Parent Pavilion

Construction details

Lazzaretto Nuovo, Venice lagoon · UM Design 1, AUD5101 · Jean Paul Sapiano

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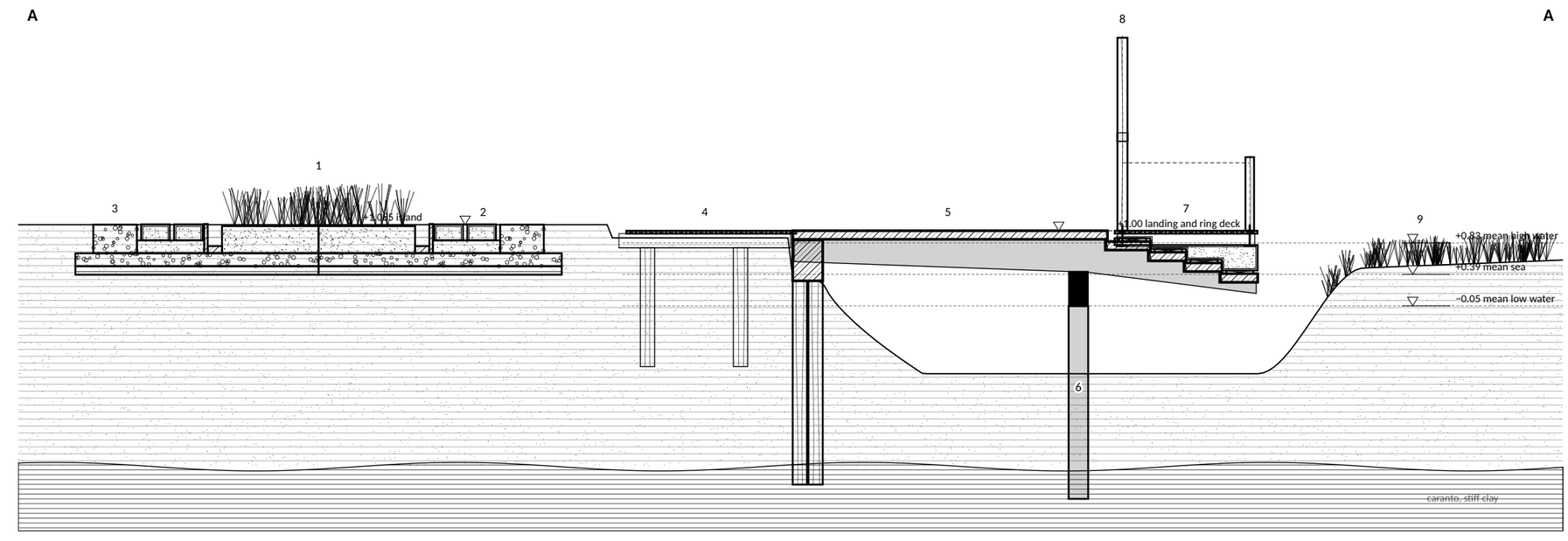
Black only: cut elements heavy and hatched, elements beyond in fine line. Levels in metres above ZMPS; dimensions in millimetres. Scales are true at A3.

D01 Station section A-A

From the nursery on the island, across the walk and the stone stair, to the ring at rest and the young marsh inside it

Legend

1 Nursery, sunk in the island
2 Crates, flush
3 Gravel walk
4 Shore walk, larch
5 Stone stair, Istrian slabs
6 Spine and tube pile
7 Ring bay, at rest
8 Tall post and lantern
9 Young marsh

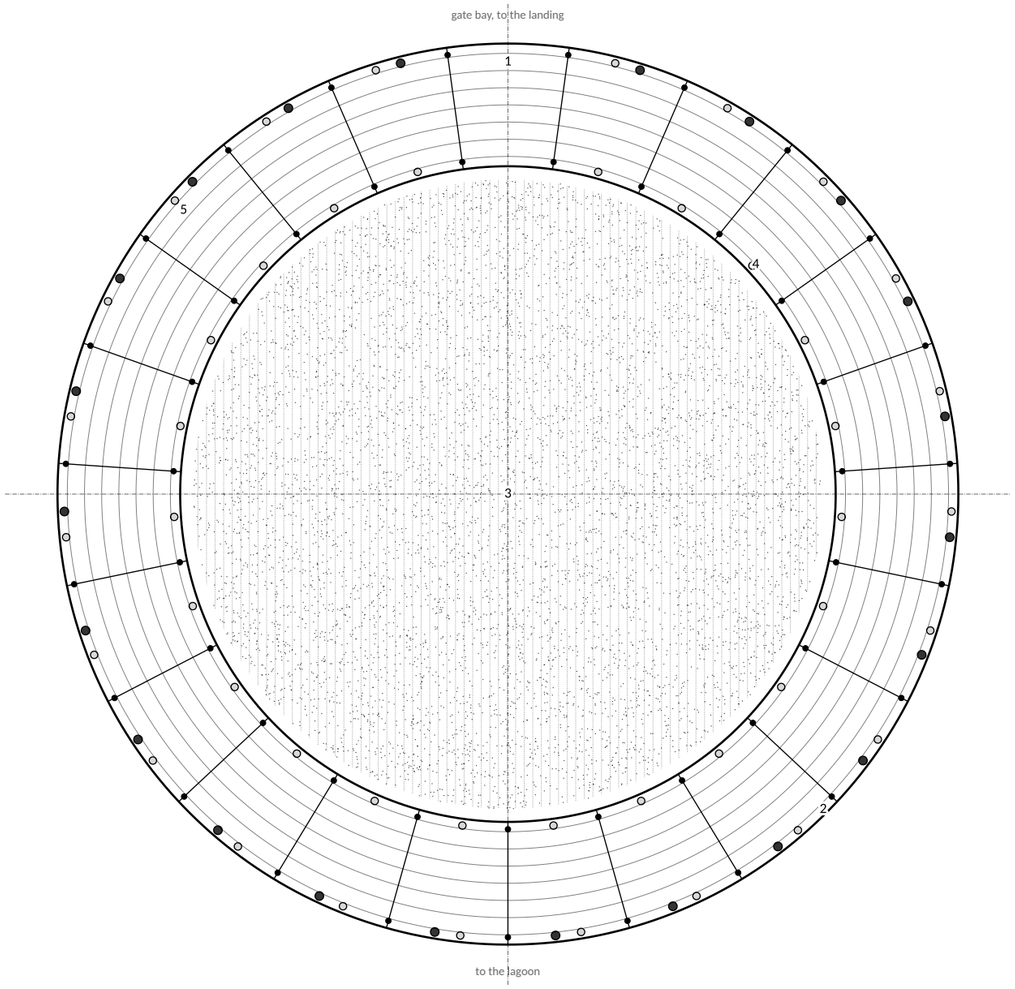


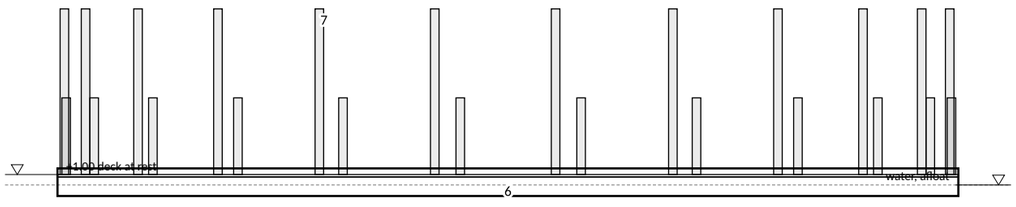
1:75

0 5 m

D02 The ring: plan and elevation

All 23 bays, hinged into a closed ring 14.7 m across. The gate bay faces the landing; drop pins at every joint. Elevation from the lagoon below





