

**GROUNDWATER  
IS OUR  
BUSINESS**



# **PRODUCT MANUAL**

Diver-HUB



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# 1 Introduction

Diver-HUB is an easy-to-use, cloud-based web portal delivering centralized and secure access to groundwater monitoring data from anywhere in the world. Diver-HUB allows you to manage groundwater monitoring data in real-time on your desktop, smart phone or tablet. Diver-HUB analyzes Diver data logger time-series, and creates interactive maps and graphs based on your monitoring data, effectively keeping track of all hardware deployed in the field and supporting the overall management of your monitoring network.

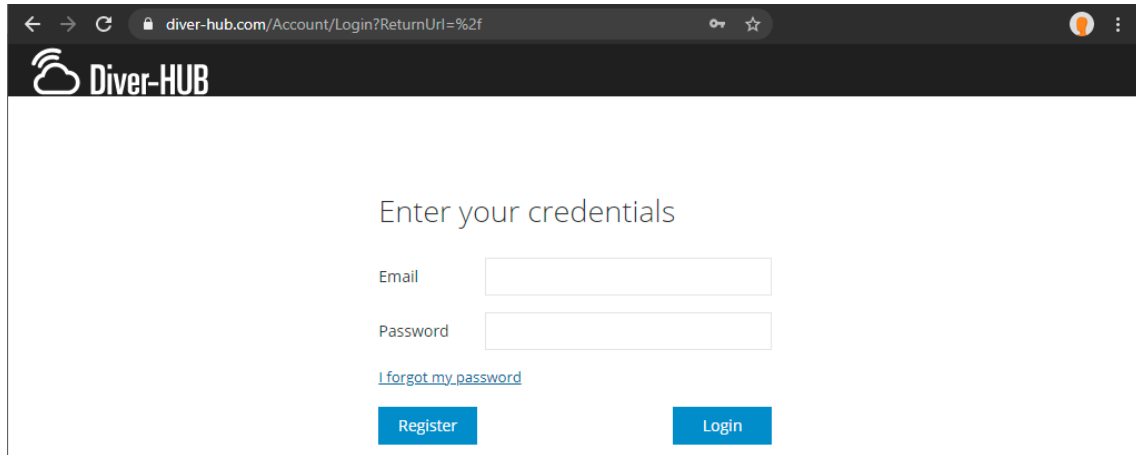
This manual outlines the general use, navigation and features of Diver-HUB. Please see the [Diver-HUB Getting Started Guide](#) for more information on how to setup Diver-HUB, create and setup a project and start data collection.



## 2 Diver-HUB Essentials

### 2.1 Login

Access Diver-HUB by navigating to [www.diver-hub.com](http://www.diver-hub.com). If you do not have a Diver-HUB click the Register button to request an account. Once your account has been created you can login by entering the provided credentials.

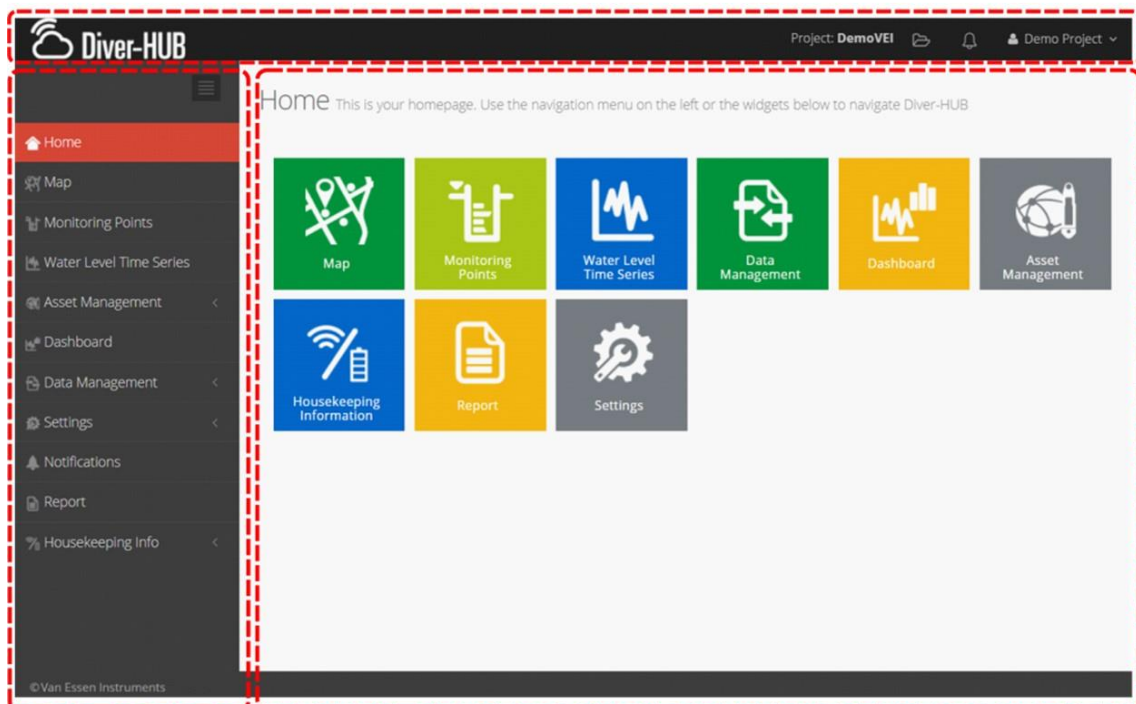


### 2.2 Structure

Once logged in to Diver-HUB, the homepage will be shown. A typical Diver-HUB homepage is shown below. Each section is described below. All main features of Diver-HUB are represented by widgets.

2

#### Ribbon



Navigation menu

Main content

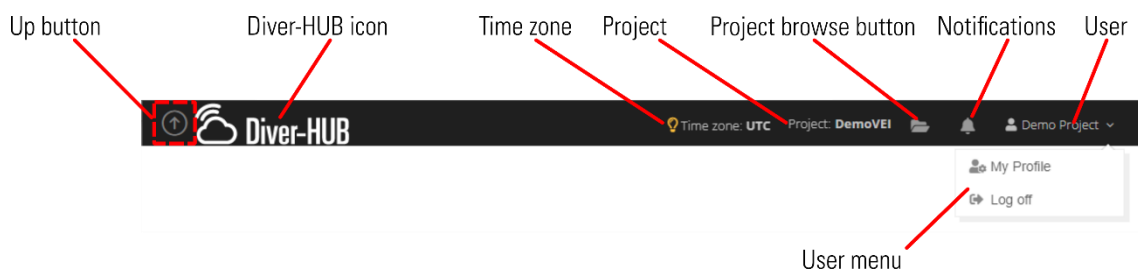




### 2.2.1 Ribbon

In the ribbon at the top of the page you will find, from left to right:

- Click the Up button to navigate from a sub-page to the page above
- Click on the Diver-HUB icon to return to the homepage
- The Time zone indicates the selected time zone in which the timestamps and time series data are shown
- The Project label indicates the active project or All if no specific project was selected
- Click the Project browse button to select a project
- Click the Notifications icon to show all new notifications
- The User label indicates the user that is currently logged in
- Click on the down arrow next to the user to show the user menu to view your profile or log off.

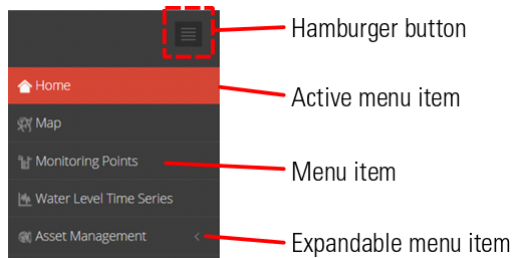


### 2.2.2 Navigation Menu

Click the Hamburger button at the top-right corner to minimize the navigation menu.

Click on a menu item to navigate to a specific feature within Diver-HUB. The active menu will be highlighted in red.

Click the left arrow symbol left of a menu item to expand the sub-menu items.



