

**Smart Construction**

# **Smart Construction Simulation (Rainwater analysis)**

**Quick Guide**

# Before You Read This Guide:

## ■ Before you start

- This Quick Guide explains the procedures for using Smart Construction Simulation (Rainwater Analysis).
- For units of measurement, the International System of Units (SI) is used. Explanation, numeral values, illustration, etc. are based on the information as of the time this guide was prepared.
- If you have any questions or opinions, please contact Smart Construction Support Center.
- Use the application after understanding the contract conditions, guarantees, and responsibilities stated in the application software terms of service.
- Screen and display of the application may change when updated. If there are any differences between what is written in this document and the display on the application screen, operate according to the application display.

## ■ Trademark used in this guide

- Smart Construction and Smart Construction Fleet are registered trademarks of Komatsu Ltd.

\*In general, company names, product names, etc. written here are business names, trademarks or registered trademarks of each company.

---

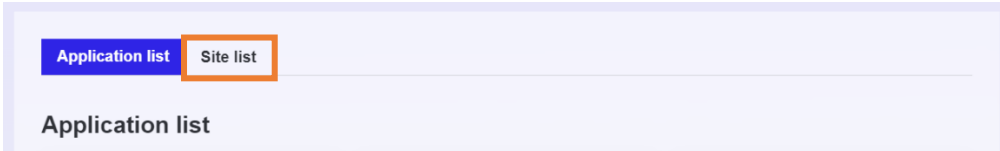
## Contents

1 Create a New Jobsite.....	3
2 Operation of Smart Construction Simulation .....	4
2.1 Open a Jobsite .....	4
2.2 Register the Current Topography Data and Design Data .....	6
2.3 Perform Rainwater Analysis .....	8
2.3.1 Set drainage points (optional) .....	8
2.3.2 Carrying out a rainwater analysis and checking the analysis result .....	10
2.4 Output the Result of the Rainwater Analysis.....	12
3 Contact.....	14
4 Revision History.....	16

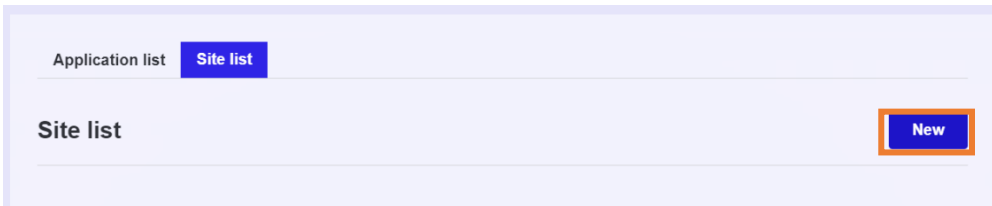
# 1 Create a new jobsite

You cannot create a new jobsite directly from Smart Construction Simulation. When creating a new jobsite, you need to create a new jobsite from the jobsite list on Customer Portal (registration of necessary information).

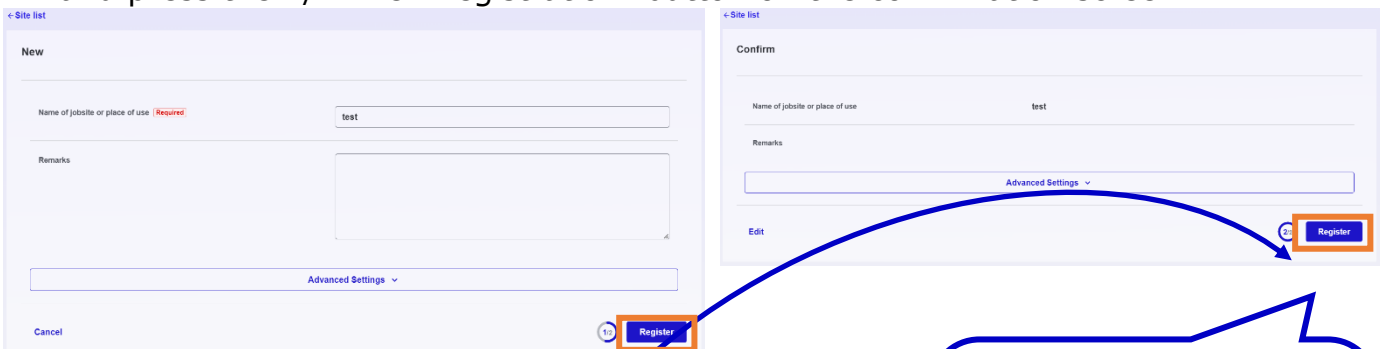
1. Log in [Customer Portal](#) before entering the "Jobsite list".



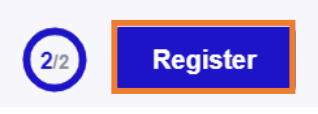
2. Press the "Create a new jobsite" button.



3. Fill out the form completely, press the 1/2 "New registration" button on the bottom, and press the 2/2 "New registration" button on the confirmation screen.

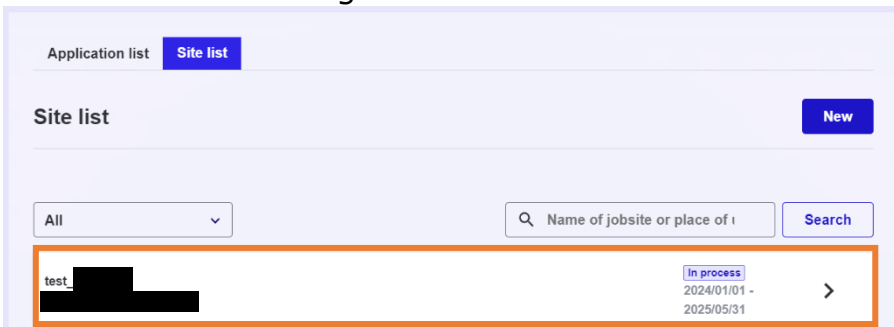


Press the "Register" button to complete the



The callout box contains a circular indicator with '2/2' inside, followed by a 'Register' button highlighted with an orange border.

