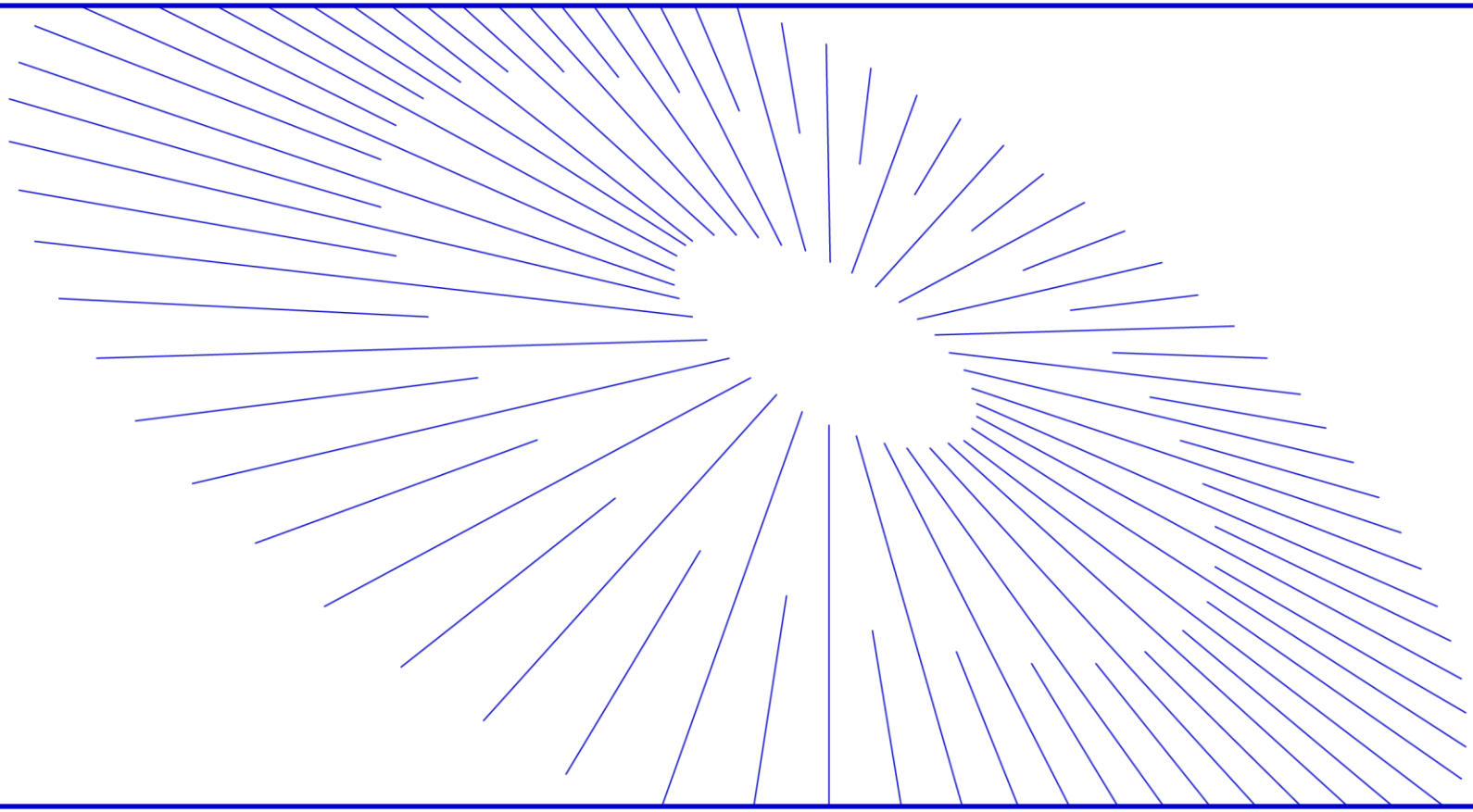
Smart Construction Groupware
Release information 21.5.2014



EARTHBRAIN

Release items list

- We will release these contents on the following schedule.

Release Schedule : JST 21st, May (expected)　19:00～21:00
(During releasing, temporally can not access the application)

NO.	Functions	Summary	Details
1	Point cloud 3D viewer	**Function improvement** "LAS Viewer" and "LandXML Viewer" have been integrated and "Groupware Viewer" has been added.	Please refer to the explanation on the following page.
2	Point cloud 3D viewer	**Function improvement** In addition to point clouds in LAS/TXT format, point clouds in CSV format can now be referenced.	The data that can be displayed is point clouds (LAS, TXT, CSV) and LandXML. The data limit is 10 GB for point clouds and 1 GB for LandXML.
3	Viewport of point cloud	**Function improvement** You can specify the size of the displayed point cloud between "0.1~10".	As shown on the left.
4	Viewport of point cloud	**New function added** The display color of the point cloud can be switched between "RGB" and "Elevation Gradient".	Please refer to the explanation on the following page.
5	Viewport of point cloud	**New function added** You can switch the coordinate system of the point cloud between “Cartesian Coordinates" and "Surveying Coordinates".	Please refer to the explanation on the following page.
6	Viewport of point cloud	**Function improvement** The point cloud projection method can be switched between "Perspective Projection" and “Orthographic Projection".	Please refer to the explanation on the following page.
7	Viewport of point cloud	**New function added** You can display the point cloud with the transparency specified in the display settings modal.	Please refer to the explanation on the following page.