1:100

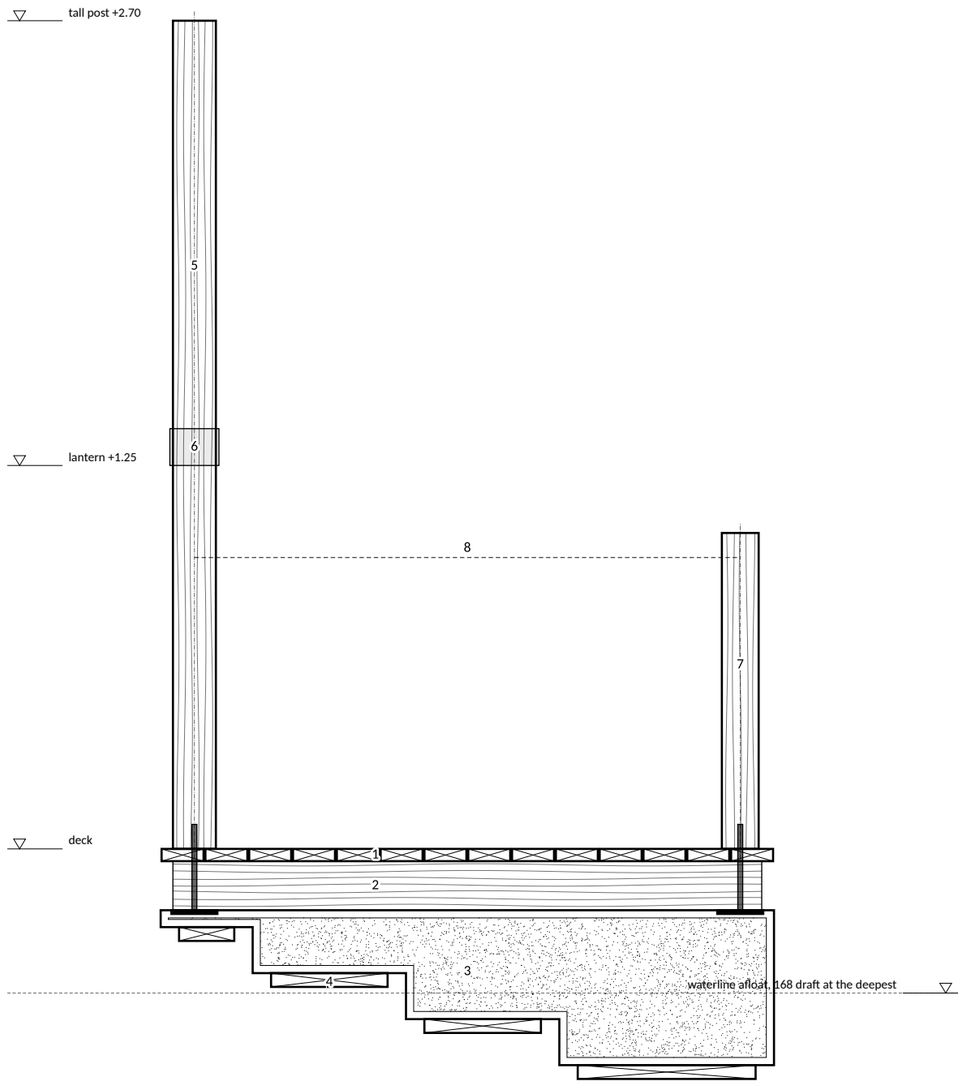
0 5 m

Legend

1 Gate bay, no posts
2 Drop pins at every joint
3 Young marsh inside
4 Inner posts
5 Tall and short posts, outer rim
6 Hulls
7 Posts stepping 2.70 and 1.25

D03 Ring bay: full section, afloat

Radial section through the middle of one bay, as it floats between stations: the hull steps down inside to rest on the stair at low water



to the lagoon ← → to the young marsh

1:20

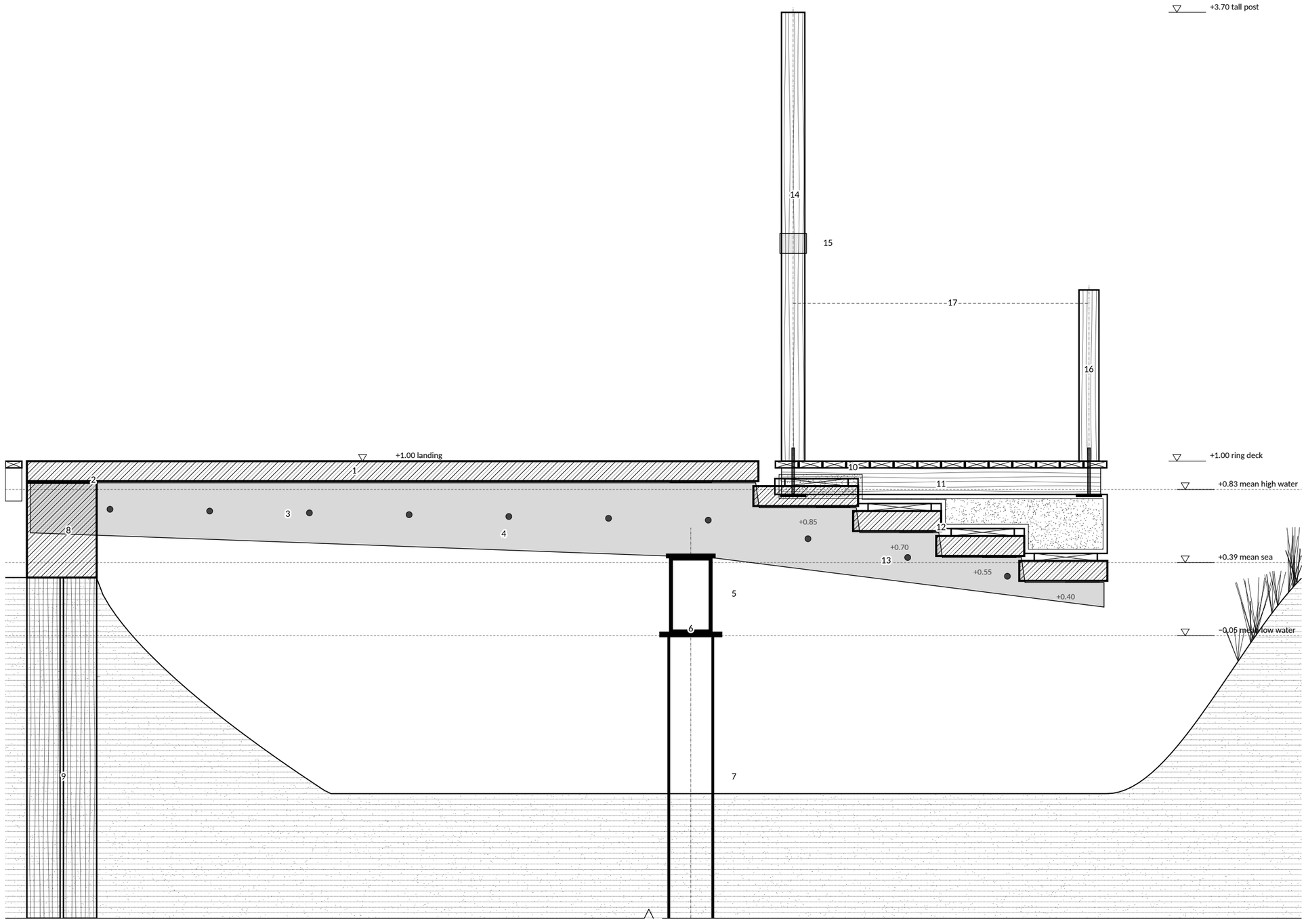
0 1 m

Legend

1 Larch deck boards
2 Glulam bearer
3 Cork core in a larch hull, stepped floor
4 Oak skids
5 Tall post 140
6 Lantern on the short post
7 Inner post
8 Rope rail

D04 The ring at rest on the stone stair

Radial section through one bay and one stair bay, low water. The ring deck lands flush with the stone landing at +1.00