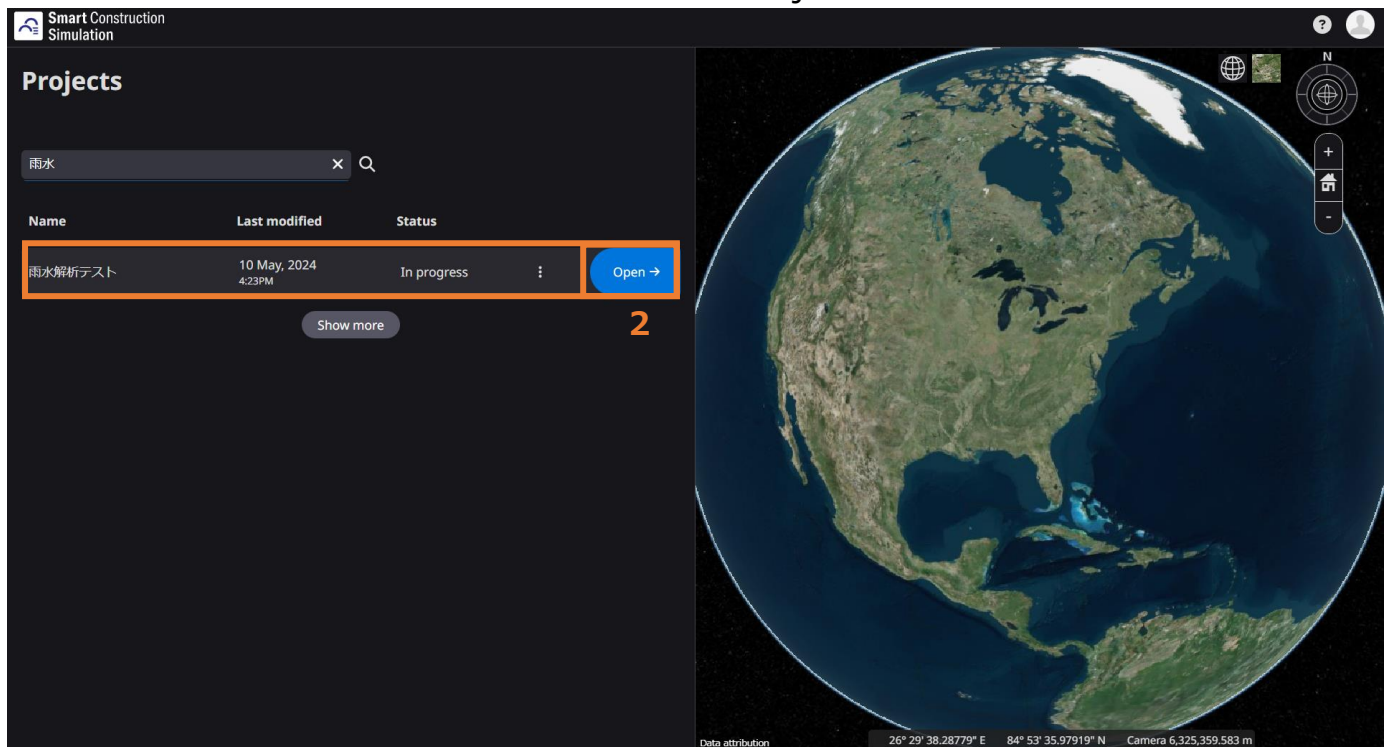
4. The new site is registered in the "Jobsite List".



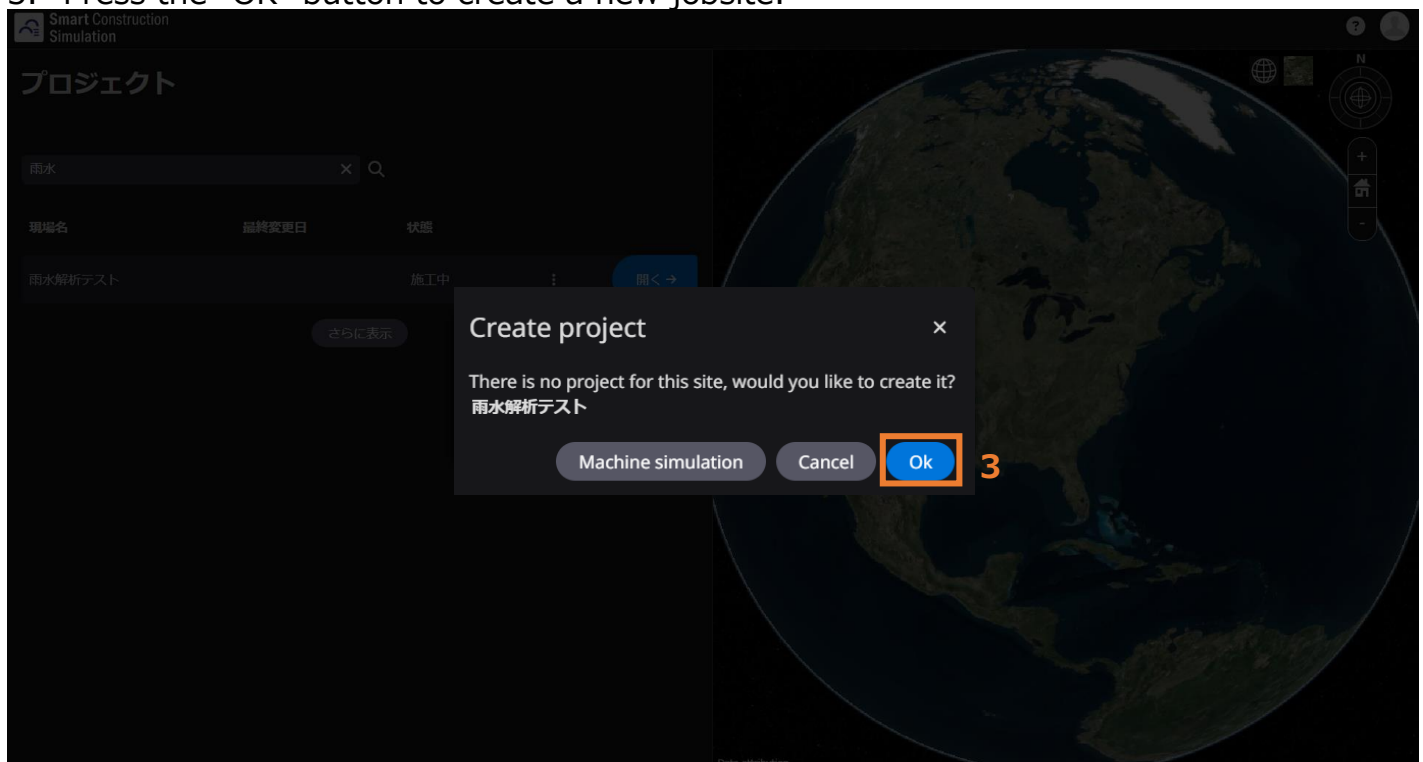
# 2 Operation with Smart Construction Simulation

## 2.1 Open a jobsite

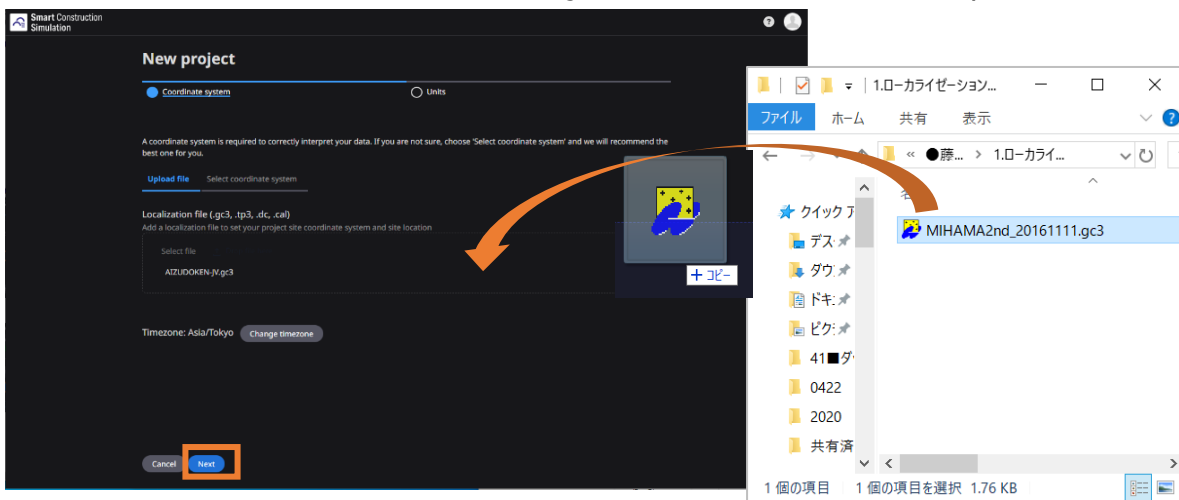
1. Access Smart Construction Simulation  
URL <https://simulation.smartconstruction.com/>  
A list of created projects (jobsites) is shown.
2. Press the “Open” button of the project you want to consider the plan.  
The site name can be searched in the “Search jobsite name” field.