Release items list

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Release Schedule : JST 21st, May (expected)　19:00～21:00
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NO.	Functions	Summary	Details
8	Viewport of LandXML	**New function added** You can switch the coordinate system of the LandXML between “Cartesian Coordinates" and "Surveying Coordinates".	Please refer to the explanation on the following page.
9	Viewport of LandXML	**Function improvement** The LandXML projection method can be switched between "Perspective Projection" and “Orthographic Projection".	Please refer to the explanation on the following page.
10	Viewport of LandXML	**New function added** You can display the LandXML with the transparency specified in the display settings modal.	Please refer to the explanation on the following page.
11	3D actions	**Function improvement** You can move the displayed point cloud / LandXML by moving the mouse cursor while left-clicking.	As shown on the left.
12	3D actions	**Function improvement** By operating the scroll (wheel), you can zoom in and out of the displayed point cloud and LandXML.	When magnifying, it is enlarged toward the tip of the mouse cursor.
13	3D actions	**Function improvement** By holding down the Ctrl key and left-clicking, you can rotate around the click position.	Please refer to the explanation on the following page.
14	3D actions	**Function improvement** By clicking the scroll (wheel), you can rotate the point cloud and LandXML in 3D.	Please refer to the explanation on the following page.

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Release Schedule : JST 21st, May (expected)　19:00～21:00
(During releasing, temporally can not access the application)

NO.	Functions	Summary	Details
15	Coordinate display XYZ	**New function added** Displays the coordinate value to which the tip of the mouse cursor is pointing.	Please refer to the explanation on the following page.
16	One-click viewpoint change	**Function improvement** Change the angle of the point cloud and LandXML so that it is referenced from the selected viewpoint.	Please refer to the explanation on the following page.
17	Measurement (distance, angle)	**Function improvement** You can add measurements between points placed by left-clicking.	Please refer to the explanation on the following page.
18	Measurement (distance, angle)	**New function added** You can view detailed information about the measurements that you have added.	Please refer to the explanation on the following page.
19	Measurement (distance, angle)	**New function added** You can edit the measurements that you have added.	Please refer to the explanation on the following page.
20	Measurement (distance, angle)	**New function added** You can duplicate, delete, or rename a measurement from the context menu of the measurement layer.	Please refer to the explanation on the following page.
21	Measurement (distance, angle)	**Function improvement** The distance between two points is measured by left-clicking on the point cloud / LandXML and placing the distance between two points.	As shown on the left.

Release items list

- We will release these contents on the following schedule.

Release Schedule : JST 21st, May (expected)　19:00～21:00
(During releasing, temporally can not access the application)

NO.	Functions	Summary	Details
22	Measurement (distance, angle)	**Function improvement** The distance between multiple points measures the distance and the total distance between multiple points placed by left-clicking on the point cloud / LandXML.	Please refer to the explanation on the following page.
23	Measurement (distance, angle)	**Function improvement** The horizontal distance between two points is measured by left-clicking on the point cloud / LandXML and placing the horizontal distance between two points.	As shown on the left.
24	Measurement (distance, angle)	**Function improvement** The height difference between two points is measured by left-clicking on the point cloud / LandXML to measure the height difference between two points.	As shown on the left.
25	Measurement (distance, angle)	**Function improvement** The angle is measured by left-clicking on the point cloud / LandXML and measuring the angle consisting of two points placed in succession.	Please refer to the explanation on the following page.
26	Markup	**New function added** You can add markup on the point cloud or LandXML.	Please refer to the explanation on the following page.
27	Markup	**New function added** You can highlight the markup that you added.	Please refer to the explanation on the following page.
28	Markup	**New function added** You can edit the markup that you have added.	Please refer to the explanation on the following page.