Legend

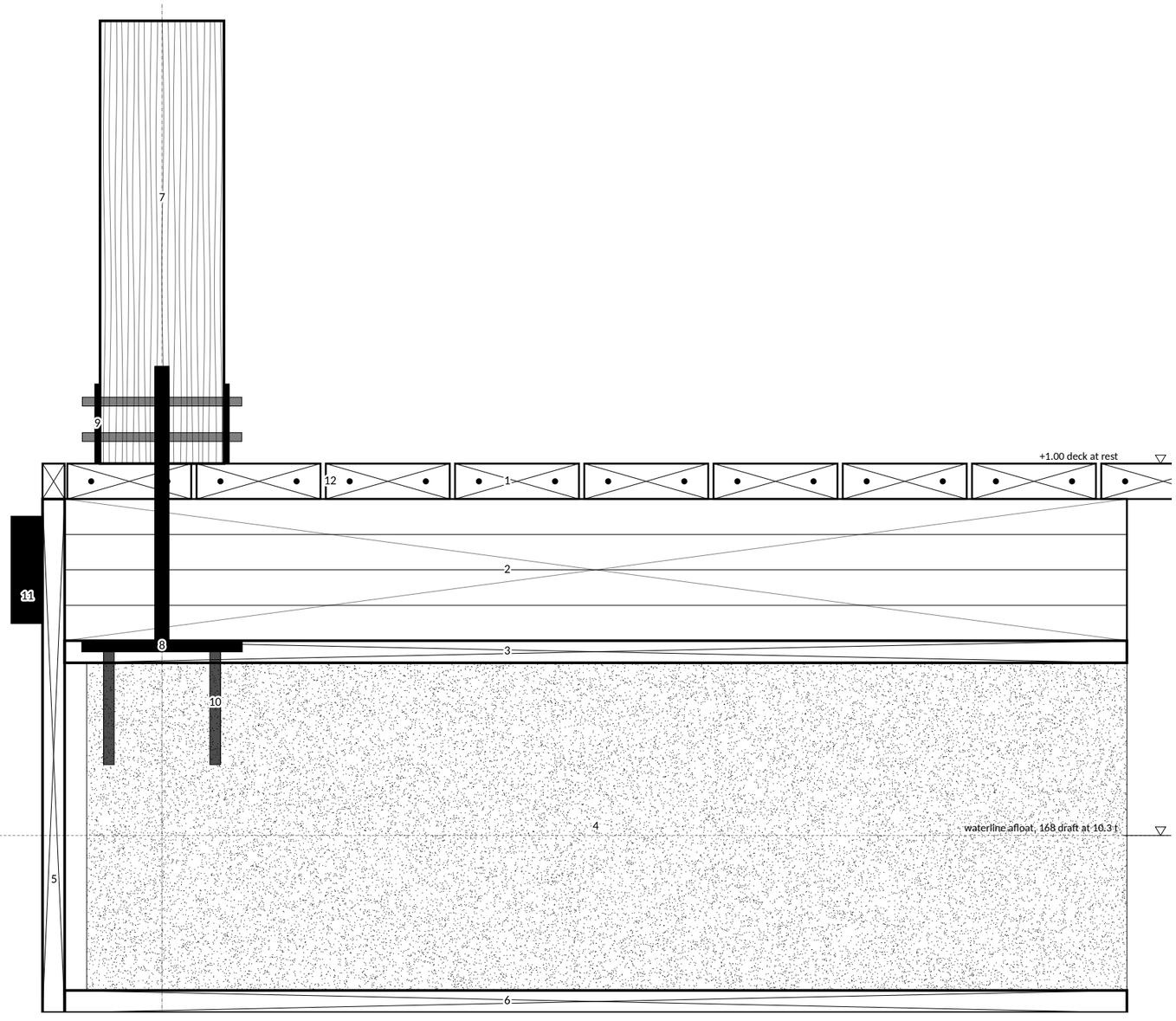
1 Istrian stone landing, 120
2 Neoprene pad, 10
3 Twin rib, duplex steel 2 x 25
4 Cross-bolt and spacer
5 Saddle on the spine
6 Spine, steel box 250 x 450
7 Tube pile 273 x 10, to the caranto
8 Stone bank ledge
9 Larch pile 200
10 Larch deck board 140 x 40
11 Glulam bearer 160
12 Cork core in a 25 larch hull
13 Oak skid 45 on each tread
14 Tall post, larch 140
15 Lantern on the short post
16 Inner post 120
17 Rope rail

1:25

0 1 m

D05 Ring bay: the outer edge

Section through the outer edge of a bay at the tall post: deck, bearer, post shoe, hull shell, cork core and skid. Afloat



1:6

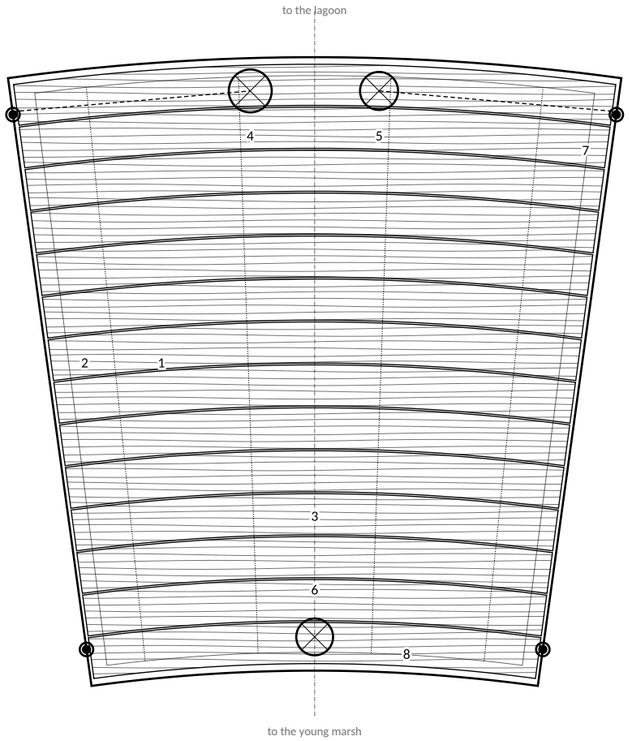
0 200 mm

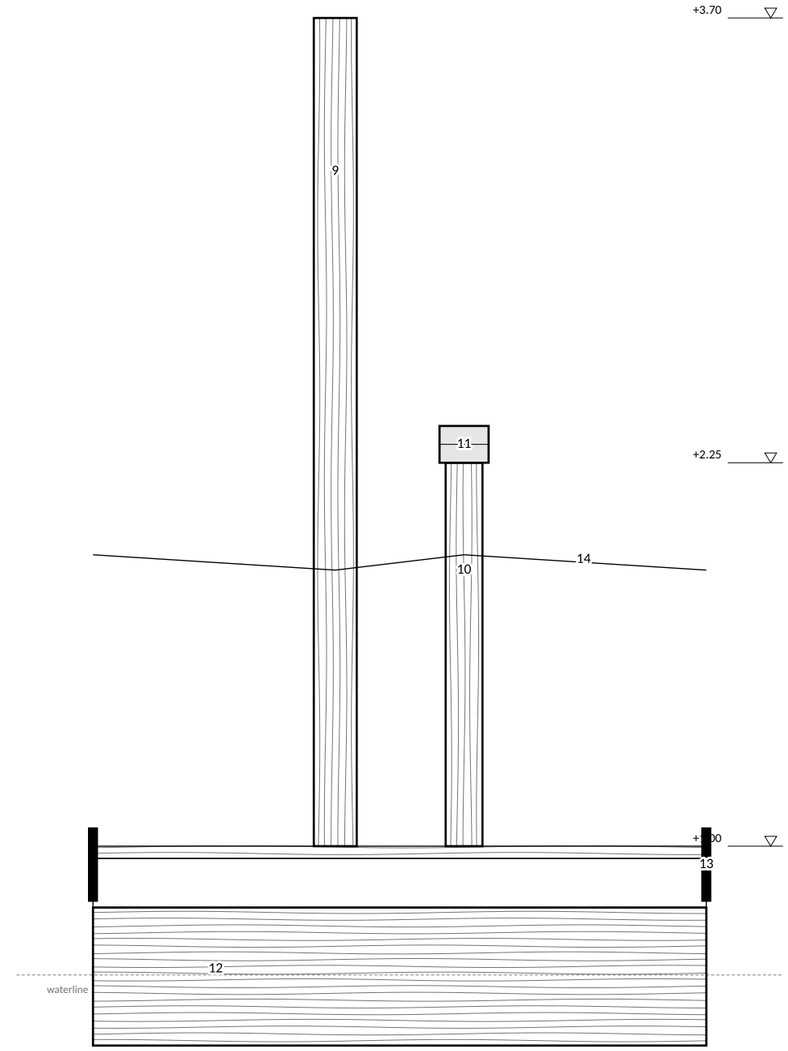
Legend

1 Larch deck board 140 x 40
2 Glulam bearer 160
3 Larch hull lid, 25
4 Cork core, expanded agglomerate
5 Larch hull side, 25, sealed
6 Larch hull floor, 25
7 Tall post, larch 140
8 Steel shoe base plate, 12
9 Shoe cheek plates and bolts
10 Coach screws into the bearer
11 Drop pin housing
12 Stainless screws, two a board