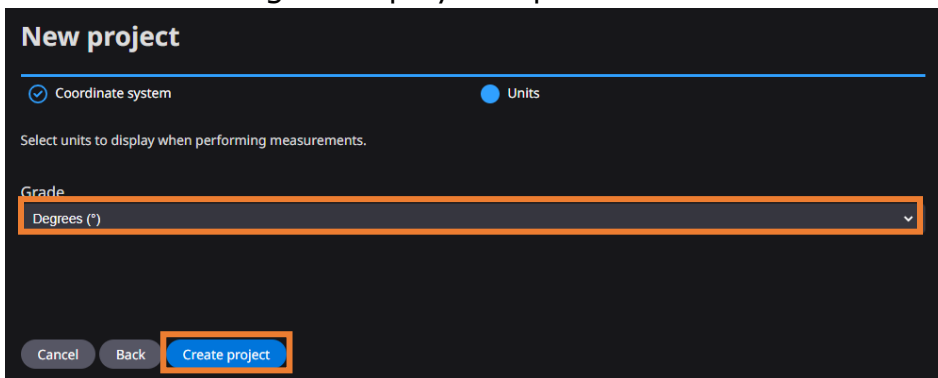
3. Press the “OK” button to create a new jobsite.



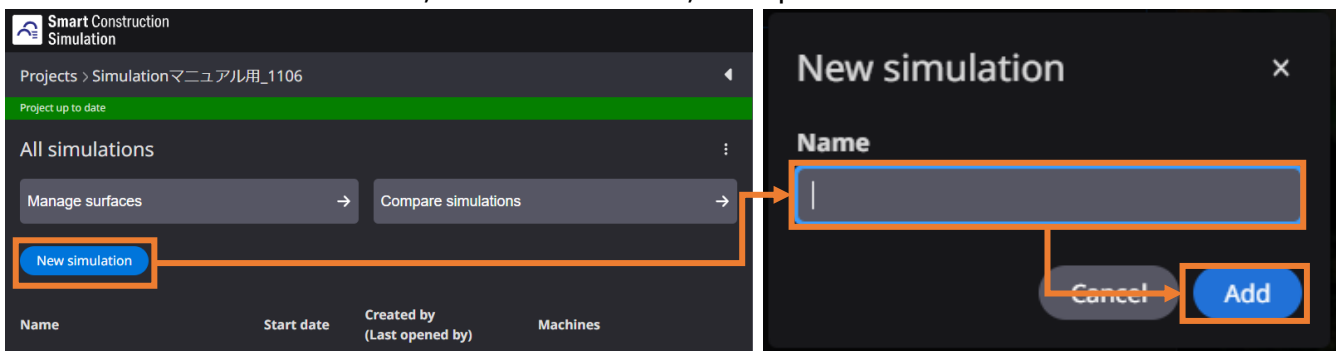
4. Select the localization file of the jobsite to be created and press “Next”.



5. Select the degree display and press “Create new”.



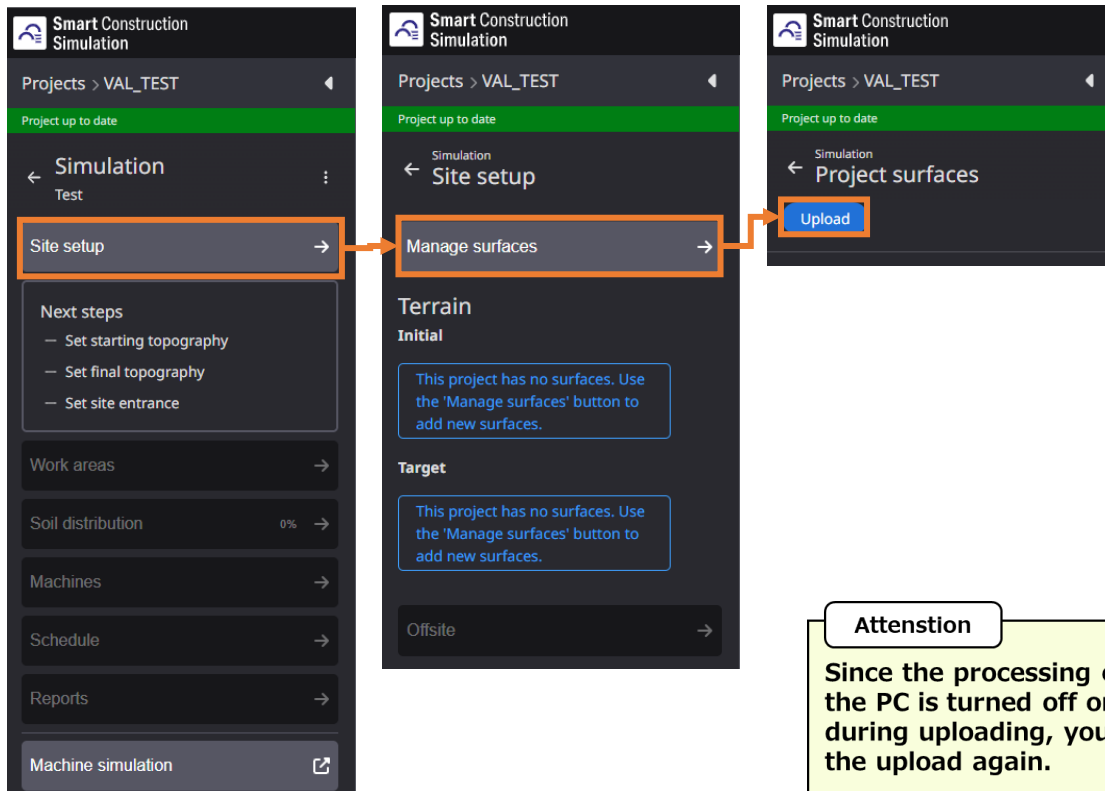
6. Press “New simulation”, enter the name, and press “Add”.



