

Engineering: Building with Nature MOOC

Understanding the interactive pdf of the Fish Migration River solution

This document is based on the *Vismigratierivier Afsluitdijk*, developed by 'Programma naar een Rijke Waddenzee' and the alliance 'de Nieuwe Afsluitdijk'. Because the original document is written in Dutch, this document provides an English translation.

Vismigratierivier Afsluitdijk

PROGRAMMA NAAR EEN RIJKE WADDENZEE

de Nieuwe Afsluitdijk

Legenda

- Ontwerp
- Werking
- Natuur
- Beleving

In the original PDF document, you can click on the items in the legend (the red box in the top right corner of the document). This will make some boxes with text appear in the image.

Because the original document is in Dutch, this document provides you with a translation for each of these boxes.

Look in the tables below. Each table corresponds to one item in the legend. The text boxes are labeled in each table, and the corresponding translation is provided in the right column.

Ontwerp = Design

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1. In the future, the influence of tides in the Wadden Sea will enable a salt marsh landscape to become established.
2. A storm surge barrier can close off the channel opening. The storm surge barrier ensures safety from flooding.
3. Fish can cross the Afsluitdijk via an open channel. The primary channel of the migration route has strong currents and the secondary channel has weak currents. There is a walking path alongside the channel.
4. The Fish Migration River can be closed off at the southern side. This mechanism prevents salt water from flowing into the IJssel Lake.

Werking = Operation



1. The fish from the Wadden Sea are attracted by the fresh water signal in the discharge area. The fish can easily swim into the Fish Migration River via two openings.
2. Weak swimmers, like the eel and the flounder use the flood tide to move from the Wadden Sea to the Ijssel Lake.
3. When it is ebb tide in the Wadden Sea, fresh water flows out of the Ijssel Lake. Strong swimmers like the sea trout and the Atlantic salmon can easily swim against these flows.
4. Locks are located in both channels. The current speeds and salt intrusion can be controlled using these locks.
The secondary channel is always open. In this stream vertical gates are placed to ensure that the current speeds remain low here.

Natuur = Nature



1. Between the two attractive fresh water streams lies a bird island where for example plover and terns can breed undisturbed.
2. The meandering transition zone between salt water and freshwater creates a dynamic area where new vegetation such as salt marsh bulrush and silt grassland can become established.
3. The migrating fish continue on their route to the Ijssel Lake and further upstream, to mature and reproduce.
4. Towards the Ijssel Lake the water will become progressively more fresh. Reeds can grow on the banks and higher on the dikes colourful vegetation and flowers can grow.

Beleving = Experience



1. In the Kazematten museum, you can find information about migratory fish species and their migration routes. Here you can experience the world of salt and fresh water!
2. It is possible to watch the migrating fish through a window. There will always be fish to see in this part.
3. The field with 'Happy Fish' is an art project of 300 fish silhouettes that turn with the tide.
4. The boating public can reach the Fish Migration River via a jetty.
5. A large part of the area is open to visitors. The new nature area can be discovered via walking paths.