Release items list

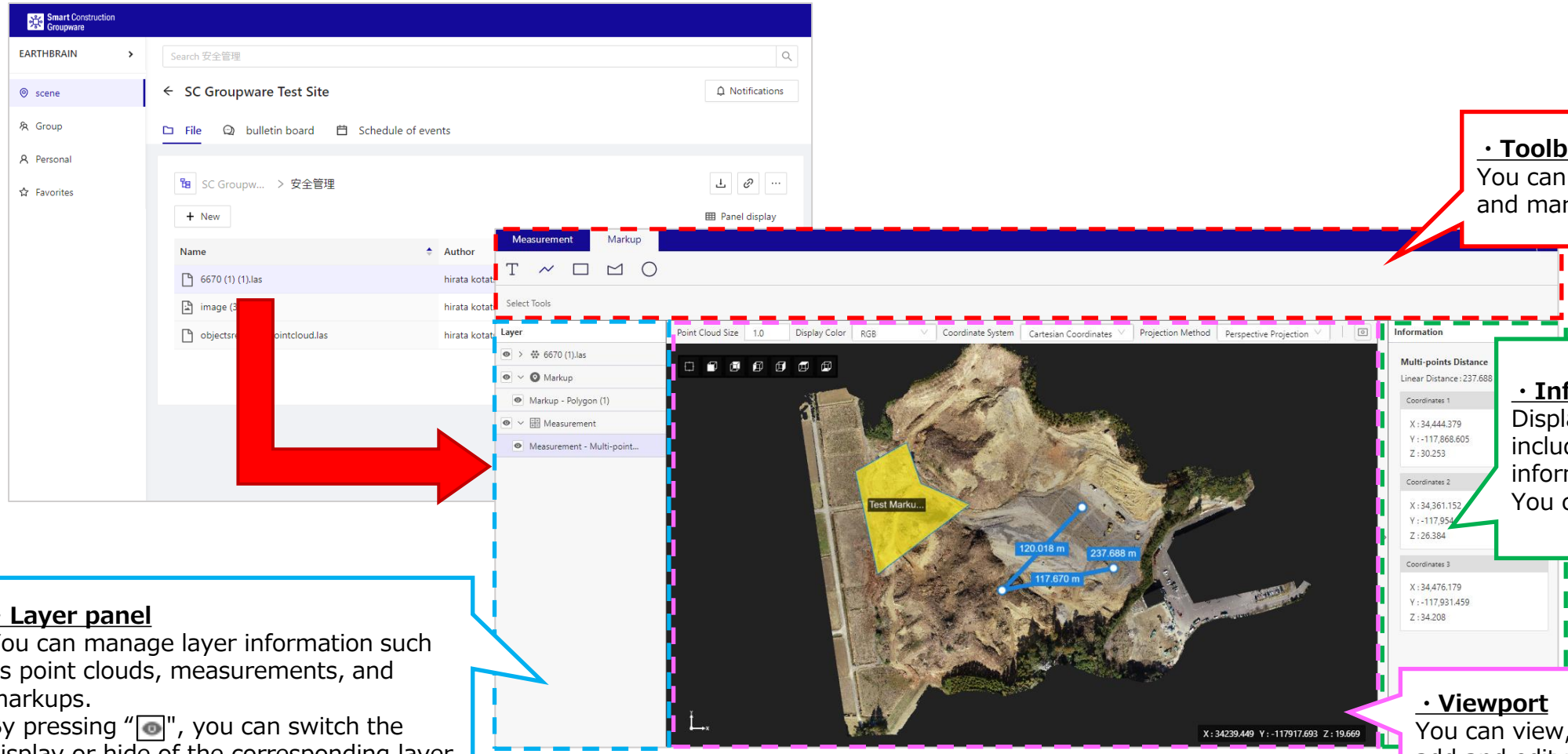
- We will release these contents on the following schedule.

Release Schedule : JST 14th, May (expected)　19:00～21:00
(During releasing, temporally can not access the application)

NO.	Functions	Summary	Details
29	Markup	**New function added** You can duplicate, delete, and rename markups from the context menu of the markup layer.	Please refer to the explanation on the following page
30	Markup	**New function added** The text can be placed in the markup of the pin at the position where you left-click on the point cloud / LandXML	As shown on the left.
31	Markup	**New function added** Lines can be placed by left-clicking on the point cloud / LandXML to place a line markup connecting multiple points.	Please refer to the explanation on the following page
32	Markup	**New function added** Rectangles can be placed by left-clicking on the start and end points on the point cloud / LandXML.	As shown on the left.
33	Markup	**New function added** Polygons can be placed in a polygon markup that connects multiple points placed by left-clicking on the point cloud / LandXML.	Please refer to the explanation on the following page
34	Markup	**New function added** Circles can be placed in the point cloud / LandXML with a perfect circle markup centered on the left-click position.	As shown on the left.
35	Point Cloud Optimization	**New function added** Uploaded and referenced point clouds (LAS, TXT, CSV) are optimized from time to time to improve browsing speed.	As shown on the left.

Release item No.1

No.1
"LAS Viewer" and "LandXML Viewer" have been integrated and "Groupware Viewer" has been added.
It is used when displaying point clouds (LAS, TXT, CSV) and LandXML from Smart Construction Groupware.



・Toolbar
You can select measurement and markup editing tools.

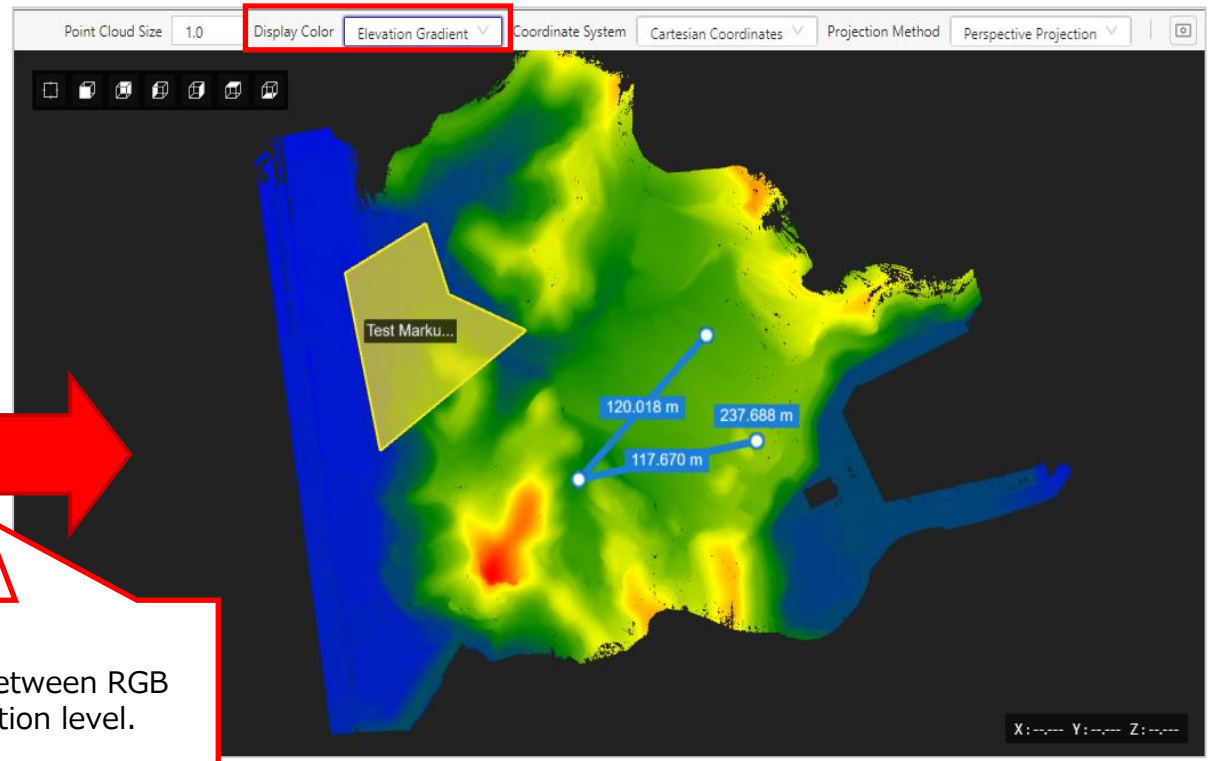
・Information panel
Displays detailed information, including measurement information.
You can hide it by pressing ">".