D06 Ring bay: plan and outer elevation

One of the 23 bays. Deck boards run with the ring; bearers radial; the hull below dashed. Hinged to its neighbours by drop pins





Legend

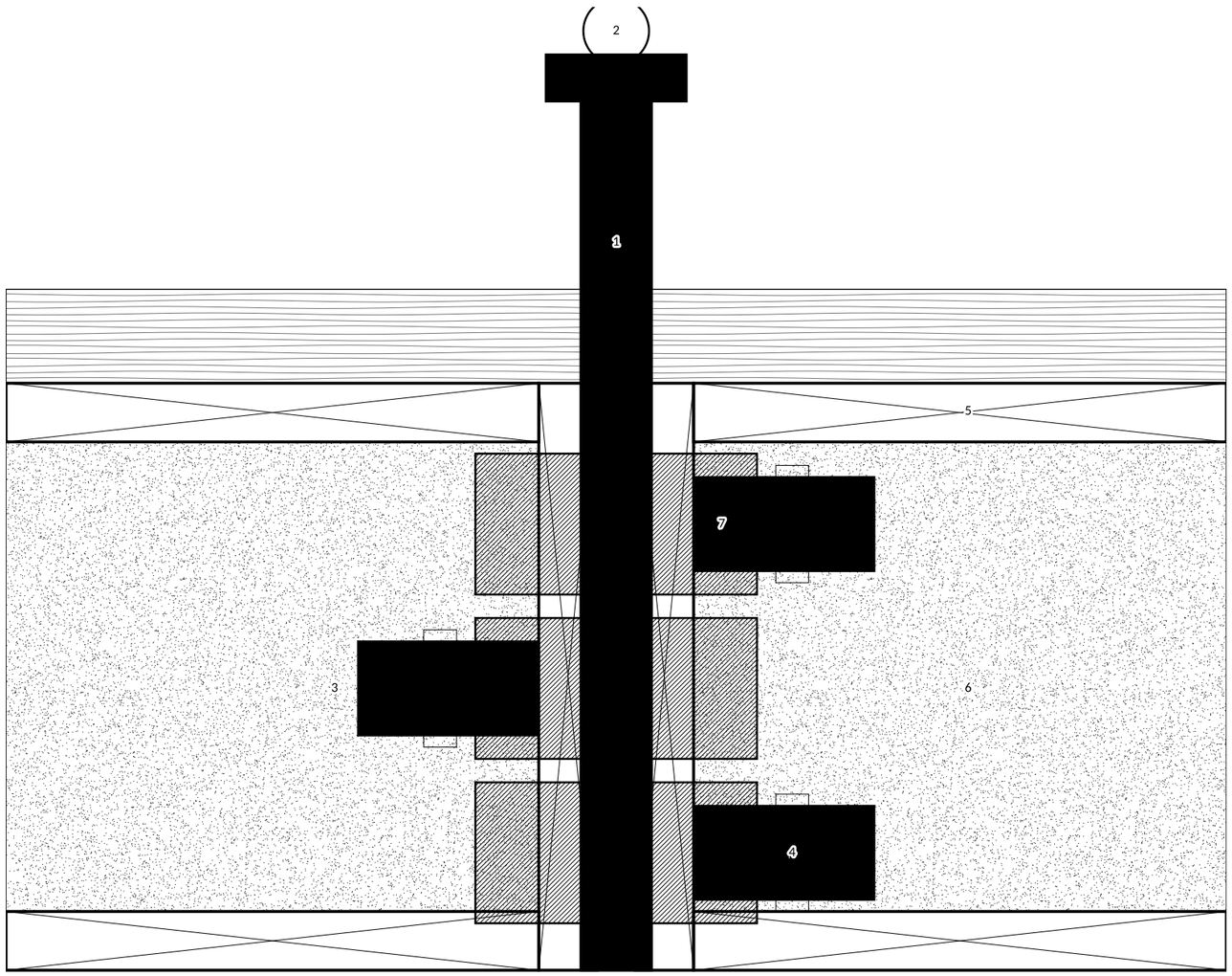
1 Larch deck boards, along the ring
2 Glulam bearers, radial, below
3 Hull, below, dashed
4 Tall post 140
5 Short post with lantern
6 Inner post 120
7 Drop pin, 30
8 Inner edge
9 Tall post 2.70
10 Short post 1.25
11 Lantern
12 Hull, sealed larch
13 Hinge knuckle
14 Rope rail

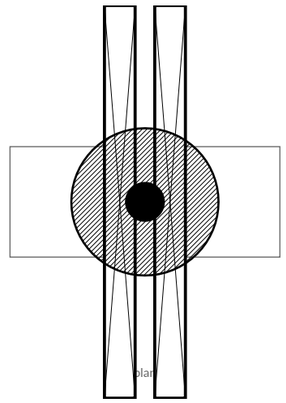
1:20

0 1 m

D07 The hinge between two bays

A 30 mm duplex drop pin through interleaved knuckles. Lift the pin and the ring opens; every November it is towed on as a line of 20 bays





Legend

1 Deck boards over the joint
2 Drop pin, duplex 30, with lifting eye
3 Hull side, larch 25
4 Knuckle plate, bolted through the hull
5 Hull lid
6 Cork core
7 Knuckles alternate, bay to bay