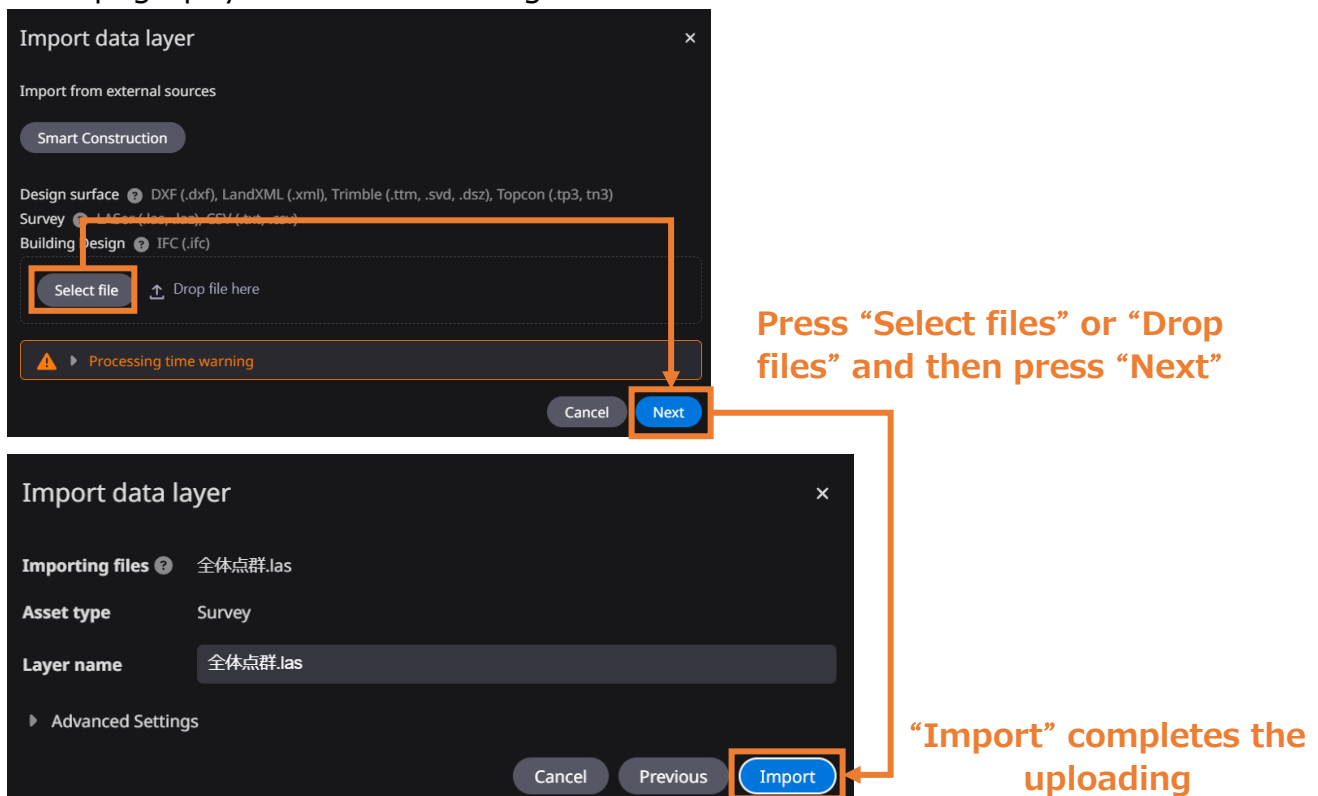
## 2.2 Register the Current Topography Data and Design Data

Register the current topography data and design data for rainwater analysis.

1. Press “Site setup” > “Manage surfaces” > “Upload”.



2. Press “Select files” and select “Next”. Press “Import” and upload the current topography data and the design data.



3. Allocate the uploaded files to “Initial” and “Target”.  
 Note that current topography data and design data will not be displayed if this operation is not conducted.



\* The source will be the area of the imported point cloud data.

**補足説明** Further explanation

■ Analysis target

The analysis target depends on the area of the current topography and target shape.

The scope of analysis target will be as follows:

- ・ Current area > Target area ... Target area is the analysis target.
- ・ Target area > Current area ... Current area is the analysis target.

**⚠ Note**

- Changes in “1 Create a new jobsite” and changes in the current status and target registration data reset the calculation results of rainwater analysis. If you do not want to delete the calculation results, we recommend creating a new analysis with “New plan” in Smart Construction Simulation.



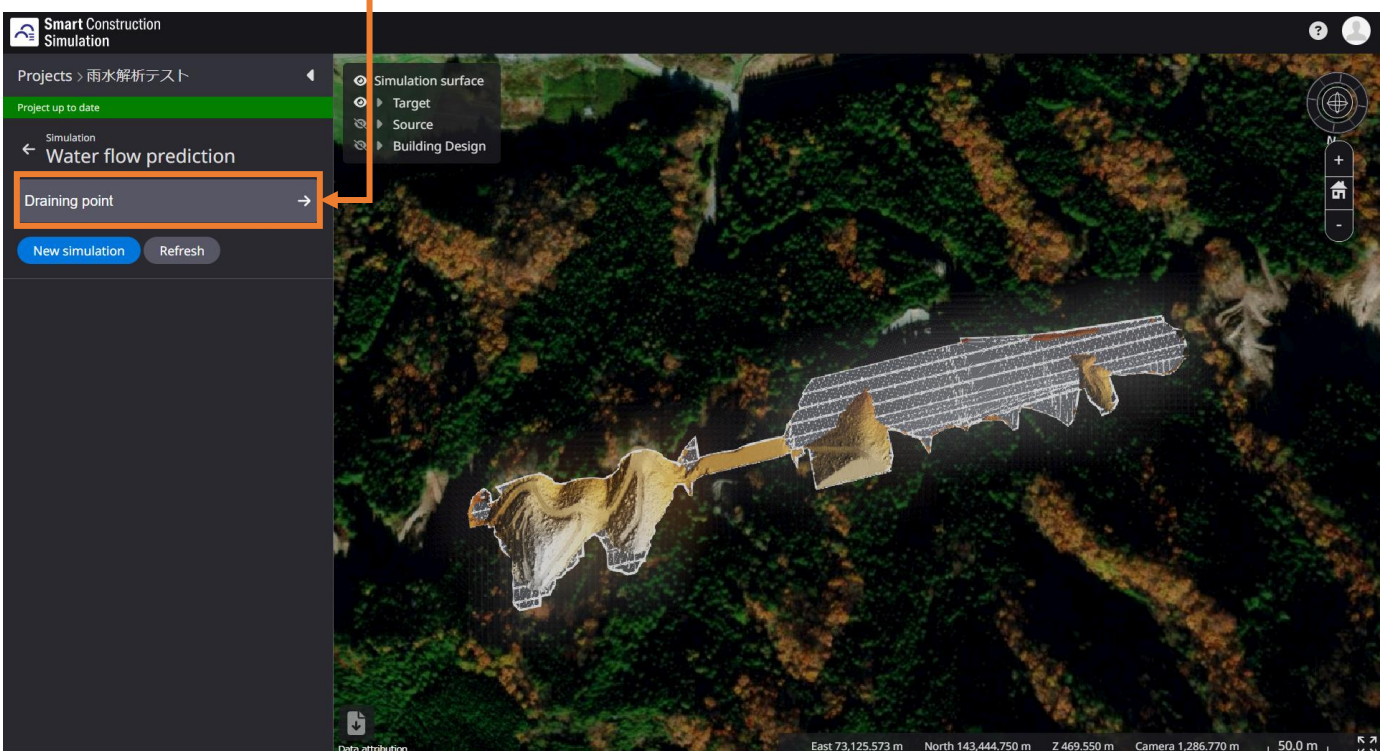
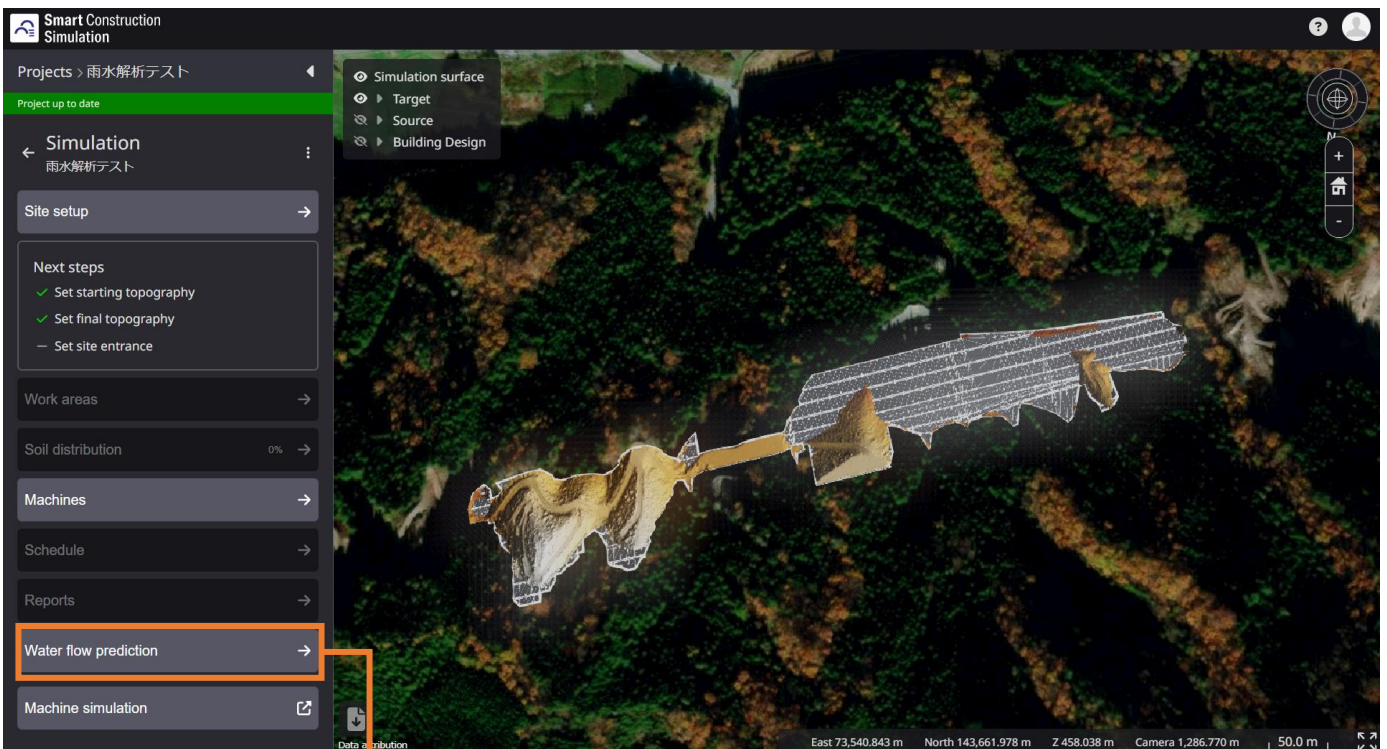
## 2.3 Perform Rainwater Analysis

