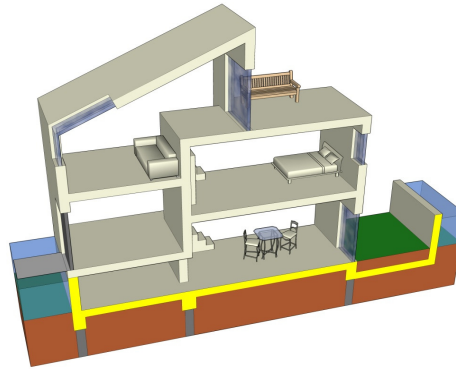
The task

Introduction

## TYPE F1: WET-PROOF SPLIT-LEVEL WITH AQUARIUM WINDOWS



## TYPE G2: MINI-POLDER WITH DRY-PROOF GARDEN ON ONE SIDE



## MOORDRECHT AS A PILOT FOR WET URBAN AREAS