### 2.2.3 Main Content

The main content view changes depending on the selected feature. In the homepage view, the main content contains widgets. The widgets that are shown can be set in Settings > Widget Management, see section

## 2.3 Navigation

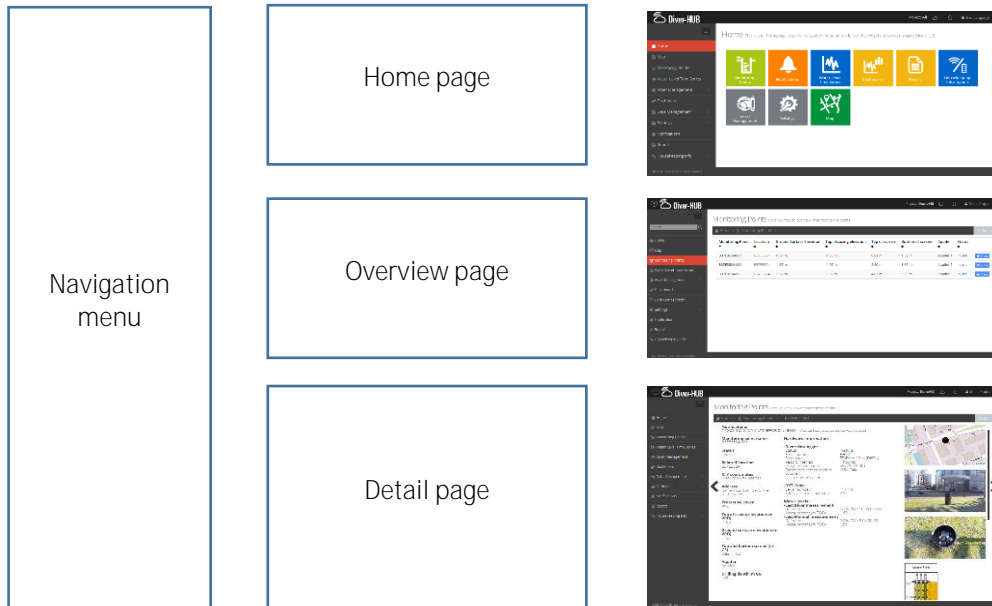
The Diver-HUB has 3 levels:

- Homepage with widgets,
- Overview page of monitoring points for a specific widget,
- Detail page monitoring point for a specific widget. A detail page is available within the Monitoring Point, Water level Time-Series and Housekeeping Info widget.



These 3 levels can be navigated vertically (up→down and down→up). Furthermore, you can navigate within the same level between the widgets with the navigation menu. For instance, for a specific monitoring point you jump directly from the detail page of the monitoring point widget to the detail page of the Water Level Time-Series widget. In this way you can easily get an overview of all relevant data for a specific monitoring point with a minimum number of clicks.

Within the detail page you can also navigate between the different monitoring points by using the carousel buttons.



### 3 Diver-HUB Features

#### 3.1 Introducing Widgets

Data visualization and presentation in the Diver-Hub web portal is possible through different widgets. Each widget contains specific information about a certain subject. Diver-HUB has the following widgets:

- Map,
- Monitoring Points,
- Water Level Time Series,
- Asset Management,
- Dashboard,
- Data Management,
- Settings,
- Notifications,
- Report,
- Housekeeping Info.

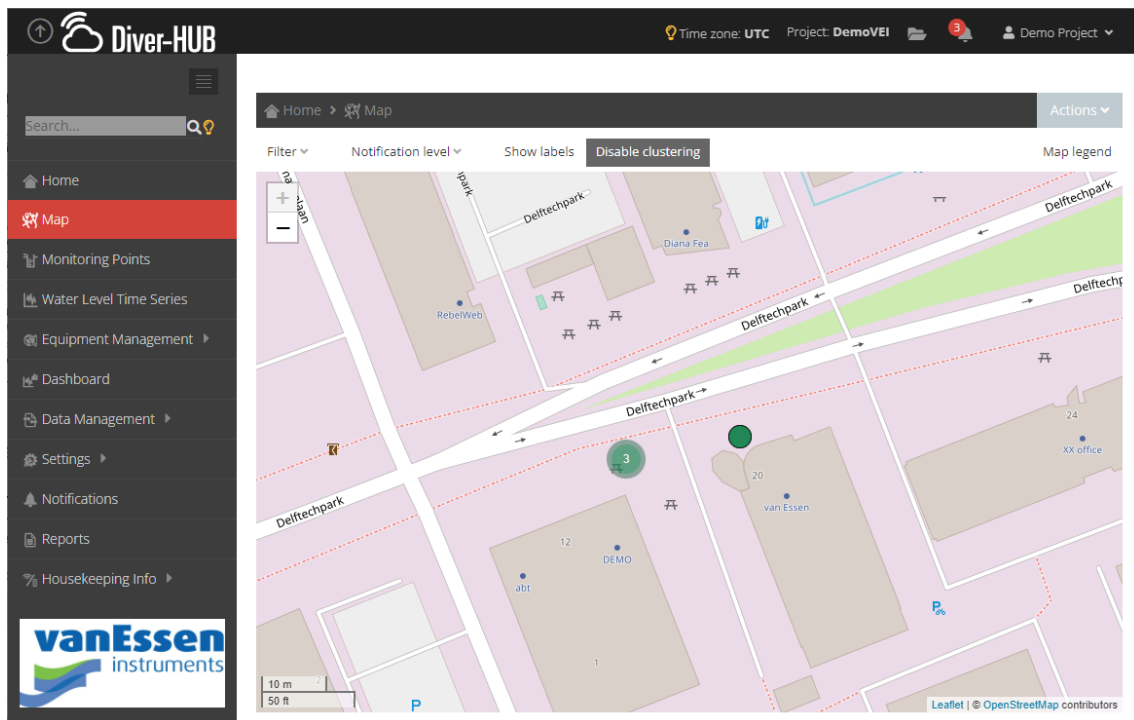


## 3.2 Map

Click on the Map in the menu on the left to show the monitoring points on a map. Each monitoring point is shown as a round marker. If there are more monitoring points for one location or for a certain area (depending on the zoom level), then a number inside the marker indicates the number of monitoring points. The color of the marker indicates the highest notification level of the monitoring points represented by the marker.

Click on the + or – symbol to zoom in or out, respectively, or use your mouse.

At the top of the map are 5 buttons that are explained below.



Click on a marker and a pop-up appears in the upper-right corner of the map with more detailed information about the monitoring point:

- Location information (address and coordinates),
- Picture,
- Start- and end datetime of the water levels recorded by the Diver datalogger,
- Overview and status of installed hardware,
- Overview of last 3 active notifications,
- View Details button. After clicking this button, the monitoring point widget with detailed information of the specific monitoring point is opened.



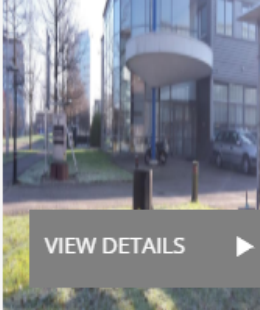


Monitoring Point	Address	X, Y coordinates
B37E3524-003	Delftechpark 20, Delft	4.38278x51.996741

**Water levels**  
First measurement: 2/24/2016 10:00:00 AM  
Last measurement: 12/13/2019 3:00:00 PM

**Hardware status**  
Active: Diver-Gate(S), Diver-DXT, Baro-DXT, Diver  
Inactive:

**Notifications**  
12/15/2019 2:19:04 PM (UTC) WARNING: Diver V7290 - Did not connect since 2019-12-13 14:15:41 (UTC)  
12/14/2019 2:19:27 PM (UTC) WARNING: Diver V7290 - Did not connect since 2019-12-13 14:15:41 (UTC)



[VIEW DETAILS](#)

### Filter

Click the Filter button to show monitoring points with specific notification types, monitoring point that are out of service, meteorological<sup>1</sup> and/or precipitation<sup>1</sup> stations.

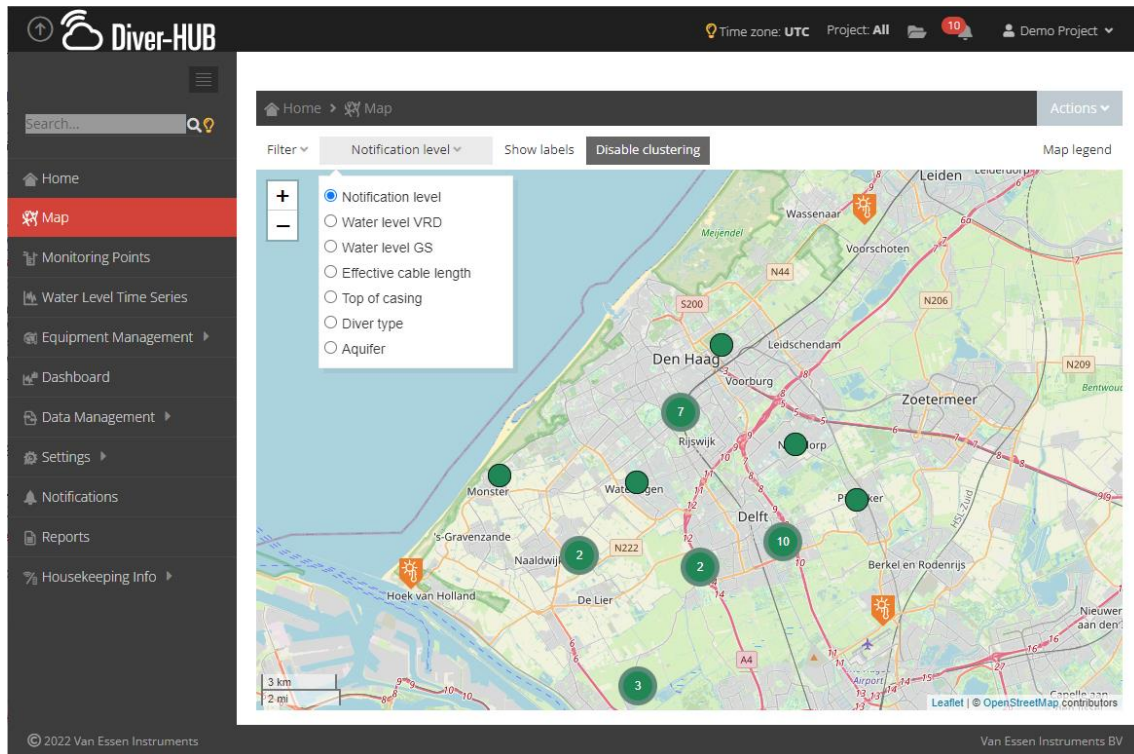
### Notification level

Click the Notification level button to change the information shown for the monitoring point, i.e. the color of the marker. The following options are available:

<sup>1</sup> Only available in the Netherlands. Data provided by the Royal Netherlands Meteorological Institute (KNMI).