Set up the conditions for rainwater flow prediction.

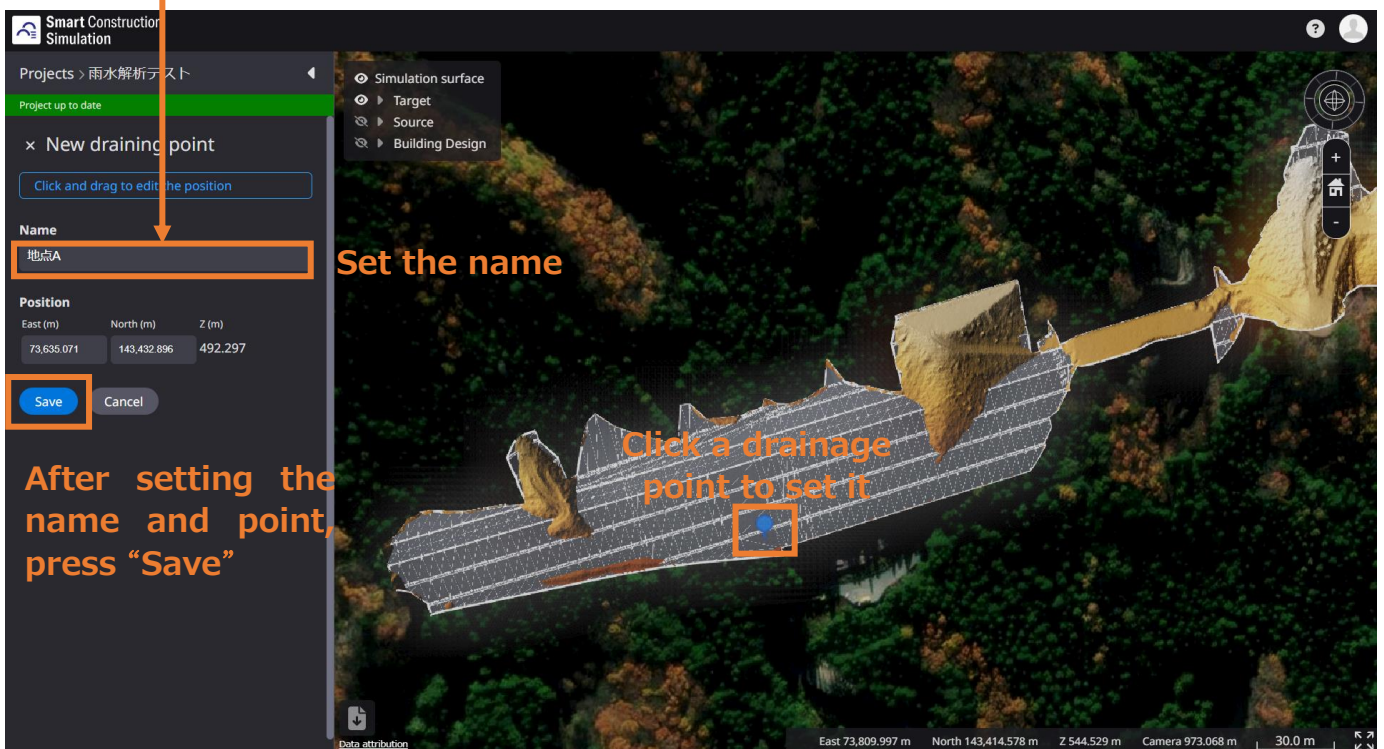
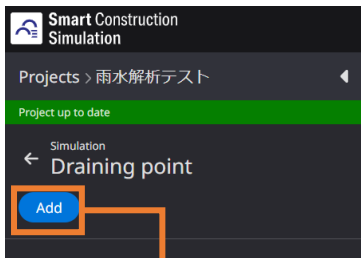
### 2.3.1 Set drainage points (optional)

Set drainage points. This is not a requirement, so analysis is possible without setting.

1. Press “Water flow prediction”. Then, press “Draining point”.



2. Add a drainage point with “Add”.  
Enter the name, and click on the map (or set by coordinate values) to set the drainage point.  
\* Multiple drainage points can be added.