・Layer panel
You can manage layer information such as point clouds, measurements, and markups.
By pressing "👁", you can switch the display or hide of the corresponding layer.

・Viewport
You can view, measure, and add and edit point clouds and LandXML data.

Release item No.4

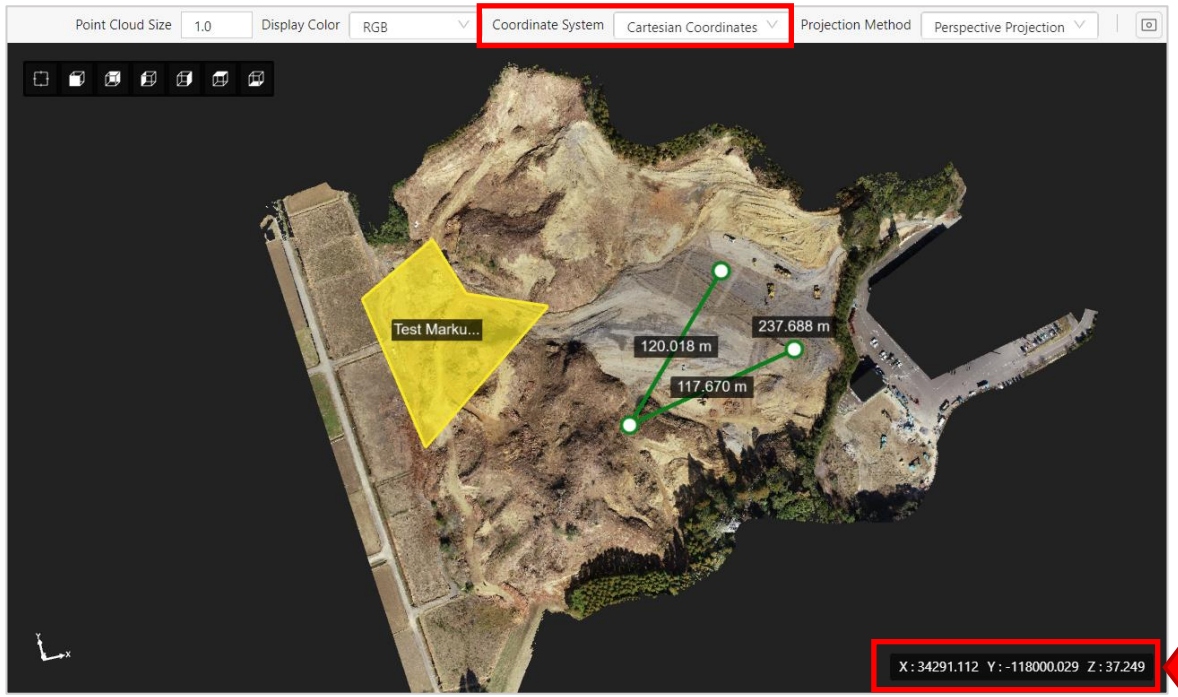
No.4
The display color of the point cloud can be switched between "RGB display" and "Elevation color".