1:2.5

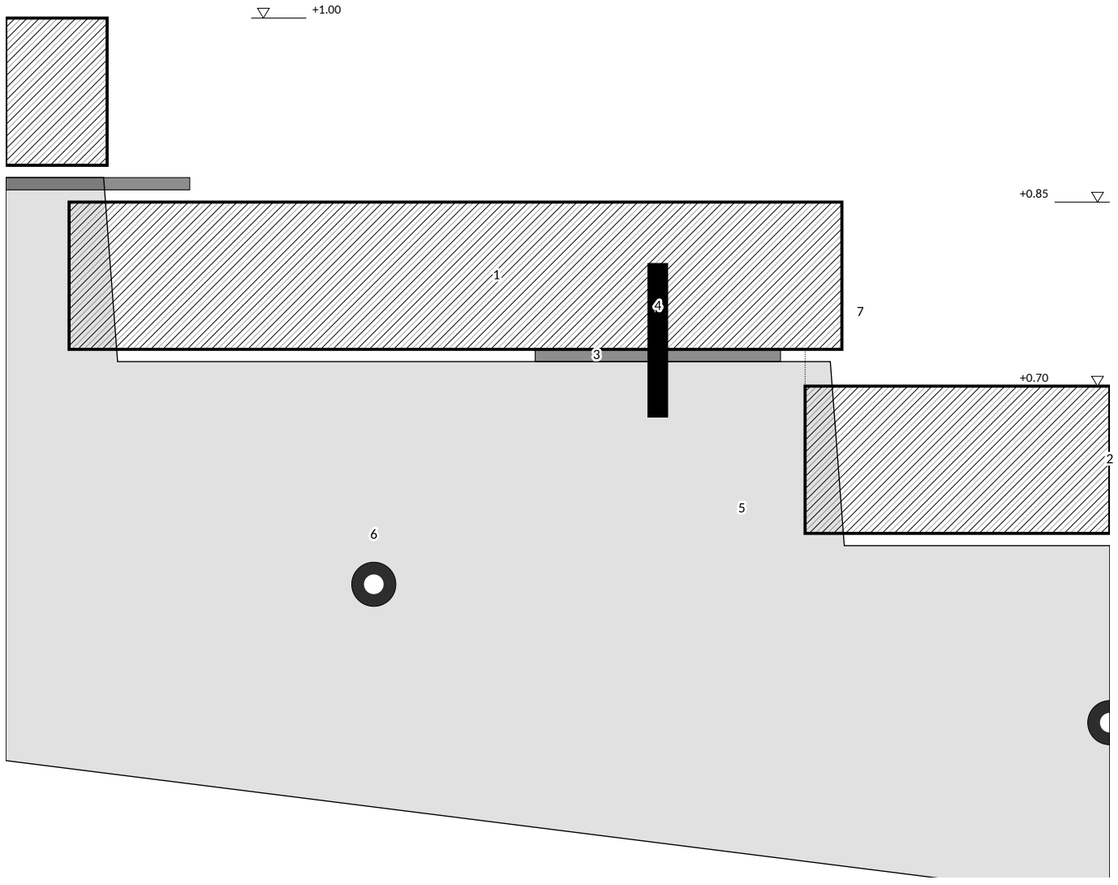
0 100 mm

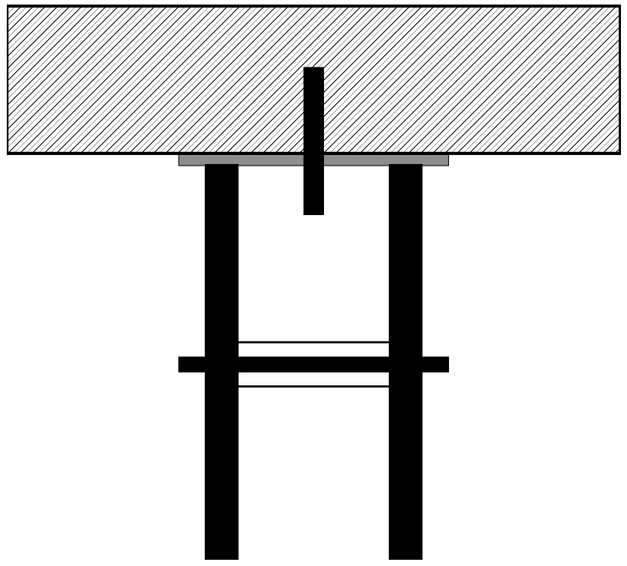
D08 Stone tread on the twin ribs

Each 120 mm slab bears on a neoprene pad on the rib pair and is held by a stainless dowel. Treads lap 30 mm with an open slot, so the tide passes through

Legend

1 Istrian stone tread, 120
2 Next tread, lapped 30
3 Neoprene pad, 10
4 Stainless dowel 16, in resin
5 Twin rib, duplex 2 x 25
6 Cross-bolt M20 in spacer tube
7 Open slot: the tide passes





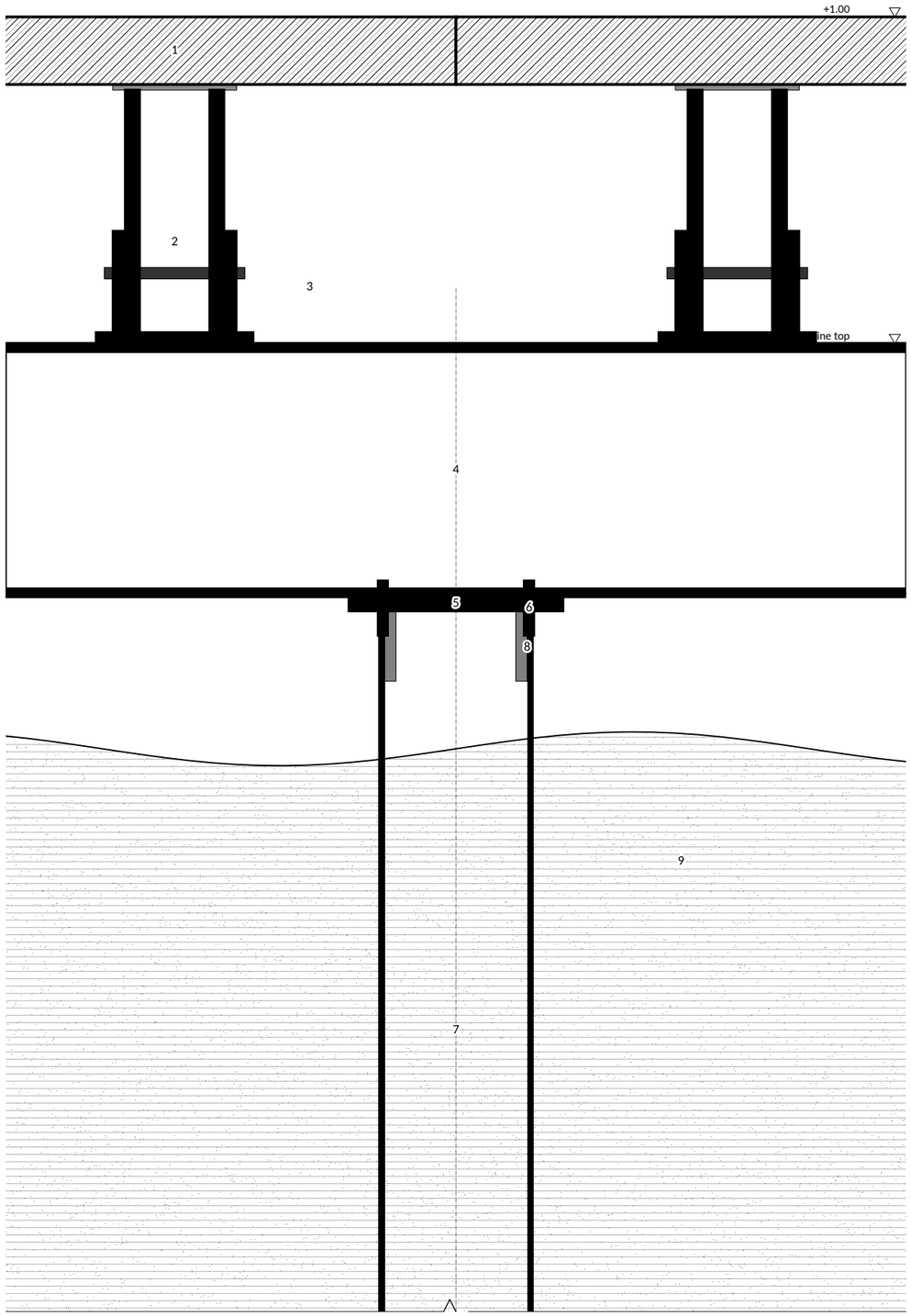
across the rib pair

1:5

0 200 mm

D09 Spine, saddle and pile head

Across the shore: the rib pair sits in a saddle welded to the spine box; the spine bolts to a cap plate on the tube pile



1:10

0 500 mm

Legend

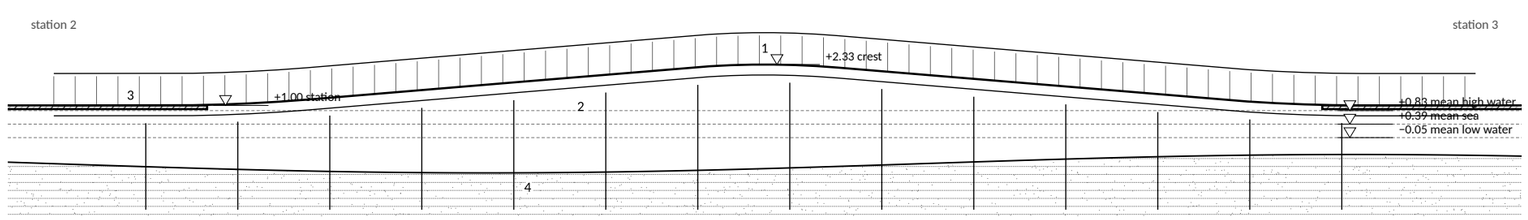
1 Stone landing slab
2 Twin rib pair
3 Saddle: base and cheek plates, M16 through-bolt
4 Spine, duplex box 250 x 450 x 16
5 Cap plate 25
6 M20 bolts, four
7 Tube pile 273 x 10
8 Stiffeners
9 Lagoon mud