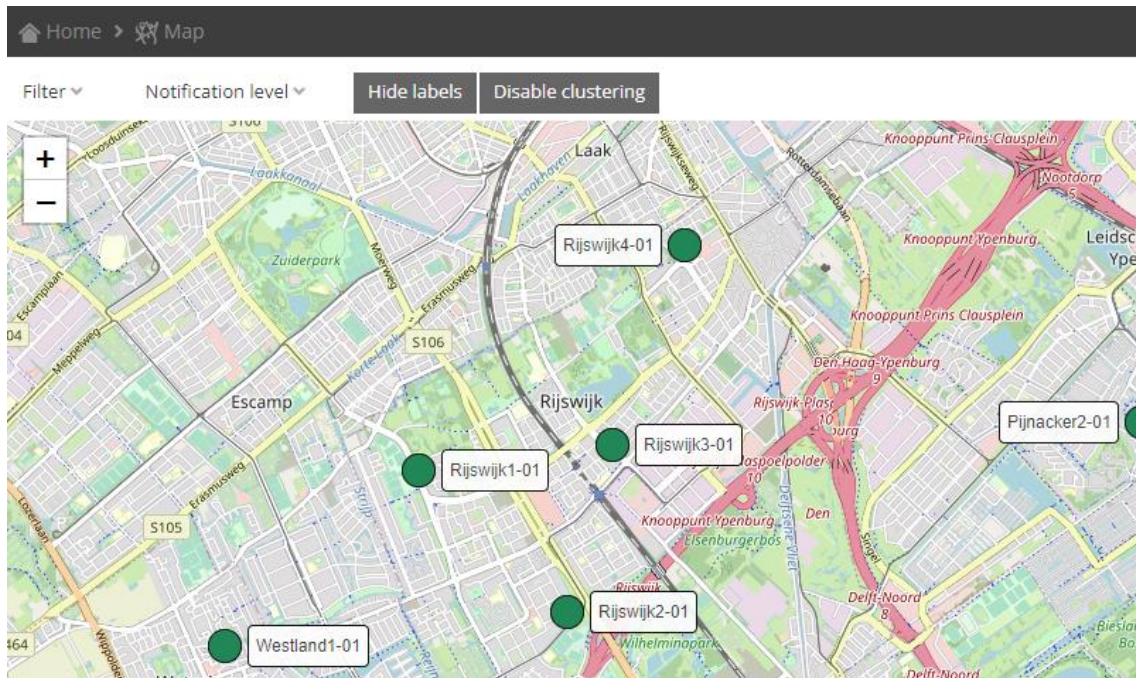
- Notification level (default),
- Water level VRD (vertical reference datum, e.g. Means Sea Level),
- Effective cable length,
- Top of casing,
- Diver type,
- Aquifer,
- Water level GS (ground surface).



### Labels

Labels can be turned on by clicking the Show labels button, and vice versa being turned off by clicking the Hide labels button

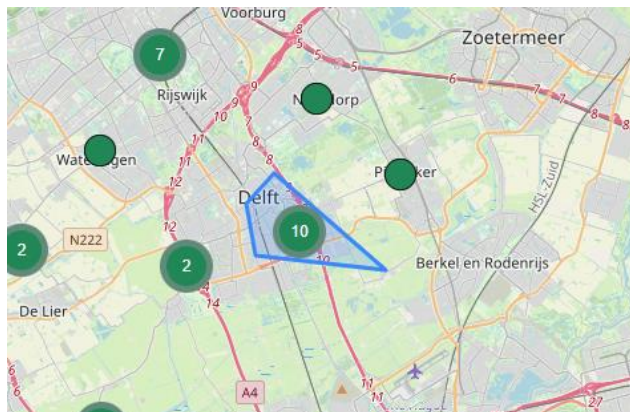




### Clustering

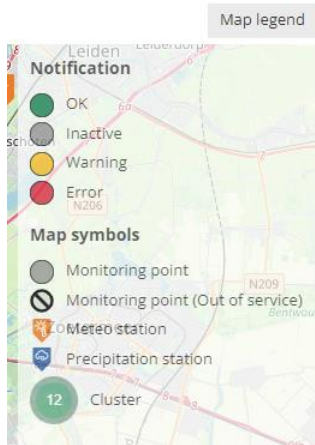
Click the Disable Clustering button and each monitoring point will be shown as a single marker. To return to clustering click the Enable Clustering button.

When hovering over a cluster of monitoring points, a blue area appears indicating where the monitoring points are located.



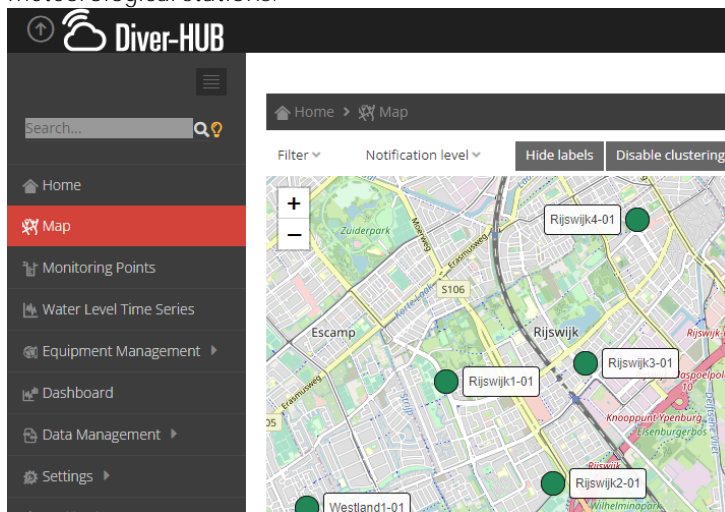
### Map Legend

Click on the Map Legend button in the top-right corner to show a legend explaining the symbols and colors on the map.



### Search

The top of the navigation menu has a search bar to search for locations, monitoring points and KNMI meteorological stations.



### Actions

Removes or adds the Map widget from your Homepage.

## 3.3 Monitoring Points

### 3.3.1 Overview page

Click on the Monitoring Points widget to get a list of all monitoring points of the selected project(s) will be displayed in a table. The table shows the following information:

- Monitoring point name,
- Location name,
- Top of ground surface elevation (m VRD),
- Top of casing elevation (m VRD),
- Top of screen (m GS),
- Bottom of screen (m GS),
- Aquifer,



- Status (In use or Out of use),
- View button to go to the detail page of a specific monitoring point.

The table is searchable through the search bar in the navigation menu. Each column of the table can be sorted alphabetically or numerically.

Monitoring Point	Location	Ground Surface Elevation	Top of casing elevation	Top of screen	Bottom of screen	Aquifer	Status
B37E3524-001	B37E3524	-1.57 m	-1.05 m	0.82 m	1.82 m	Aquifer 1	In use <a href="#">View</a>
B37E3524-002	B37E3524	-1.57 m	-1.07 m	2.60 m	3.60 m	Aquifer 2	In use <a href="#">View</a>
B37E3524-003	B37E3524	-1.57 m	-1.09 m	4.65 m	5.65 m	Aquifer 3	In use <a href="#">View</a>

### Detail page

The detail page of the Monitoring Points widget contains the following information:

- Notifications. Overview of last 3 active notifications,
- Metadata monitoring point (address, coordinates, top of casing, drilling depth, etc.),
- Hardware information (type of equipment installed, last communication, status, etc.),
- Pictures. Diver-HUB allows 3 pictures for each monitoring point. For instance, an overview image, detail image and borehole log plot. By clicking on the image, a larger version of the image will popup.

**Notifications**

**Monitoring point name**  
MP01\_DL

**Status**  
In use

**Related location**  
MP01

**X, Y coordinates**  
4.383095 x 51.996778

**Address**  
Deifttechpark 20, Delft, Nederland

**Protective cover**  
straatpot

**Top of casing elevation (m VRD)**  
-1.70

**Ground surface elevation (m VRD)**  
-1.64

**Top and bottom screen**

**Hardware information -Diver-Link**  
Status: Active  
Serial number: DL13555  
Last communication: 3/30/2020 12:00:18 AM  
Data transmission interval: 1 day(s)  
SIM card number: 8946200800200349080

**-Baro-Link datalogger**  
Status: Active  
Serial number: 13555  
Barometric datalogger: Yes  
Record interval: 1 hour(s)  
Programmed name: MP01\_DL-B  
Last communication: 3/30/2020 12:00:18 AM

**-Diver datalogger**  
Status: Active  
Serial number: AW611  
Diver type: TD-Diver 10 m (DI801)  
Record interval: 1 hour(s)  
Programmed name: MP01\_DL  
Barometric compensation source: MP01\_DL-B





### 3.3.2 Carousel

With the carousel button you can browse forward and backwards through the monitoring points. The monitoring points are sorted based on the order of your import.