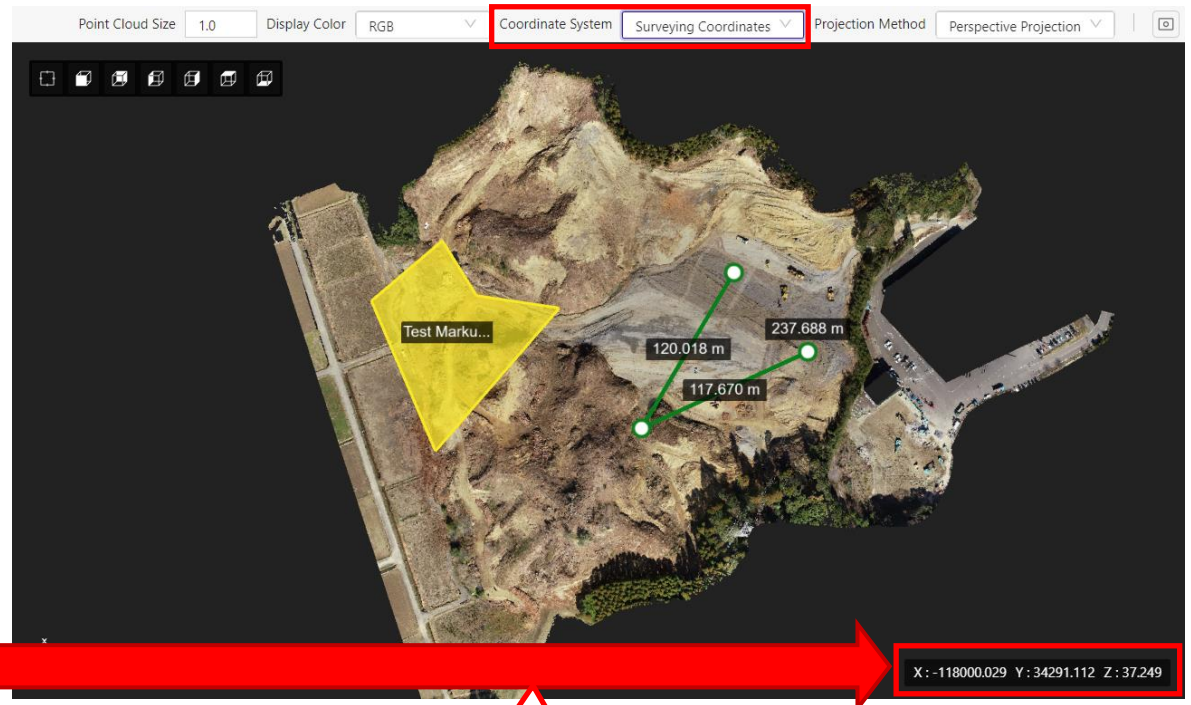


・Display color
You can switch between RGB display and elevation level.

Release item No.5, 8

No.5, 8
You can switch between the point cloud and LandXML coordinate system by “Cartesian Coordinates" and "Surveying Coordinates".