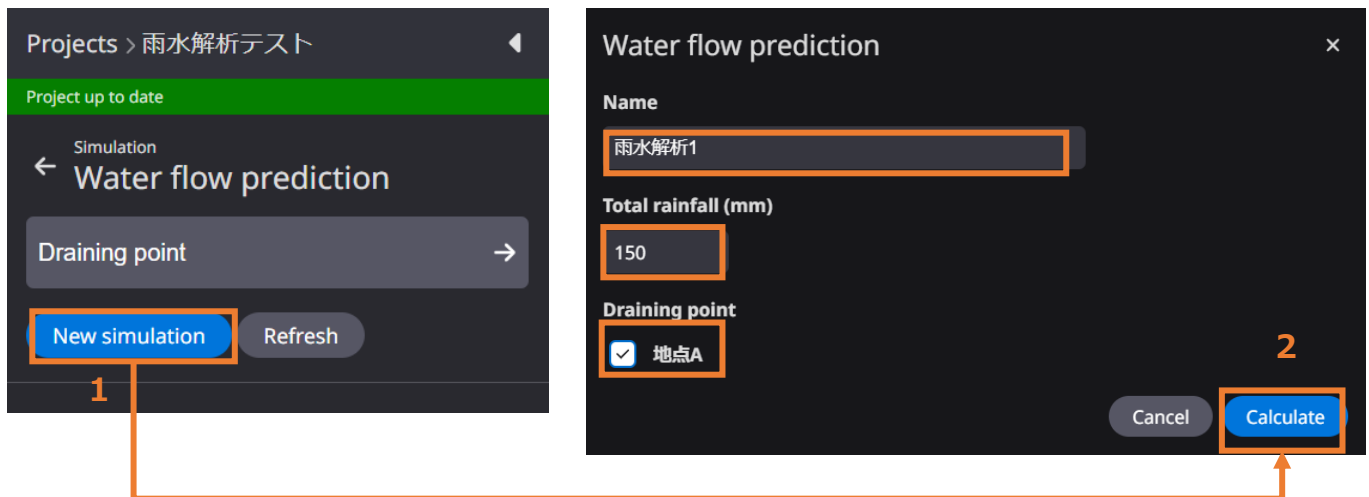




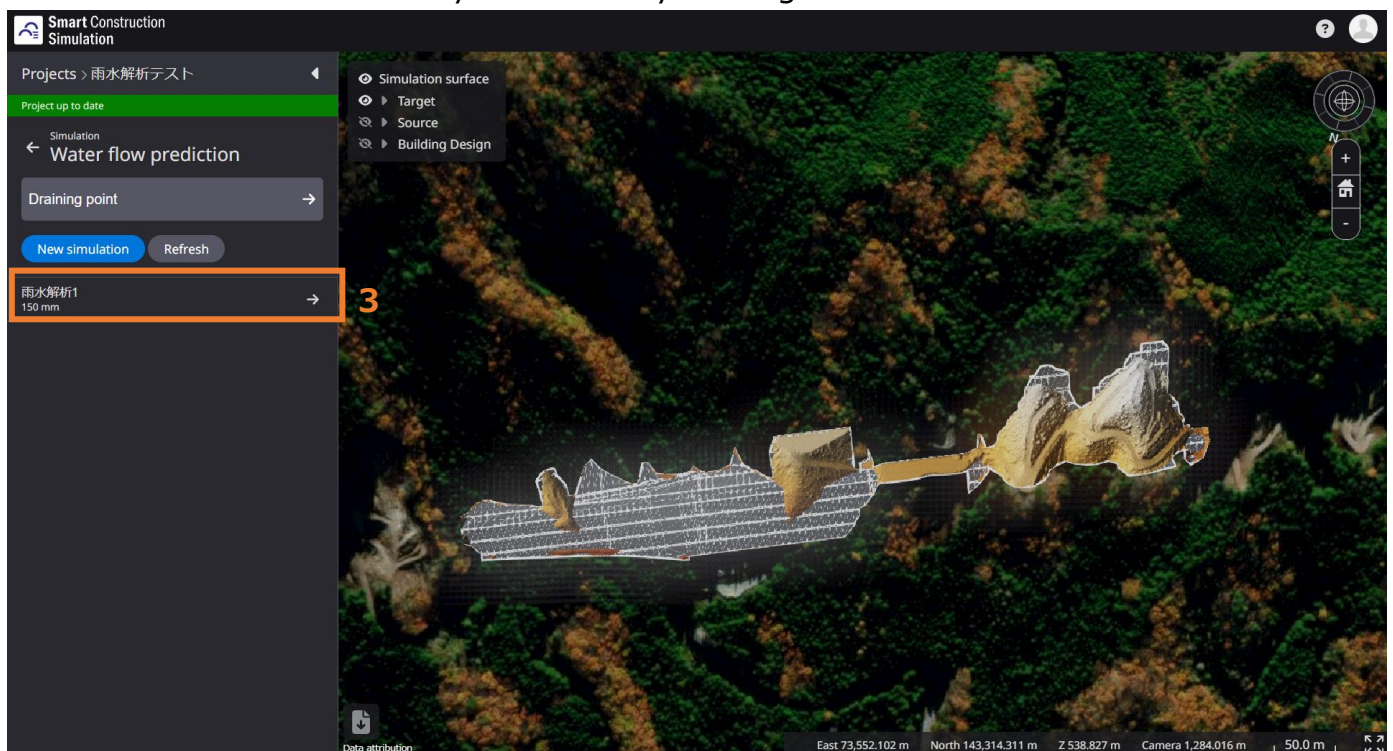
## 2.3.2 Carrying out a rainwater analysis and checking the analysis result

Set the conditions and run the analysis.

1. Press “New simulation” under rainwater flow prediction.
2. Optionally set the name and total rainfall, and perform the analysis with “Calculate”.  
\* If drainage points are required, put checkmarks in the drainage points set in “2.3.1 Set drainage points (optional)”.