**Monitoring Points** Here you can view monitoring point data

Project: DemoVEI Demo Project

Home > Monitoring Points > MP01\_DL > Actions

**Notifications**

**Monitoring point name**  
MP01\_DL

**Status**  
In use

**Related location**  
MP01

**X, Y coordinates**  
4.383095 x 51.996778

**Address**  
Delftechpark 20, Delft, Nederland

**Protective cover**  
straatpot

**Top of casing elevation (m VRD)**  
-1.70

**Ground surface**

**Hardware information -Diver-Link**

Status: Active  
Serial number: DL13555  
Last communication: 3/30/2020 12:00:18 AM

Data transmission interval: 1 day(s)  
SIM card number: 8946200800200349080

**-Baro-Link datalogger**

Status: Active  
Serial number: 13555  
Barometric datalogger: Yes  
Record interval: 1 hour(s)  
Programmed name: MP01\_DL-B  
Last communication: 3/30/2020 12:00:18 AM

**-Diver datalogger**

Status: Active  
Serial number: AW611  
Diver type: TD-Diver 10 m

#### Actions

The action button allows users to Edit certain data. The following parameters can be directly edited in the Diver-HUB:

- Status,
- Coordinates and address,
- Protective cover,
- Screen and drilling data information,
- Add images.

Actions

Edit this page

### 3.4 Water Level Time Series

#### 3.4.1 Overview page

Click on the Water Level Time Series widget to show a list of all the monitoring points in the selected project(s). The table shows the following information:

- Monitoring point name,
- Location name,
- Diver serial number,



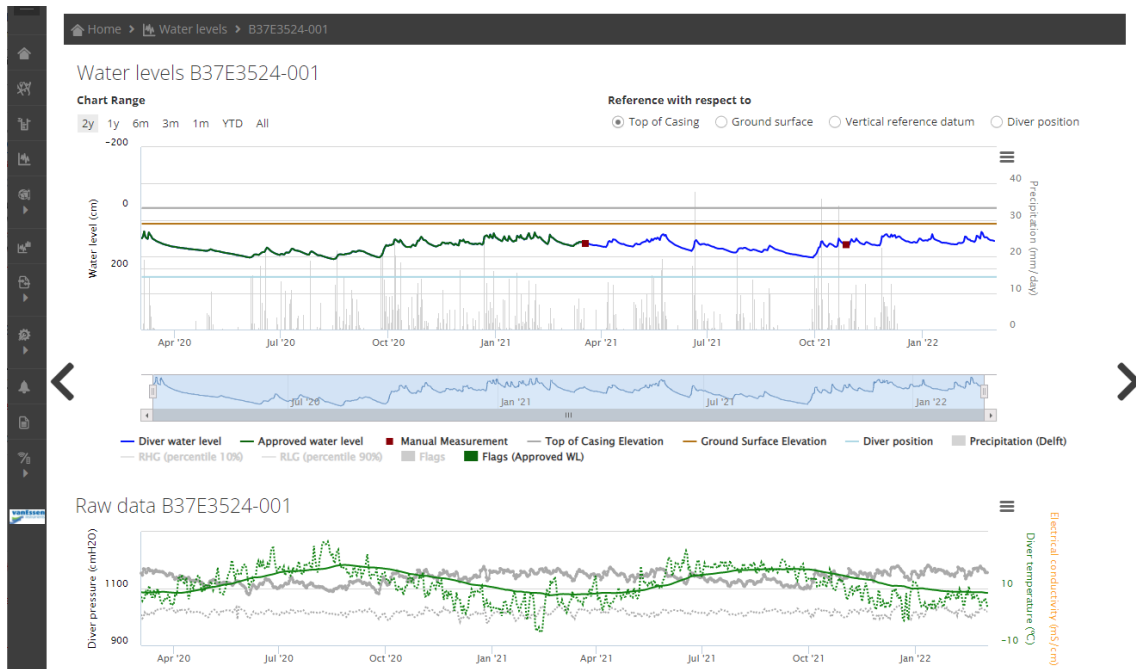
- Baro location code,
- Ground surface (m VRD),
- Top of Casing (m VRD),
- Cable length (m),
- Water level (m VRD),
- View button to go to the detail page of a specific monitoring point.

The table is searchable through the search bar in the navigation menu. Each column of the table can be sorted alphabetically or numerically.

### 3.4.2 Detail page

The detail page of the Water Level Time Series widget contains the following graphs:

- Water levels graph.
  - The time-series in the water level graph can be displayed with respect to:
    - Top of Casing,
    - Ground surface,
    - Vertical reference datum,
    - Diver position.
  - The following time-series can be displayed:
    - Diver water level. Unapproved water levels (not validated),
    - Approved water levels (validated),
    - Manual measurements of the water level,
    - Top of Casing elevation,
    - Ground surface elevation,
    - The position of the Diver in the monitoring point,
    - Precipitation. The precipitation time-series will only be displayed for monitoring points in the Netherlands. The precipitation data is obtained from the closest KNMI precipitation station.
    - RHG (percentile 10%). Representative Highest Groundwaterlevel is calculated based on all Diver water levels.
    - RLG (percentile 90%). Representative Lowest Groundwaterlevel is calculated based on all Diver water levels.
    - Flags (Diver water level). The flag feature is used to place labels at various points of interest. A flag can be set by double clicking the data point of the Diver water level.
    - Flags (Approved water level). The flag feature is used to place labels at various points of interest. A flag can be set by double clicking the data point of the Approved Water Level. A flag (approved water level) can be set by double clicking the data point or by importing the approved water level template.
- Raw data graph.
  - The following time-series can be displayed:
    - Diver pressure,
    - Air pressure (only available if a Baro-Diver, Baro-DXT-or Baro Diver-Link is used for compensation),
    - Diver temperature,
    - Air temperature (only available if a Baro-Diver is used for compensation).



Graph features:

- Time-series can be turned on or off in the graph by clicking on the labels,
- Data labels with the datetime and time series information are shown when hovering over the graph,
- You can zoom in by clicking and dragging and area in the graph. You can also use the slider to zoom in or out. It is also possible to zoom in/out by selecting a specific start- and end date,
- The graph can be exported in the following formats: PNG, JPEG, PDF, SVG vector image, CSV, XLS and NITG.

### 3.4.3 Carousel

With the carousel buttons < and > you can click back and forward through the monitoring points. The monitoring points are sorted alphabetically in the carousel.

## 3.5 Asset Management

The Asset Management widget has 2 sub-widgets:

- Diver-Link Configuration,
- Hardware Deployment.

### Diver-Link configuration

The Diver-Link configuration sub-widget allows a user to configure the modem Diver-Link used in the Diver-HUB project. Configuration of the Diver-Link is as follows:

First select the project for which you want to configure the Diver-Links. Then, in the Home screen click the Asset Management tile. Next, click the Diver-Link Configuration tile and the view as shown below will appear.



Set the desired data transmission interval, the time of the day that the transmission must occur and the data destination. Click Save to store the settings. With the next connection of the Diver-Link to the server, these settings will be applied to all Diver-Links in the selected project.

Setting the Data Destination to External FTP Settings requires you to setup your own FTP server and enter the login credentials for it. Choosing this option will not show any Diver data in Diver-HUB.

**Diver-Link Configuration** Here you configure the Diver-Link

Home > Equipment Management > Diver-Link Configuration

**Data Transfer Settings**

- Transmission Interval: 24 hours (recommended)
- Time of Transmission (UTC): 12:00 AM
- Data Destination: Diver-HUB (recommended)

Save

### 3.5.1 Hardware Deployment

The sub-widget Hardware Deployment provides insight in the hardware (type and serial number) deployed in each monitoring point over time. The slider in the graph can be adjusted to zoom to the right period.