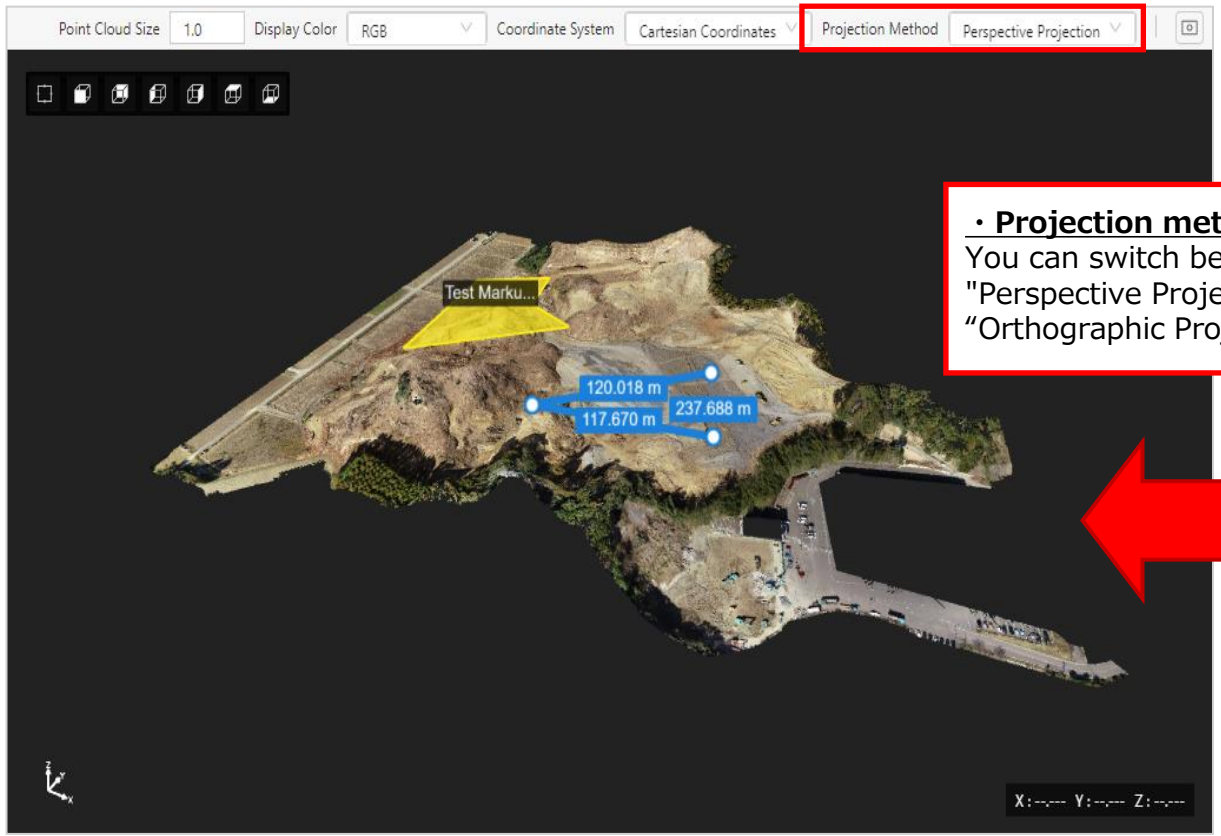




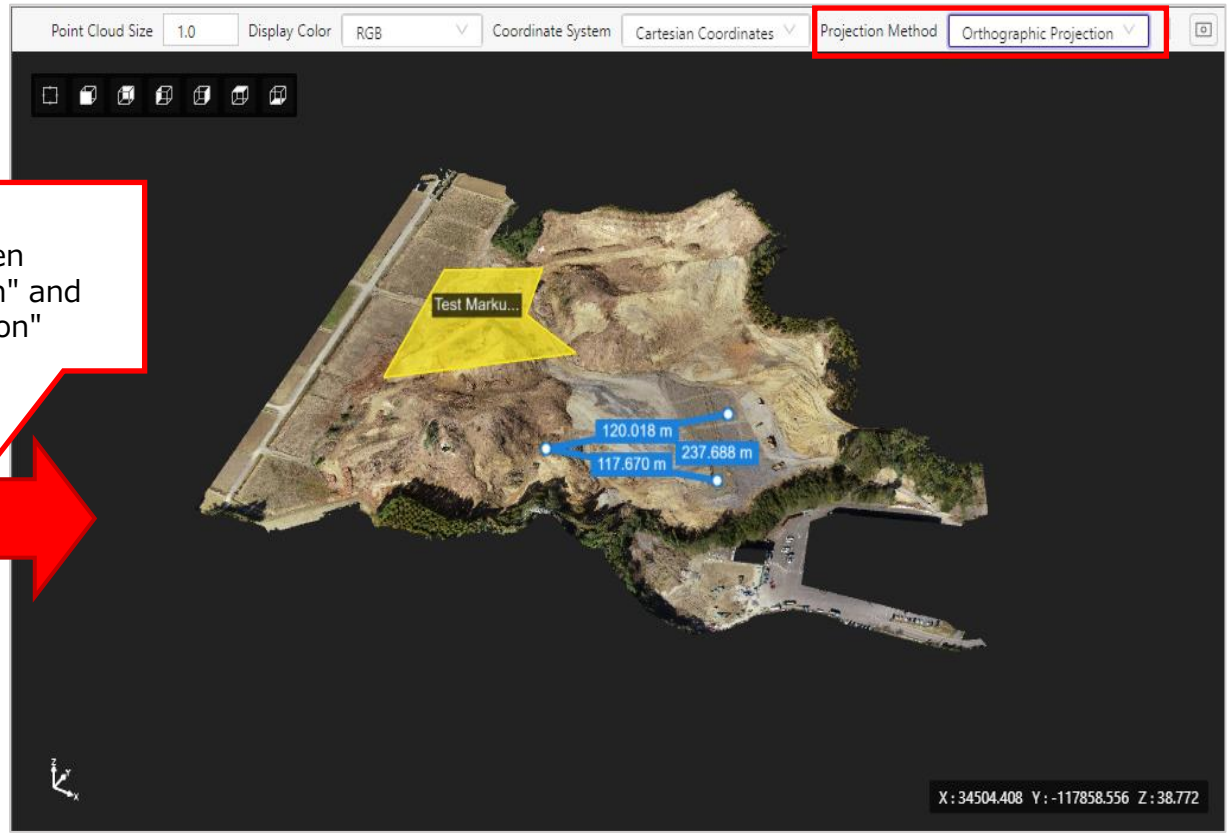
・Coordinate system
X and Y coordinates can be displayed interchangeably.

Release item No.6, 9

No.6, 9
You can switch between "Perspective Projection" and "Parallel Projection" projection methods for point clouds and LandXML.



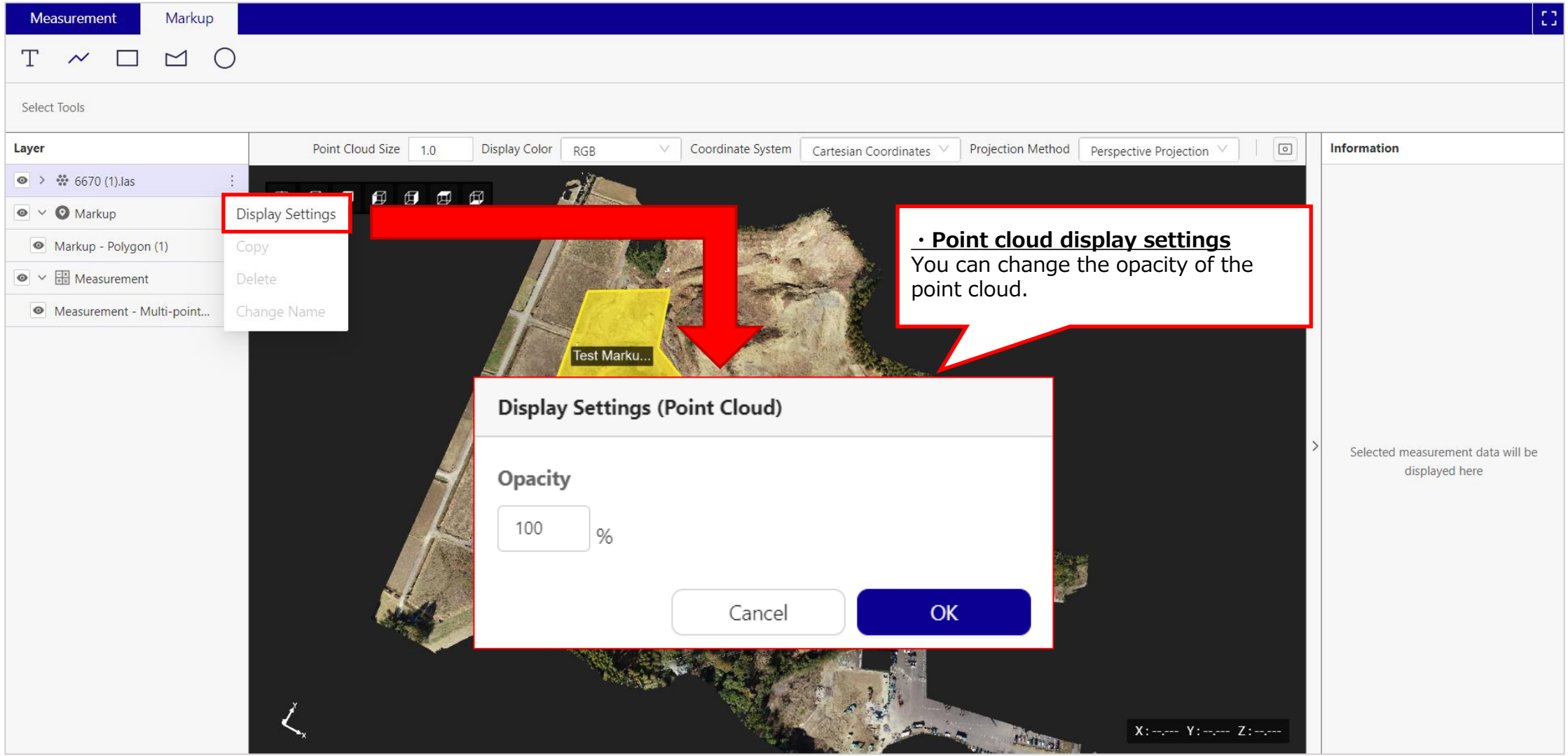
・Projection method
You can switch between "Perspective Projection" and "Orthographic Projection"