3. Completion of calculation  
You can confirm the analysis results by clicking the set name.

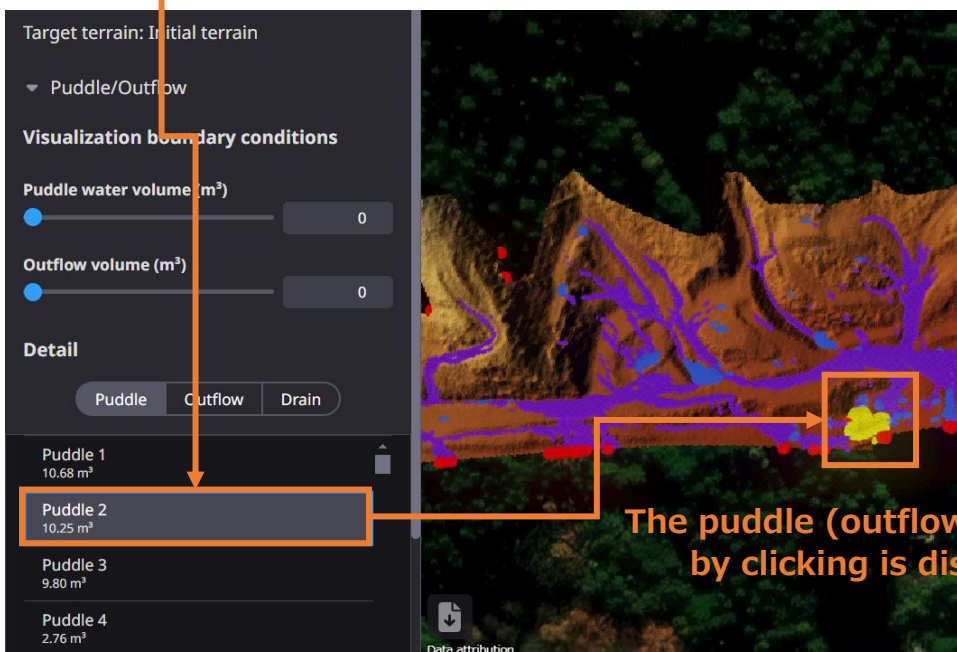
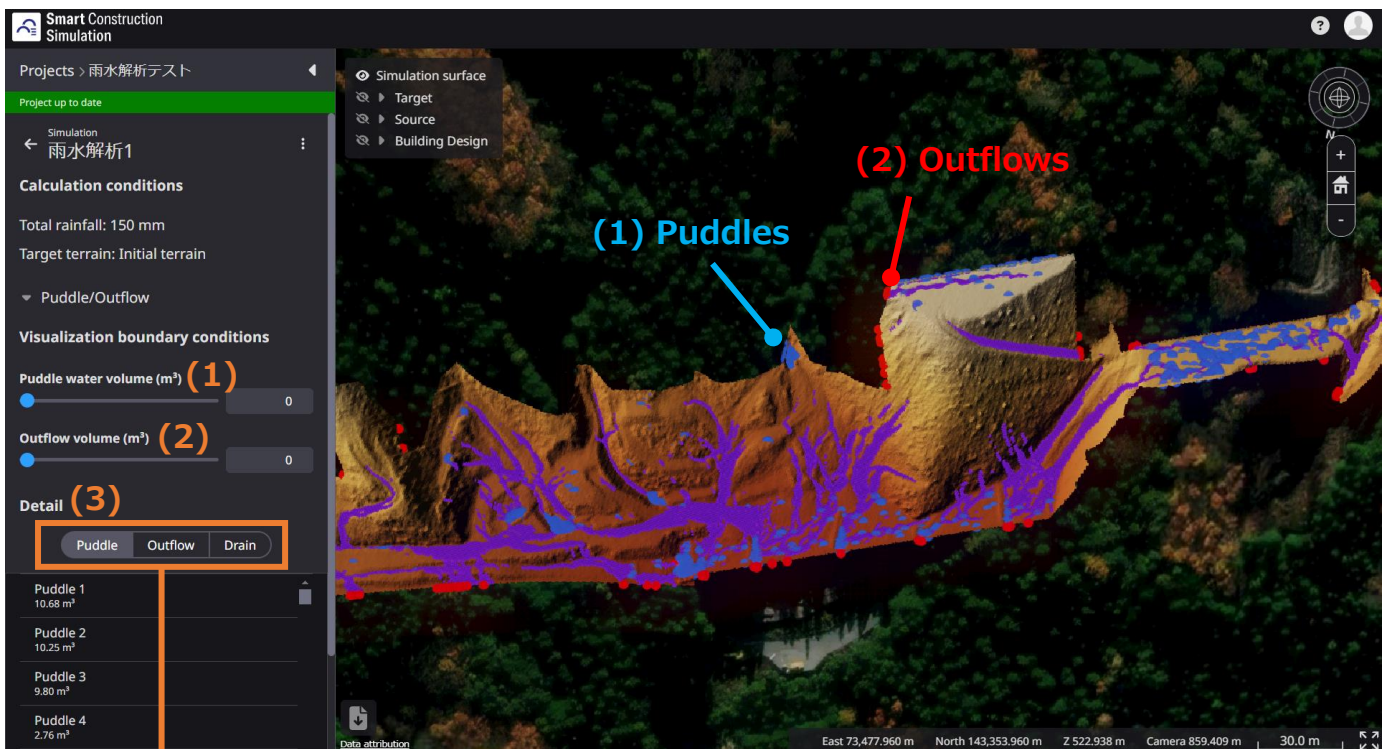


#### 4. Analysis results

(1) Puddle water volume (m<sup>3</sup>): This is a prediction of the locations (blue areas) and volume of water according to the amount of rainfall. (1) Puddle water volume (m<sup>3</sup>)  
If you change the threshold setting bar or numerical value, the puddles on the 3D view also change according to the water volume.

(2) Outflow water volume (m<sup>3</sup>): This is the prediction of the outflow points (red areas) and flow rate to the outside. (2) Outflow water volume (m<sup>3</sup>)  
If you change the threshold setting bar or numerical value, the outflows on the 3D view also change according to the water volume.

(3) Details: You can confirm the water volume and location of each puddle, outflow, and drainage. The clicked and selected place is displayed in yellow.



The puddle (outflow, drainage) selected by clicking is displayed in yellow

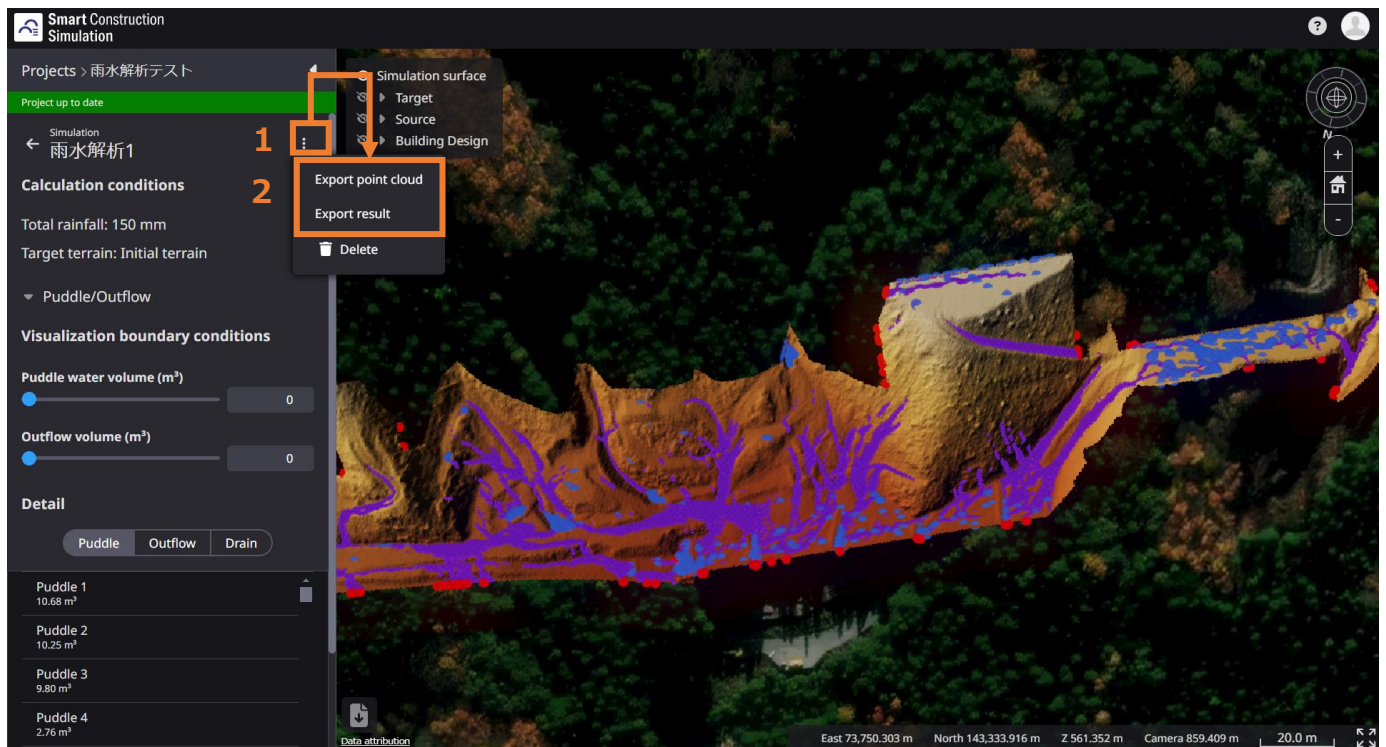


## 2.4 Output the Result of the Rainwater Analysis

Analysis results can be output in CSV format for uploading to Smart Construction Dashboard or Smart Construction Design3D.