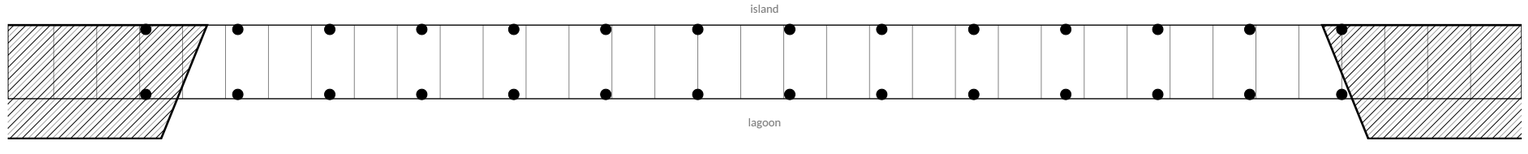
D10 The walk between two stations: elevation and plan

The walk lifts in one curve between stations 2 and 3 so the tide and small boats pass under; level and stone-paved at each station

Legend

1 Handrail on oak fins
2 Deck and edge beam, one smooth curve
3 Stone landing, level at +1.00
4 Pile bents every 3 m





1:200

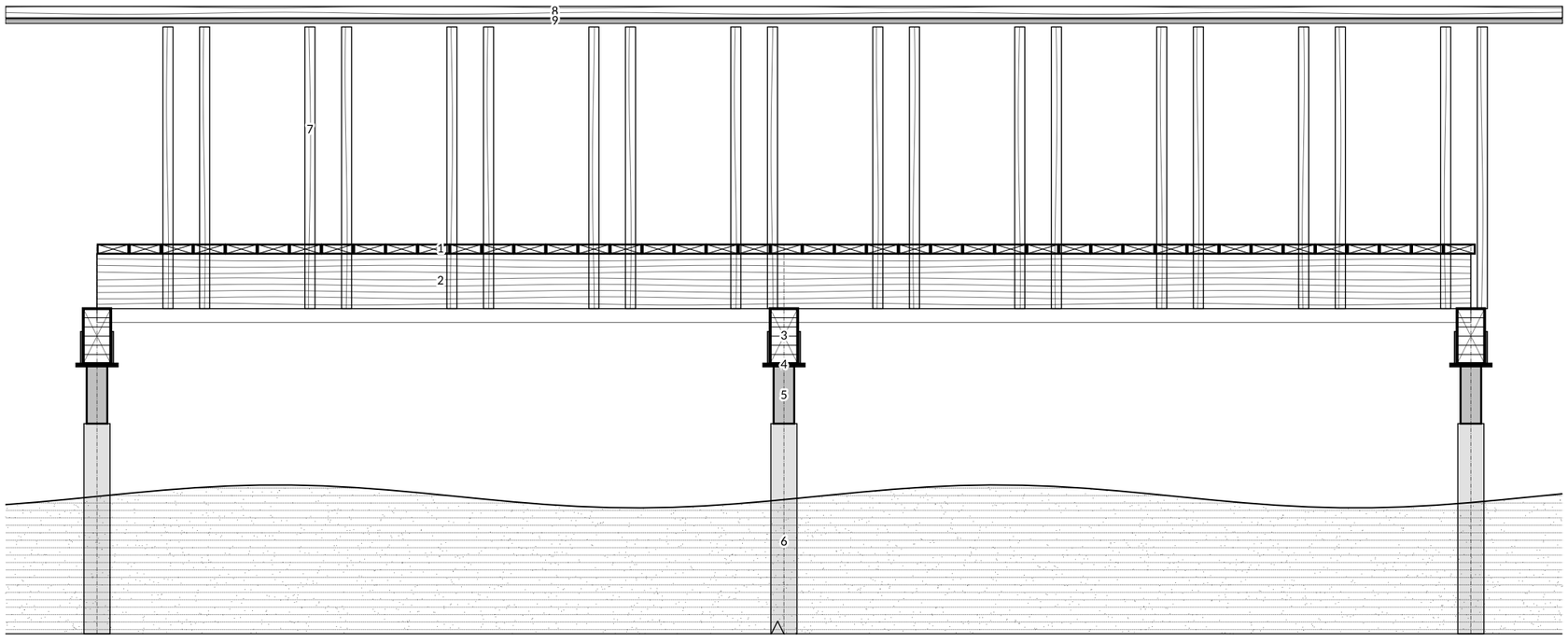
0 10 m

D11 The walk: longitudinal section through two bays

Section along the walk on its centre line: deck boards cut, joists and edge beam beyond, crossbeams on pile bents at 3 m, fins and handrail behind

Legend

1 Larch deck boards, cut
2 Joists and edge beam beyond
3 Glulam crossbeam, cut
4 U-saddle
5 Spigot
6 Steel tube pile 114
7 Oak fins in pairs
8 Oak handrail
9 Light strip

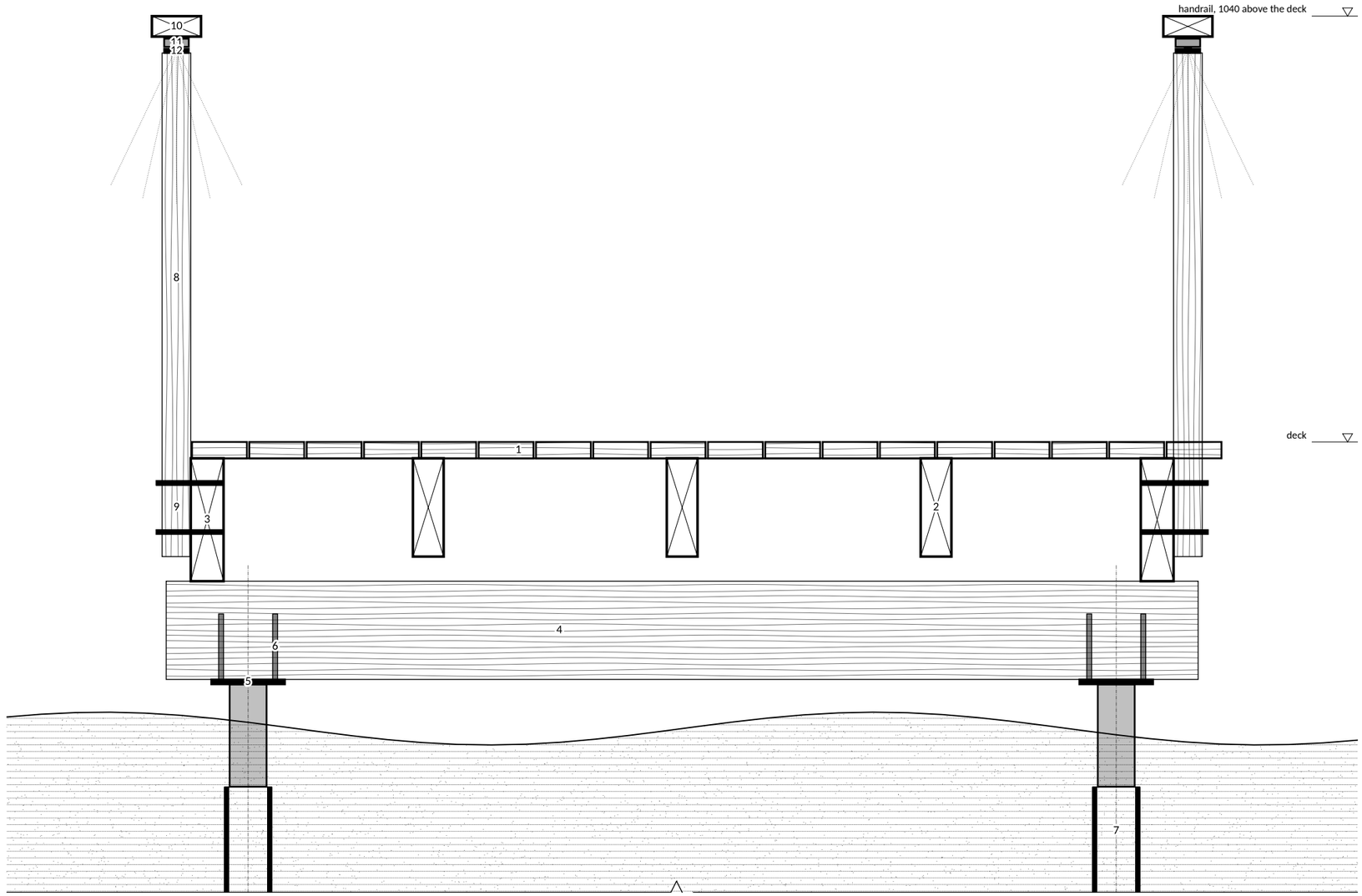


1:25

0 1 m

D12 Bridge between stations: cross-section

Larch deck on joists and oak edge beams, carried on a glulam crossbeam in U-saddles on two steel tube piles. Oak fins bolted outside, the light under the handrail