Release item No.7

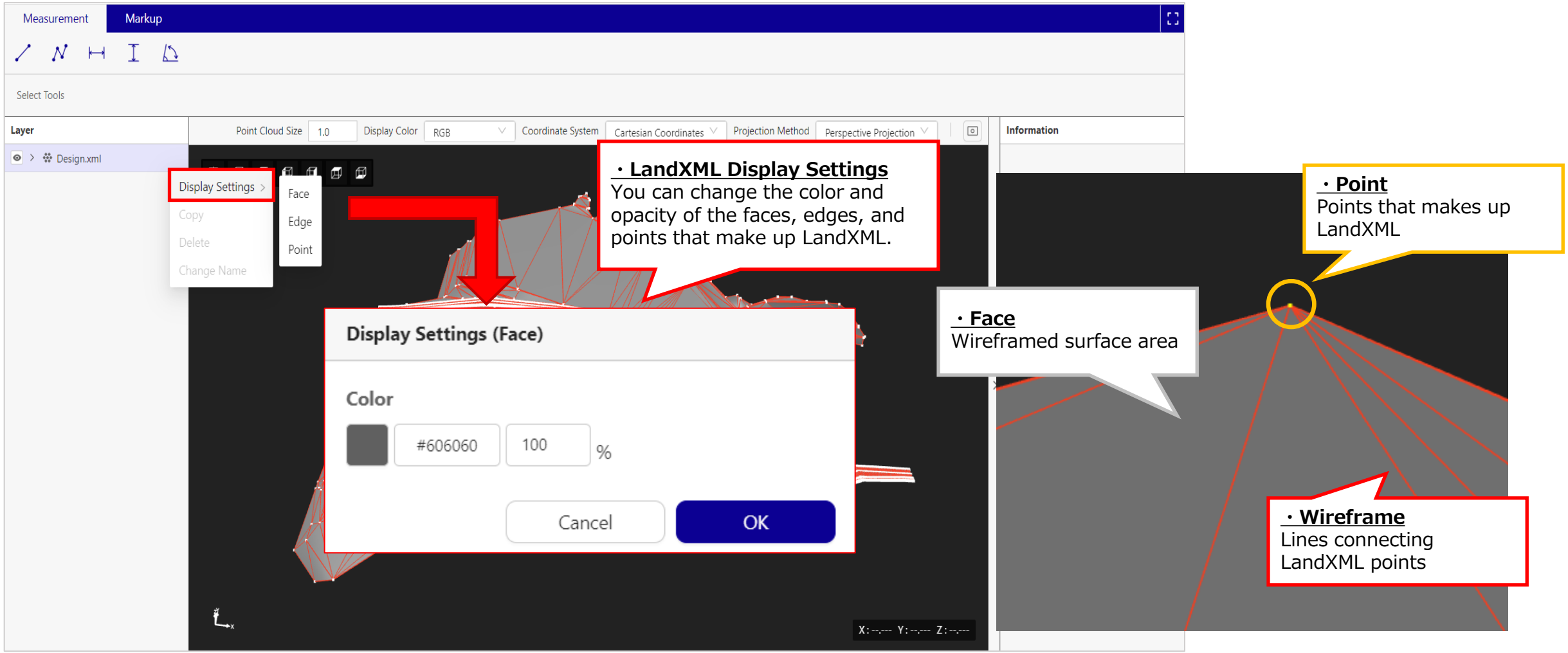
No.7

The point cloud can be displayed with the specified transparency on the display setting screen launched from the context menu.