**Equipment Deployment** Here is the overview of all hardware deployed in the project

Home > Equipment Management > Equipment Deployment

Monitoring Point: B37E3524-001

Hardware Type	Serial Number	Deployment Period (Approximate)
Diver-Link	141406g00009	2018 - 2022
Diver-Link	DL14007	2021 - 2022
SIM	8931080620043097068	2021 - 2022
SIM	00154F2000200212	2018 - 2022
Diver-DXT	00154F20002002FD	2019 - 2021
Diver-DXT	00154F20002002EE	2019 - 2021
Diver-DXT	DL14007-1	2021 - 2022
Baro-DXT	E3325	2018 - 2021
Baro-DXT	E4822	2019 - 2021
Baro-DXT	E4940	2019 - 2021
Baro-DXT	14007	2021 - 2022
DXT Cable	111111	2018 - 2022
Diver	H9614	2018 - 2021
Diver	U2800	2018 - 2021
Diver	BH961	2019 - 2021
Diver	BU158	2019 - 2021
Diver	DE508	2021 - 2022

### 3.6 Dashboard

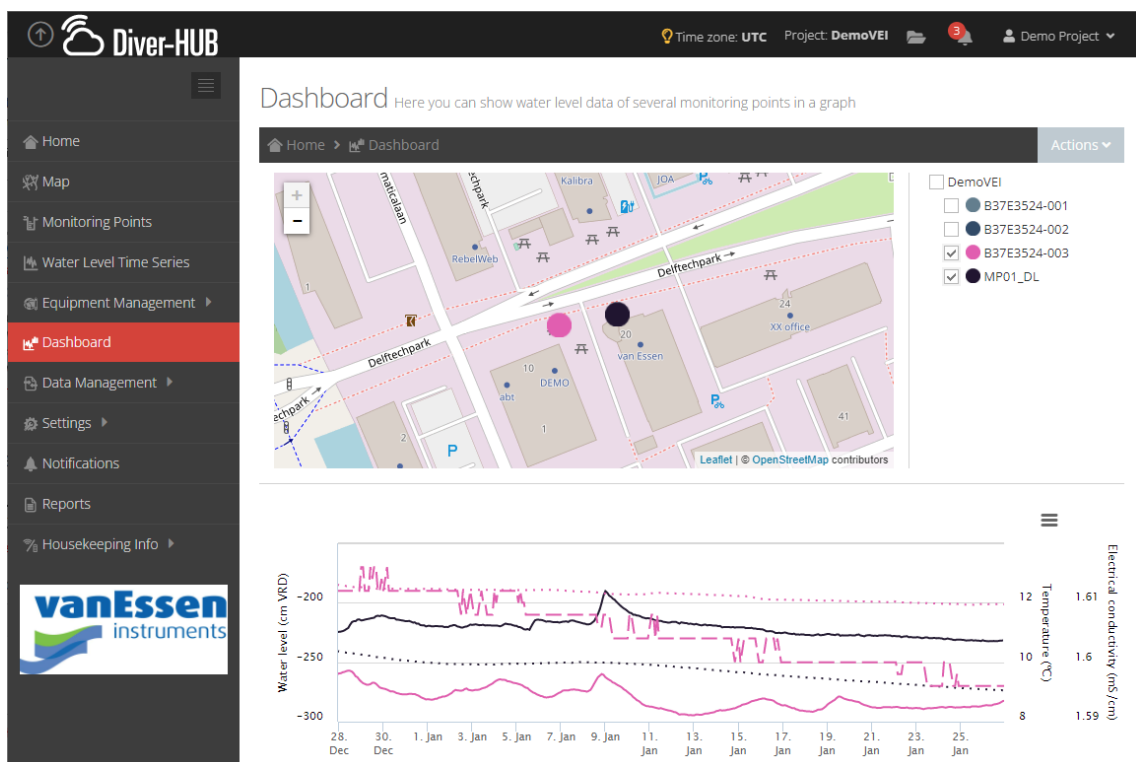
The dashboard widget allows a user to visualize water levels of multiple monitoring points in a single graph. Water levels are shown with respect to the vertical reference datum. Besides water levels, temperature and electrical conductivity time-series can also be visualized.



The monitoring points can be selected by checking the checkbox. The time-series will appear in the graph. Furthermore, the location of monitoring point is shown in the map.

Graph functionalities:

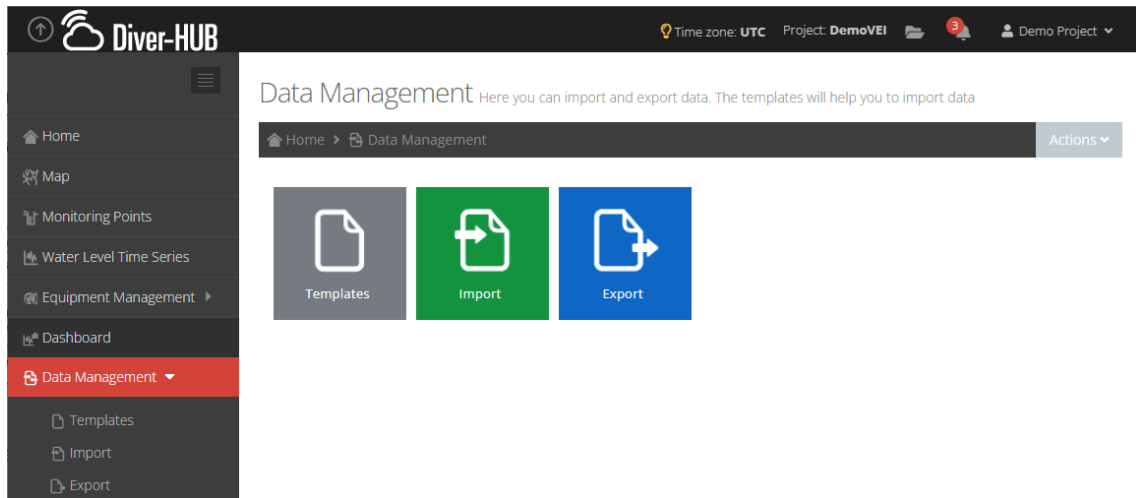
- Time-series can be turned on or off in the graph by clicking on the labels,
- Data labels with the datetime and time-series information are shown when a user hovers over the graph,
- The user can zoom in by clicking and dragging and area in the graph. User can also use the slider to zoom in or out. It is also possible to zoom in/out by selecting a specific start- and end date,
- The graph can be exported in the following formats: PNG, JPEG, PDF, SVG vector image, CSV, and XLS.



### 3.7 Data Management

The Data Management widget is used for import and export of project data. This widget also includes predefined template files which should be used to import project data (such as monitoring network meta data).



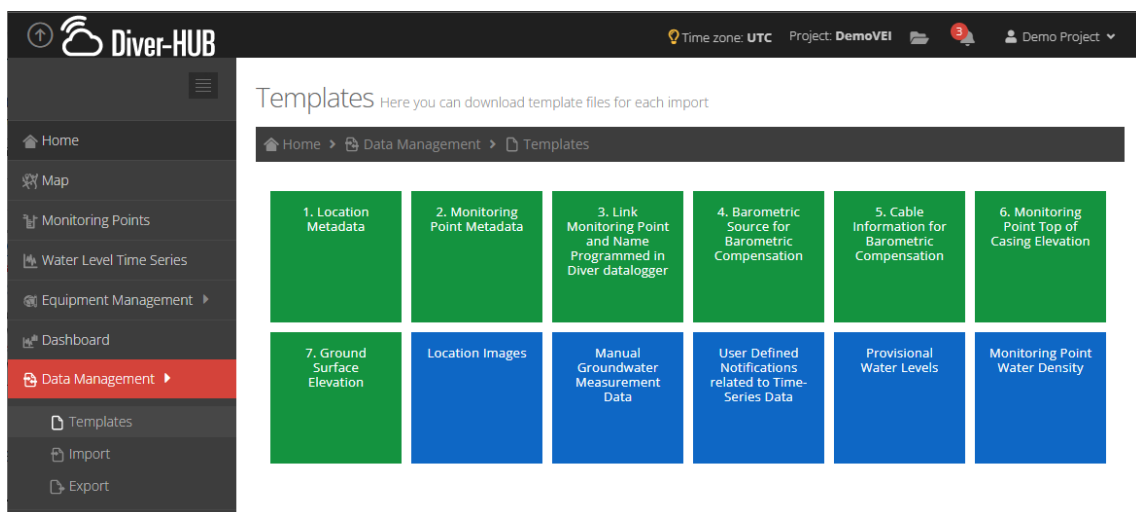


Diver-HUB automatically calculates water levels for each monitoring point. This requires the following minimum dataset:

- Location Metadata,
- Monitoring Point Metadata,
- Monitoring Point Top of Casing Elevation,
- Barometric Source for Barometric Compensation,
- Link Monitoring Point and Name Programmed in Diver datalogger,
- Cable Information for Barometric Compensation,
- Ground Surface Elevation,

These import template files are colored green. Other templates are blue colored and not required, however, importing this data is useful in providing and visualizing additional information of your monitoring points:

- Approved Water Levels,
- Location Images,
- Manual Groundwater Measurement Data,
- User defined Notifications related to Time Series data.





Import of project data is possible via sub-widget Import. Once data is imported, imported template files with the import date and time and user will be listed. The imports can also be removed (starting with the latest import).