There are two output methods: point cloud data CSV output and calculation results CSV output, the latter for local DXF conversion to make it design data.

1. Click the ellipsis on the right side of the analysis name.
2. Selecting “Export point cloud” outputs the set point cloud data in CSV format.  
Selecting “Export results” outputs the set status in CSV, which can be uploaded to Smart Construction Dashboard as design data after performing DXF conversion locally.



### Further explanation

#### ■ DXF conversion method for uploading to Smart Construction Dashboard

Use the conversion software “WaterLabelDXFGenerator\_v1.exe”.

1. Double-click the execution file to open the conversion window.
2. Press the “Browse...” button to set the destination of the CSV file downloaded by “Output results” in the field for (1) “Input of analysis result file”.
3. To set the file output destinations after DXF conversion, press the “Save As...” button for each of (2) “Output of puddle drawing file” and (3) “Output of label file” to specify the output destination paths and the file names respectively.
4. Enter the thresholds of various water volumes in (4) manually.
5. Clicking “Execute” outputs the DXF files to the output paths specified in 3.
6. Two DXF files can be imported into Smart Construction Dashboard.



**DXF conversion software**

Waterflow Processing		
(1) 解析結果ファイルの入力:	Select the CSV file downloaded by “Output results”	Browse...
(2) 水たまり描画ファイルの出力:	Specify the puddle draw file output path	Save As...
(3) ラベルファイルの出力:	Specify the label file output path	Save As...
(4) 図形描画する水たまり水量:	Manual Input	m3 以上
ラベル表示する水たまり水量:	Manual Input	m3 以上
ラベル表示する場外流出点水量:	Manual Input	m3 以上
実行		

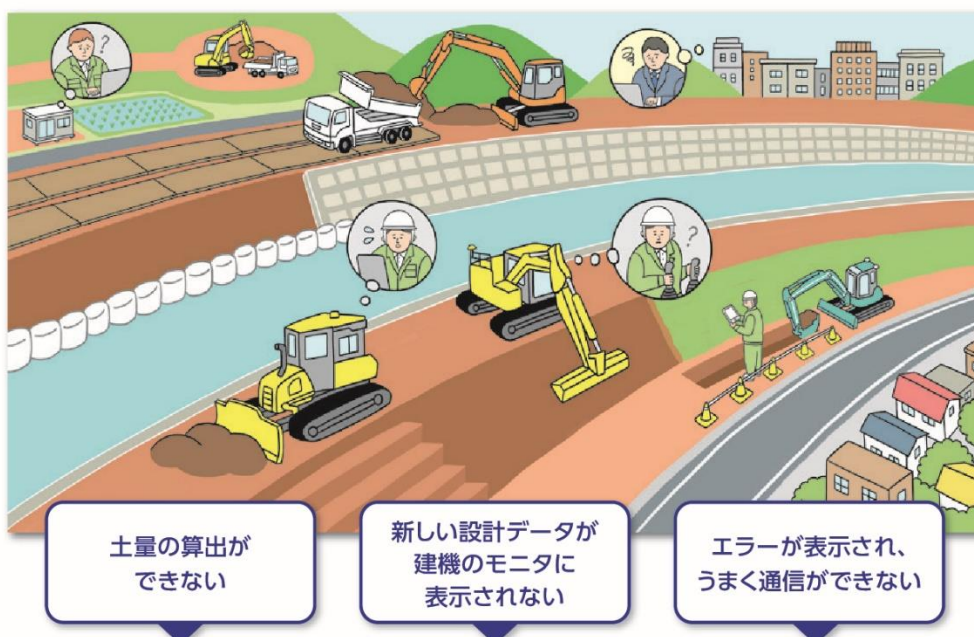
# 3 ContactContact

- For inquiry on products  
EARTHRAIN Ltd.  
The URL below brings you to the inquiry site.  
<https://www.earthbrain.com/contact/form/>
- Contact at the time of malfunction  
Please contact Smart Construction Support Center.

現場でのトラブルやお困りごとを安心サポート

## Smart Construction Support Center

調査・測量 > 施工計画 > 施工・施工管理 > 検査



困ったときは、お気軽にご連絡ください。

 お客様		<b>① 0120-445-538</b> 受付時間 平日8:00~18:00	 サポートセンター	
		<b>②</b> 画像・動画、アドレスを添付してください。 受付時間 平日8:00~18:00		
		<b>③</b> FAQで確認 24時間パソコンやスマホからいつでも検索 (パソコンの方) <a href="https://support.smartconstruction.com/hc/ja">https://support.smartconstruction.com/hc/ja</a>		



## お客様の状況に適した3つのサポート体制 (実際のお問い合わせ事例より)

### お電話でお問い合わせ



? 新しい設計データが  
建機のモニタに表示されない。

サポートセンターへ電話

データの選択が  
できていなかった!  
操作も教えてもらえた。

解決

### LINEでお問い合わせ



? エラーが表示され、モニタと  
コントローラの通信ができない。

LINEで質問

配線がゆるんでいた。  
しっかり差し直したら通信できるようになった。

解決

### サポートサイトでお問い合わせ



? パソコンで進捗を管理したいが、  
土量の算出ができない。

サポートサイトで確認

「よくあるお問い合わせ」から、今お困りの内容で検索。

自己解決 現況データが  
アップロード  
できていなかった!

解決しないとき

それでも解決しない場合は、ページ下にあるリクエストボタンからサポートセンターへお問い合わせできます。

他に質問がございましたら、**リクエストを送信**してください

Click!

製品・サービスに関するご相談や導入のご検討について詳しくはお問い合わせ下さい。

Smart Construction お問い合わせフリーダイヤル

0120-574-448

9:00~18:00 (土日祝日/年末年始除く)



株式会社EARTH BRAIN

〒106-6029 東京都港区六本木一丁目6番1号  
泉ガーデンタワー29階



本パンフレットの情報は2022年9月現在のものです。©2022 株式会社EARTH BRAIN





---

## Smart Construction Simulation (Rainwater Analysis) Quick Guide

---

Tokyo,

Issued by EARTHBRAIN Ltd.  
1-6-1, Roppongi, Minato-ku,  
29th floor, Izumi Garden Tower

---

Unauthorized copying or reprinting is prohibited.