1:12.5

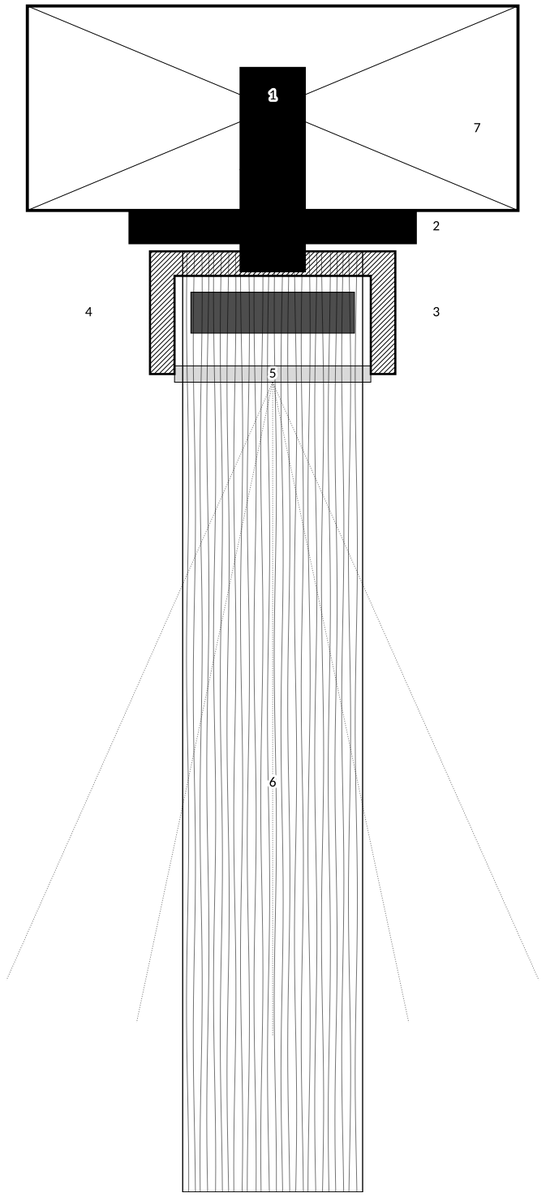
0 500 mm

Legend

1 Larch deck board 140 x 40
2 Larch joist 75 x 240, at 620
3 Oak edge beam 80 x 300
4 Glulam crossbeam 120 x 240
5 U-saddle base plate
6 Saddle cheeks, M16 through-bolt
7 Steel tube pile 114, galvanised
8 Oak fin 44 x 70
9 M12 through-bolts
10 Oak handrail 120 x 50
11 LED strip in aluminium channel
12 Bracket plate

D13 Handrail and light strip

The light washes the deck from under the handrail; nothing shines across the water. Warm white 2700 K, dimmed after midnight



Legend

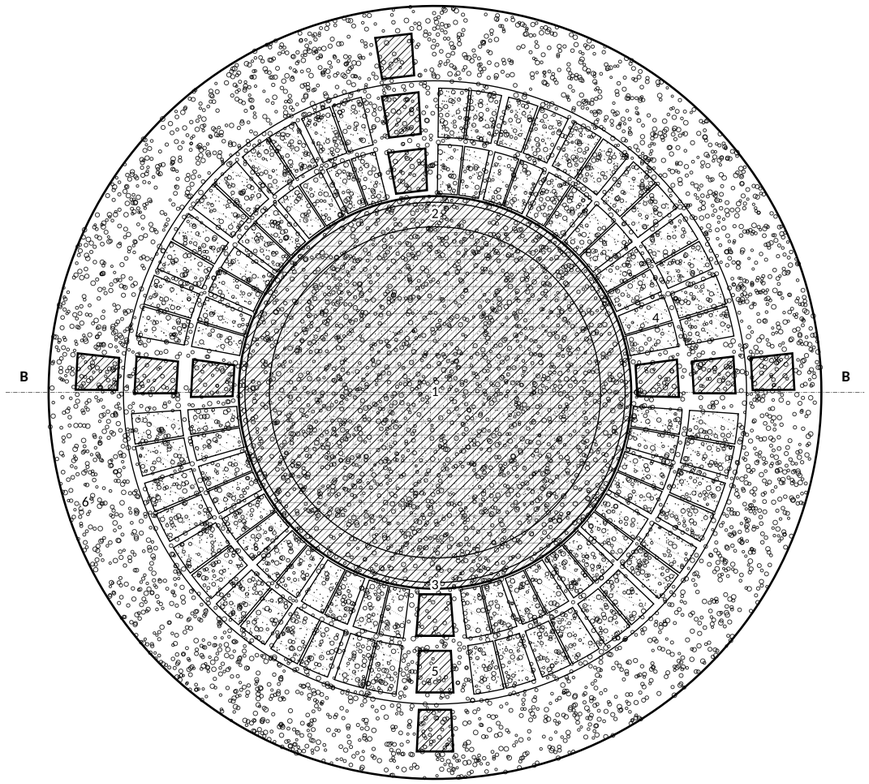
1 Oak handrail 120 x 50, eased edges
2 Bracket plate 8, screwed to the fin
3 Aluminium channel
4 LED strip, 2700 K
5 Opal diffuser
6 Oak fin 44 x 70
7 Stainless screws

1:1.5

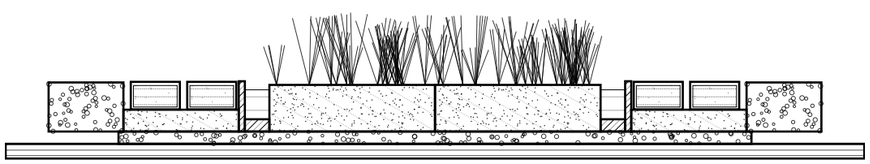
0 50 mm

D14 Nursery: plan and section

The whole nursery: reed bed, channel and kerb, 23 crate slots in two rings, four stepping-stone paths, the gravel walk. Section through a path and a crate slot