Job ID	Datetime	Imported by	Related files	
137	16/12/2020 3:25:39 PM	Demo Project	Copy of 3_toc_elevation_monitoring_point_template.csv	<a href="#">View</a>
136	16/12/2020 3:20:42 PM	Demo Project	2_monitoring_point_template.csv	<a href="#">View</a>
135	16/12/2020 3:20:33 PM	Demo Project	1_location_template.csv	<a href="#">View</a>
134	20/04/2020 2:36:39 PM	Demo Project	Foto.zip	<a href="#">View</a>
133	20/04/2020 2:25:22 PM	Demo Project	7_groundsurface_elevation_template.csv	<a href="#">View</a>
132	20/04/2020 2:22:35 PM	Demo Project	6_cable_data_monitoring_point_template.csv	<a href="#">View</a>
131	20/04/2020 2:18:33 PM	Demo Project	5_monitoring_point_diver_location_code_template.csv	<a href="#">View</a>
130	20/04/2020 2:15:51 PM	Demo Project	4_barometric_source_monitoring_point_template.csv	<a href="#">View</a>
129	20/04/2020 2:13:17 PM	Demo Project	3_toc_elevation_monitoring_point_template.csv	<a href="#">View</a>
128	20/04/2020 2:10:58 PM	Demo Project	2_monitoring_point_template.csv	<a href="#">View</a>
127	20/04/2020 2:09:04 PM	Demo Project	1_location_template.csv	<a href="#">View</a>
125	19/02/2020 1:56:27 PM	Demo Project	Images.zip	<a href="#">View</a>
124	09/02/2020 11:12:56 AM	Demo Project	5_Link monitoring point en name programmed in Diver datalogger_20200207.csv	<a href="#">View</a>
123	07/02/2020 2:57:30 PM	Demo Project	Images.zip	<a href="#">View</a>
122	07/02/2020 2:35:35 PM	Demo Project	7_groundsurface_elevation_template_20200207.csv	<a href="#">View</a>

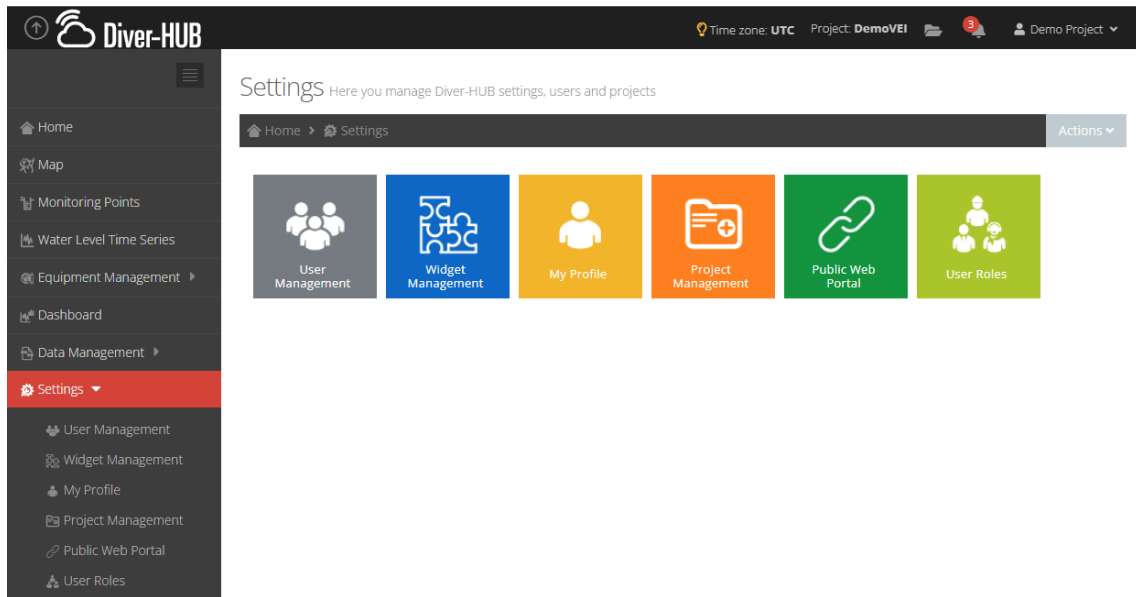
Export of water level time series is possible via the Export sub-widget. Time series of raw datalogger data can also be exported. Time series for a complete measurement period or for the selected time period can be exported in CSV format.



### 3.8 Settings

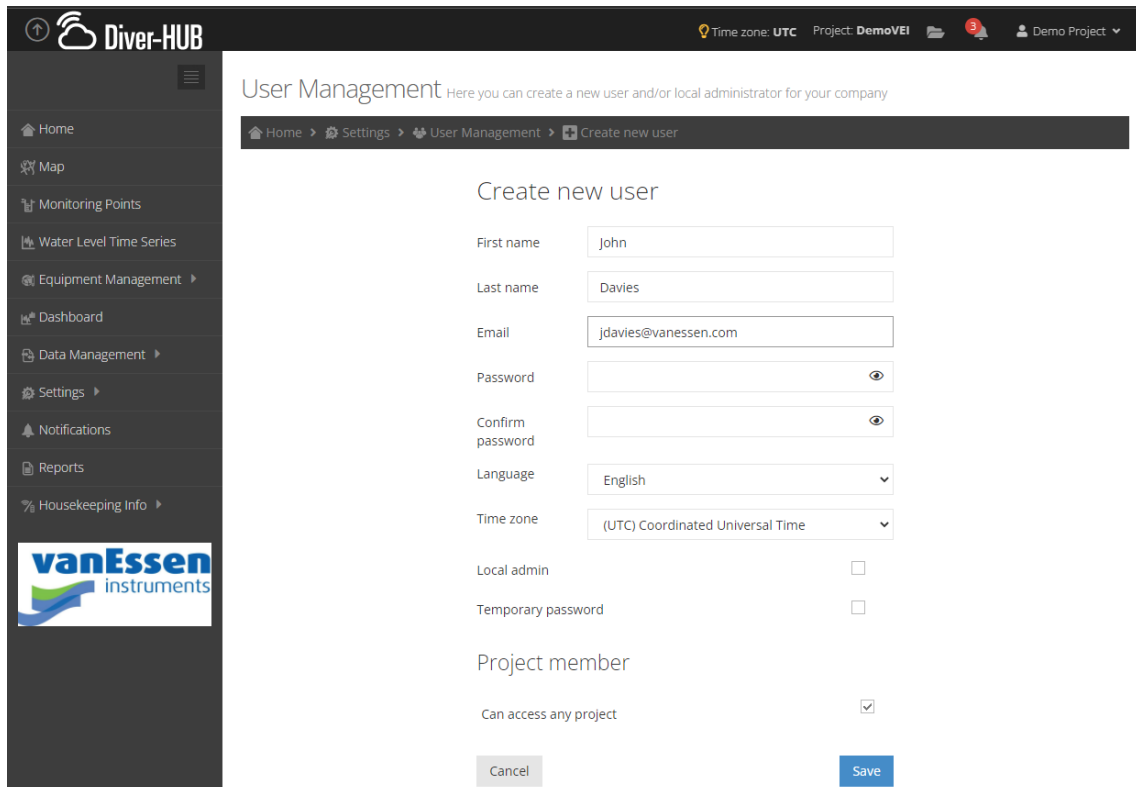
The Settings widget consists of several sub-widgets. Not all sub-widgets are available for all users. The sub-widgets marked by \* are only available for a user with local admin privileges.

- User Management\*
- Widget Management
- My Profile
- Project Management\*
- Public Web Portal\*, and
- User roles\*.



### 3.8.1 User management sub-widget

The User Management sub-widget is used for managing project users. New users can be added, and user details can be modified.



The following information must be entered when adding a new user:

- First name,
- Last name,



- Email,
- Company,
- Language. The Diver-HUB user interface is available in Dutch and English,
- Time zone. The Time zone indicates the selected time zone in which the timestamps and time series data are shown,
- Local admin. A local admin can import data, edit data and add users. A user without local admin rights can only view data,
- Force user to change password at next login. When this box is checked the user is forced to change his password during the next login session.

A user can be member of a single project, multiple projects or all projects. If the box *Can access any project* is checked a user can access all existing and future projects.

In addition, a role can be assigned to a user. The role determines which widgets are available for the user. The following predefined roles are available in Diver-HUB:

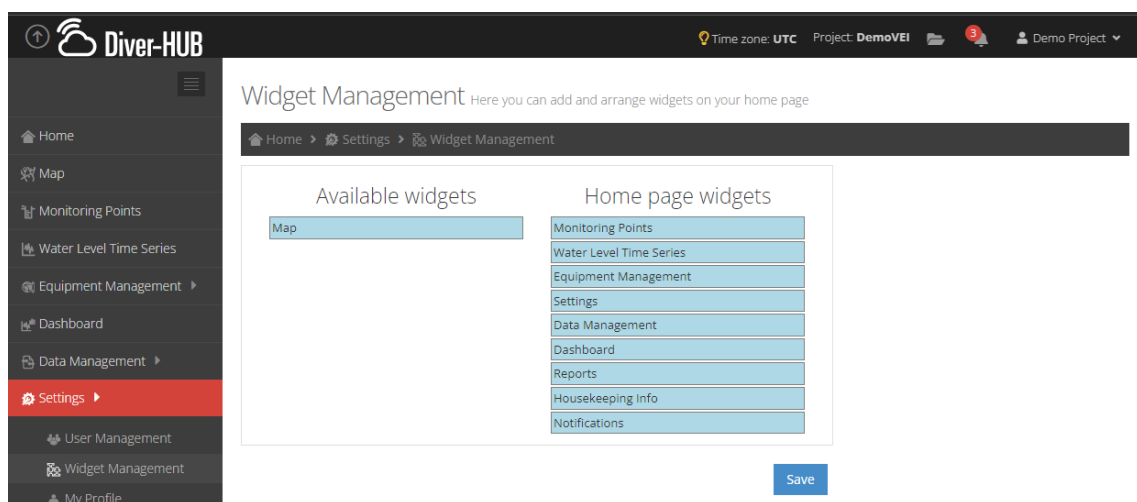
- Default. In the default role all available widgets are available for a user,
- Hydrologist. The Hydrologist role contains only the widgets important for a hydrologist,
- Operational. The Operational role contains only the widgets to manage and maintain your hardware and monitoring network,
- Public. The Public role contains a minimum number of widgets to also give external users access to Diver.