section B-B



1:50

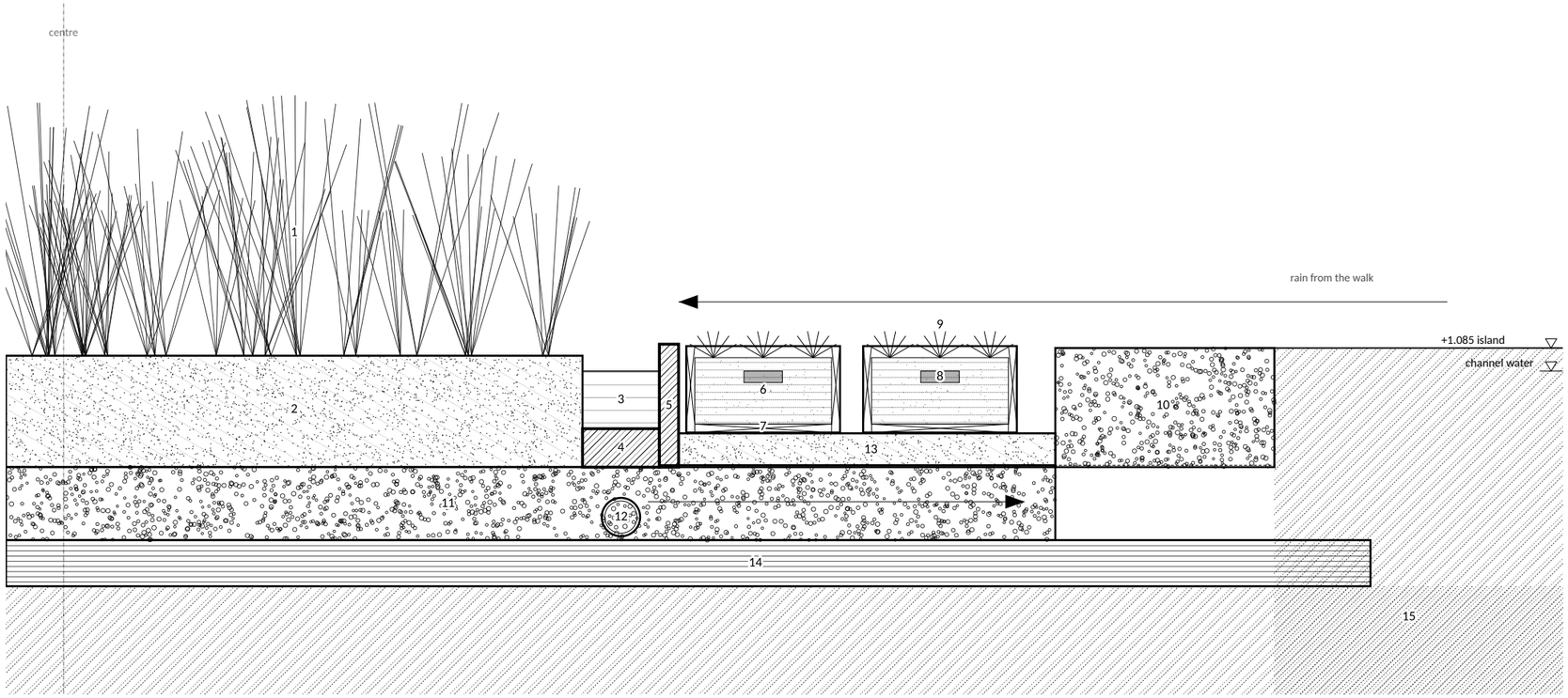
0 2 m

Legend

1 Reed filter bed
2 Feed channel
3 Stone kerb
4 Crate in two halves, 46 in all
5 Stepping-stone path, four
6 Gravel walk

D15 Nursery: half section

Rain from the walk feeds the channel; the reed bed cleans it; it spreads through the gravel under the crates and overflows to the marsh. The crates sit flush in the ground



Legend

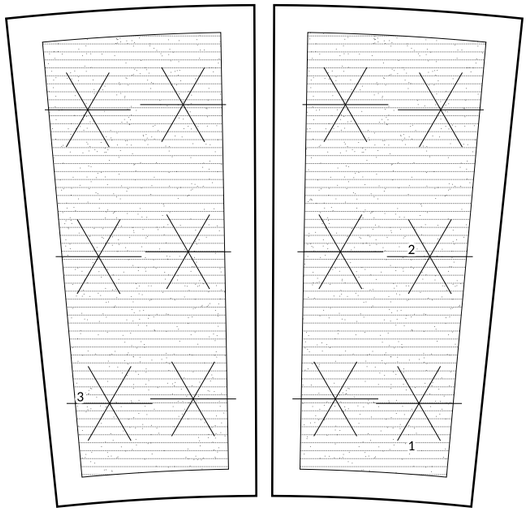
1 Reeds and rushes
2 Reed filter bed
3 Feed channel, still water
4 Channel floor, stone
5 Stone kerb
6 Larch crate, 22 sides, slatted floor
7 Lagoon mud, 170
8 Hand hold
9 Seedlings
10 Gravel walk
11 Gravel drainage bed
12 Perforated feed ring 100
13 Geotextile
14 Puddled clay liner 120
15 Island ground

1:15

0 500 mm

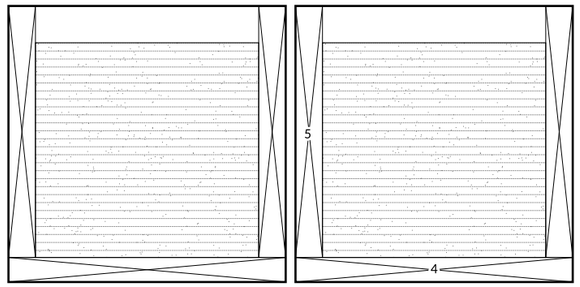
D16 Nursery crate

Two halves, each light enough for two children to lift out by its hand holds and carry to the ring. Larch, no glue, stainless screws

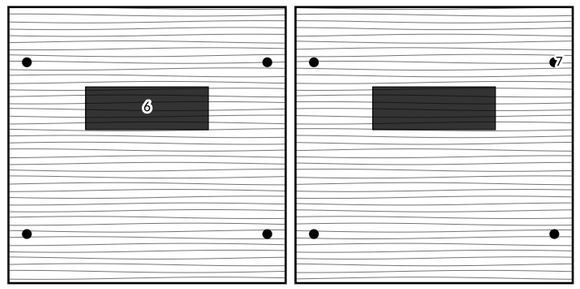


plan, two halves

section across



end elevation, hand holds



Legend

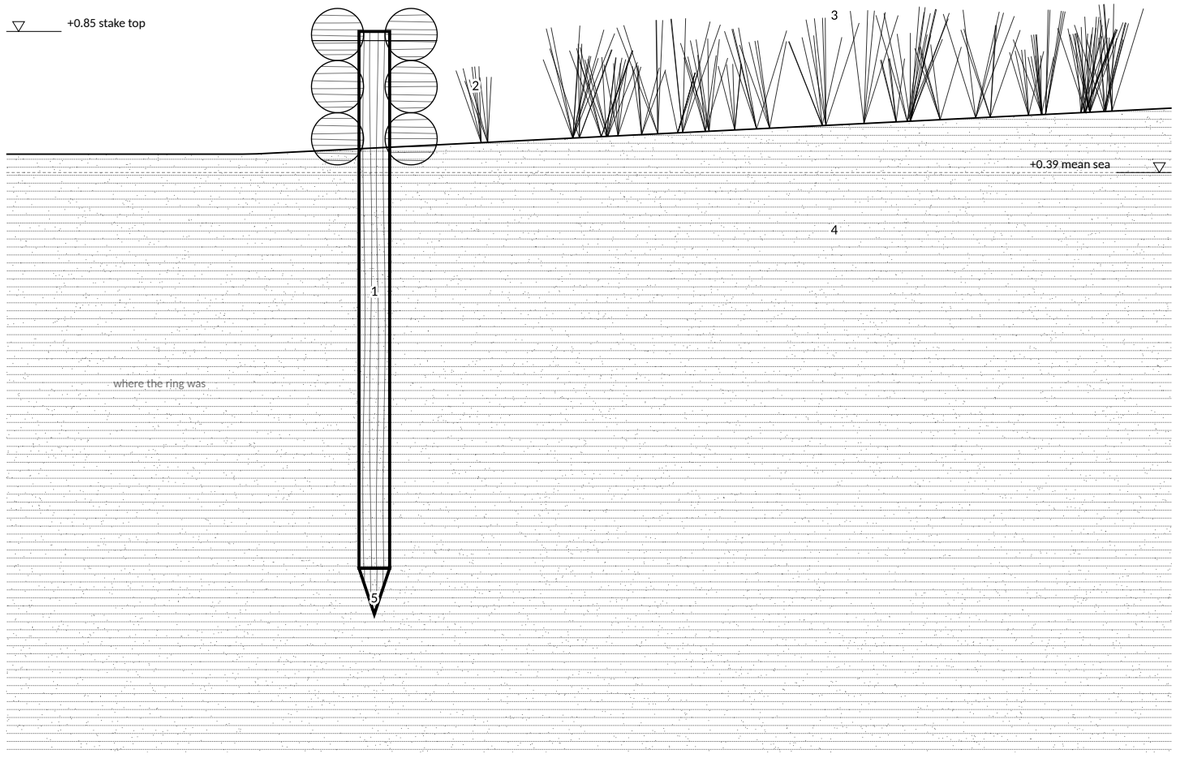
1 Larch sides 22
2 Lagoon mud, 170
3 Seedlings: sea lavender, glasswort
4 Slatted larch floor, drains to the gravel
5 Gap between halves, 8
6 Hand hold, 100 x 35
7 Stainless screws

1:5

0 200 mm

D17 What stays: the brushwood stakes

Four larch stakes a bay are driven inside the ring with brushwood bundles between. When the ring leaves in November they stay, holding the young marsh edge until the roots take over



1:20

0 1 m

Legend

1 Larch stake 100, driven
2 Brushwood bundle, tied
3 Cordgrass and glasswort, rooted
4 Mud caught by the ring
5 Point, 1.9 m into the mud