A local admin can also create a specific user role. For more information see paragraph *User Roles sub-widget*.

### 3.8.2 Widget Management sub-widget

The Widget Management sub-widget gives an overview of the available widgets (dependent upon the role of the user) and enables a user to decide which widgets icons should be displayed and in which order on the homepage. By dragging and dropping an user can set-up his own homepage.

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### 3.8.3 My Profile sub-widget

The My Profile sub-widget gives information about the profile of the user. In My Profile a user can change his password, select the language (English or Dutch), select the project time zone, enable 2 Factor-Authentication and select pressure/length and temperature units.

Note: When changing the Time zone, log out and then login to make the change effective.





The screenshot shows the 'My Profile' page in the Diver-HUB application. The page title is 'My Profile' with a subtitle 'Here you can edit your profile information'. The breadcrumb trail is 'Home > Settings > My Profile'. The settings are as follows:

Password	<input type="password"/>	<a href="#">Change password</a>
Two-Factor Authentication	Inactive	<a href="#">Change two-factor authentication</a>
First name	<input type="text" value="Demo"/>	
Last name	<input type="text" value="Project"/>	
Email	<input type="text" value="edijkstra@vanessen.com"/>	
Company	<input type="text" value="Van Essen Instruments BV"/>	
Language	<input type="text" value="English (Canada)"/>	
Time zone	<input type="text" value="(UTC) Coordinated Universal Time"/>	
Length Units	<input type="text" value="Metric"/>	
Temperature Units	<input type="text" value="Metric"/>	
Local admin	<input checked="" type="checkbox"/>	

Buttons: Cancel, Save

### 3.8.4 Project Management sub-widget

A new project can be created in the Project Management sub-widget. In addition, existing project information can be reviewed and modified if needed. All existing projects are listed in the Project Management sub-widget.

In addition, this widget gives an overview of the projects, users and monitoring points in relation to maximum allowed. The maximum numbers allowed are based on the license type: Basic, Plus or Premium.



**Project Management** Here you find a list of your projects, add projects and view project settings

Home > Settings > Project Management

Project name	Project manager	Created on	Created by	Number of monitoring points	Number of users		
DemoVEI	Demo Project	24/02/2016 9:05:47 AM	Demo Project	4	109	<a href="#">View</a>	<a href="#">Edit</a>
DemoVEI_NAM	Demo Project	20/08/2019 4:02:53 PM	Demo Project	3	6	<a href="#">View</a>	<a href="#">Edit</a>
Ge_PlijnackerNootdorp	Demo Project	13/02/2019 11:16:05 AM	Demo Project	4	3	<a href="#">View</a>	<a href="#">Edit</a>
Gem_MiddenDelfland	Demo Project	13/02/2019 11:14:29 AM	Demo Project	5	3	<a href="#">View</a>	<a href="#">Edit</a>
Gemeente_Delft	Demo Project	13/02/2019 11:09:24 AM	Demo Project	4	3	<a href="#">View</a>	<a href="#">Edit</a>
Gemeente_DenHaag	Demo Project	13/02/2019 11:12:48 AM	Demo Project	4	3	<a href="#">View</a>	<a href="#">Edit</a>
Gemeente_Rijswijk	Demo Project	13/02/2019 11:16:52 AM	Demo Project	4	3	<a href="#">View</a>	<a href="#">Edit</a>
Gemeente_Westland	Demo Project	13/02/2019 11:18:03 AM	Demo Project	4	3	<a href="#">View</a>	<a href="#">Edit</a>
Testproject_dec20	Demo Project	16/12/2020 3:07:41 PM	Demo Project	10	4	<a href="#">View</a>	<a href="#">Edit</a>

[Add new +](#)

<b>Projects</b> Current number: 9 Maximum allowed: 50	<b>Users</b> Current number: 108 Maximum allowed: 1000	<b>Monitoring points</b> Current number: 42 Maximum allowed: 1000
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### 3.8.5 Public Web Portal sub-widget

The data in Diver-HUB can also be displayed on an open public web portal; [www.diver-hub.com/public](http://www.diver-hub.com/public). In case you want to display your data on the public web portal please contact Van Essen Instruments for more information. When your request is approved the user can manage himself which monitoring point should be displayed on the public web portal. This procedure is the same as for making your Diver-HUB project available for the API.

**Public Web Portal** Here you can edit if data for a monitoring point is available on the public web portal

Home > Settings > Public Web Portal > B37E3524-001

Monitoring point name: B37E3524-001

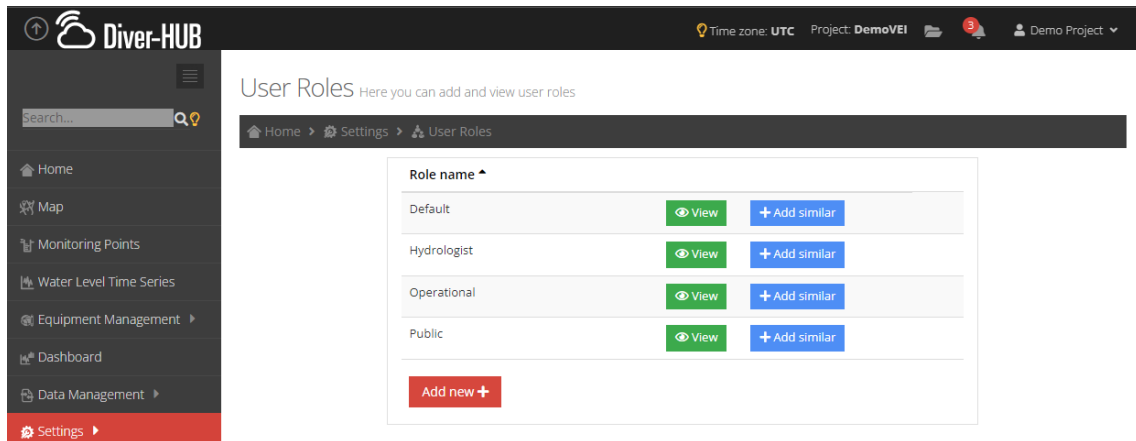
Data available via API:

Show data in public web portal:

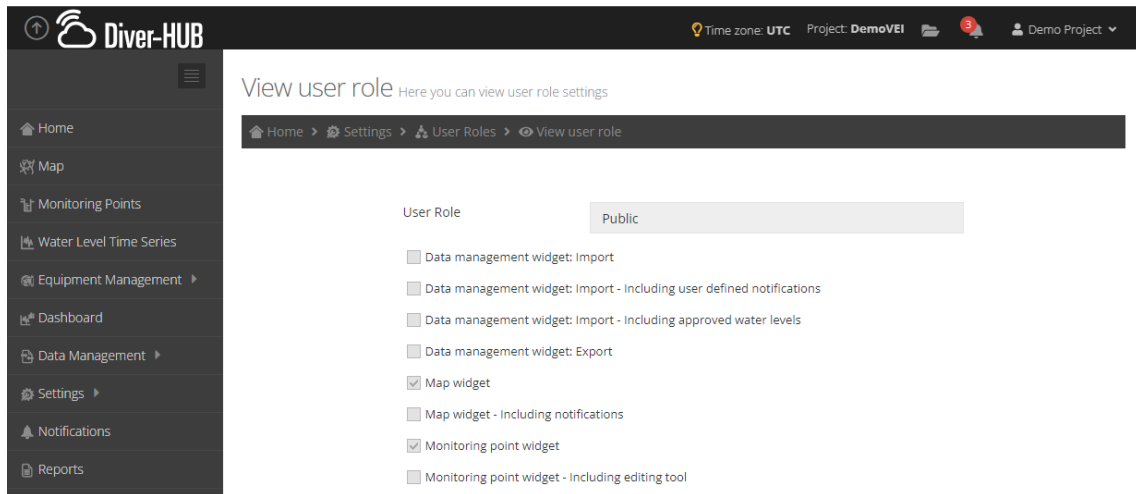
[Cancel](#) [Save](#)

### 3.8.6 User Roles sub-widget

User roles can be viewed and added in the User Roles sub-widget. Diver-HUB users can have the following default roles: Default, Hydrologist, Operational or Public.



Each role has several predefined role permissions. New roles can also be added based on the default defined roles.



### 3.9 Notifications

Notifications provide insight in the functioning of the hardware. Furthermore, a user can setup alarms based on the Diver time-series data (by importing the data management template User-defined Notifications related to Time-Series Data). Notifications are created automatically by Diver-HUB when importing and processing new data. Notifications can be viewed in the Notifications widget. Notifications in Diver-HUB web portal are divided into 4 different categories:

- Notification Type,
- Device Type,
- Notification Group, and
- Notification Status.

Each notification category can be filtered in Diver-HUB. Diver-HUB supports automatic notifications for monitoring points which are equipped with the Diver-NETZ telemetry solution. Diver-HUB also supports project notifications defined by a user.



### 3.9.1 Notification Type

There are three different types of notification levels in Diver-HUB:

- Info,
- Warning, and
- Error.

A user can filter the notification table based on these levels.

### 3.9.2 Device Type

Notifications can be filtered based on the device type. These notifications relate to following devices:

- Modem Diver-Gate(S) or Diver-Link,
- Radio module Diver-DXT, and
- Datalogger.

### 3.9.3 Notification Group

Notifications in Diver-HUB can be filtered based on the following notification groups:

- Hardware communication:
  - This notification provides information about the last hardware connections to the server.
- Hardware status:
  - This notification provides information about the status of the hardware (modem, radio module or datalogger).
- Time series validation:
  - This notification provides additional information regarding the groundwater time series. Based on a predefined threshold by a user, this notification can be used as alarm for additional control of a monitoring site and equipment.
- Project notification:
  - This notification provides information about the possible missing project data in Diver-HUB (for example cable length, top of casing etc.). These notifications are currently not displayed in Diver-HUB



### 3.9.4 Notification Status

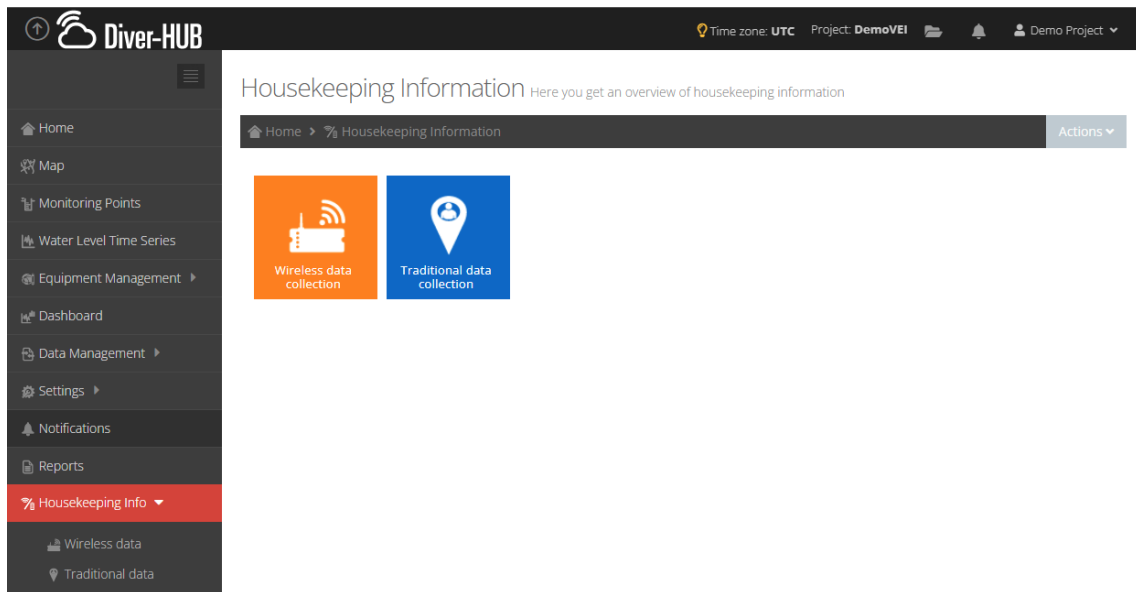
Notifications in Diver-HUB web portal can have different statuses:

- Active:
  - Notification is still active and the status of the hardware communication and/or its status has not changed.
- Inactive:
  - Notification is not active anymore and the hardware communication and/or its status has been solved and changed.
- Follow up:
  - This notification status is defined by a user. If a user sets a flag for a certain notification, this notification will have Follow up status until user changes its status.

### 3.10 Report

The Report widget enables import (upload) and export (download) of project documentation. Most of the commonly used file extensions such as docx, xlsx, csv, pdf, ppt, jpg, xml etc. are supported by Diver-HUB web portal. Report widget is useful tool for information dissemination between project users.

### 3.11 Housekeeping information



Diver-HUB web portal supports both wireless (Diver-NETZ) and traditional solution (non-telemetry) for collecting the Diver datalogger data. Traditional data can be uploaded directly from Diver-Office. Housekeeping information widget gives an overview of the housekeeping data gathered with the Diver datalogger data collection. Housekeeping data consist of battery levels, signal strength, memory capacity of the datalogger, internal temperature etc.





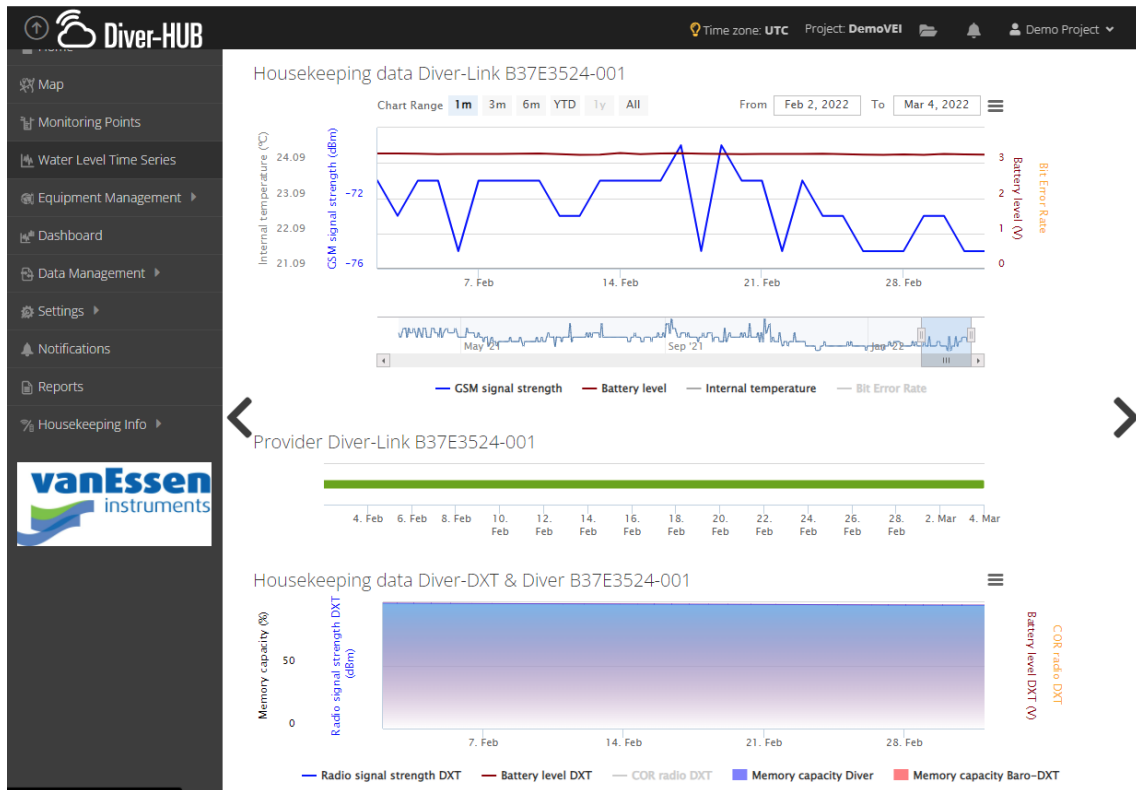
### 3.11.1 Wireless data collection

When Diver datalogger data is collected by means of Diver-NETZ wireless solution the housekeeping information of a Diver datalogger, Diver-DXT radio module, and Diver-Gate(S) or Diver-Link modem is visualized in the portal.

Monitoring point name	Location name	Diver	Diver-DXT	Diver-Link
B37E3524-001	B37E3524	98.5%	99.25%	3.241 V -75 dBm
B37E3524-002	B37E3524	99.63%		3.241 V -75 dBm
B37E3524-003	B37E3524	97.75%		3.241 V -75 dBm
MP01_DL	MP01	99.67%	99.83%	3.024 V N/A

When a user selects a telemetry monitoring point in wireless data collection page the following housekeeping information will be displayed:

- Diver datalogger:
  - Memory capacity.
- Diver-DXT radio module:
  - Radio signal strength,
  - Battery level,
  - Memory capacity Baro-DXT datalogger,
  - COR radio DXT.
- SIM card:
  - Provider name.
- Diver-Gate(S) and Diver-Link modem:
  - GSM signal strength,
  - Battery level,
  - Internal temperature,
  - Bit error rate.



### 3.11.2 Traditional data collection

When Diver datalogger data is collected traditionally, the only housekeeping information presented in the Diver-HUB portal is related to the Diver datalogger. Memory capacity of the Diver can be viewed for a selected monitoring point.