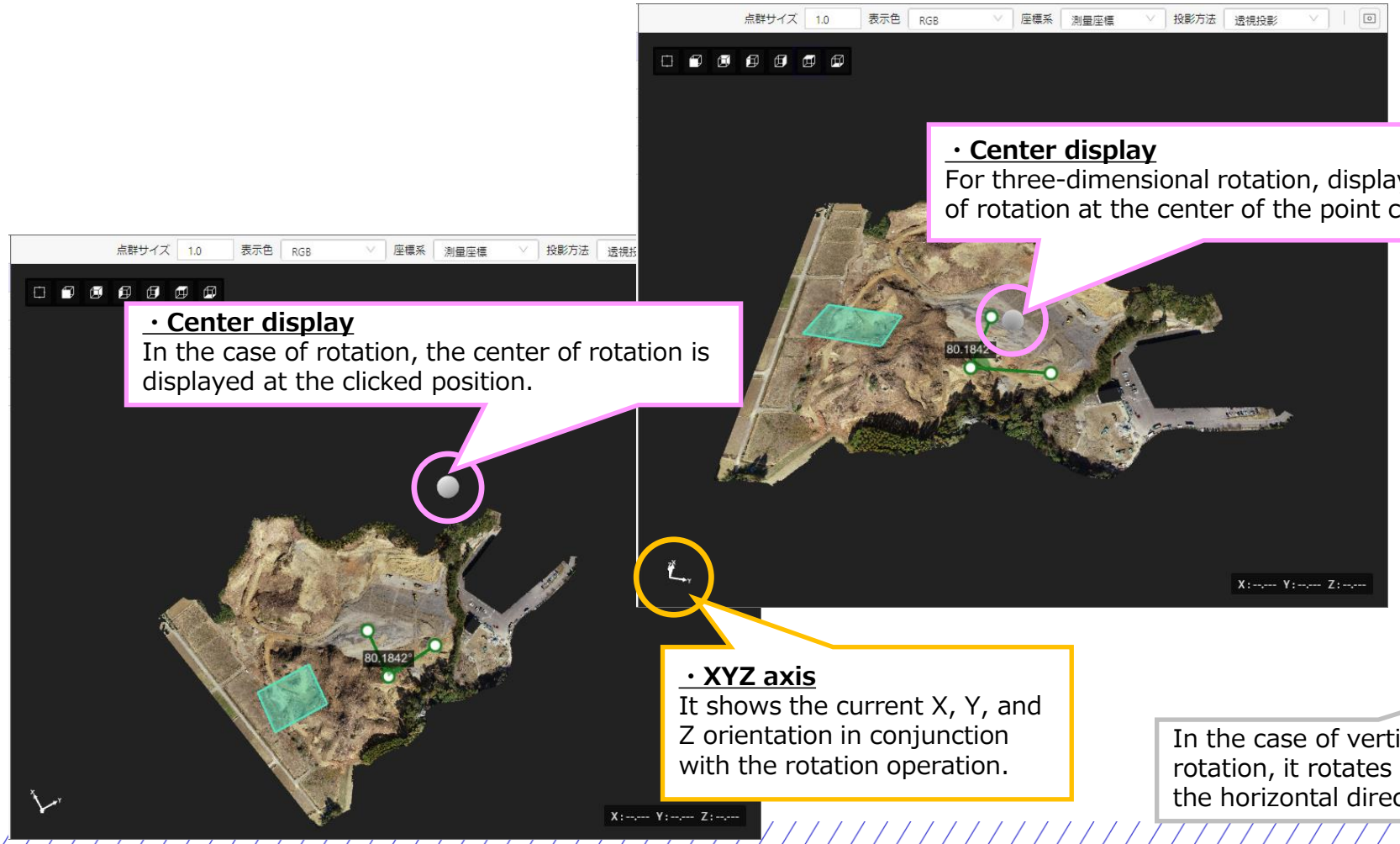
Release item No.10

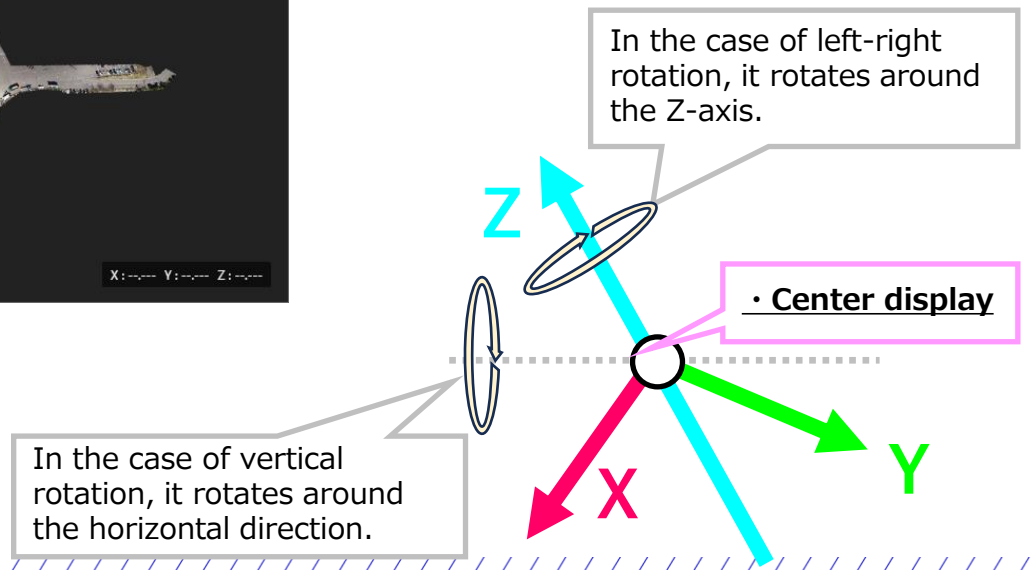
No.10
LandXML can be displayed with the specified color and transparency on the display settings screen launched from the context menu.



Release item No.13, 14

No.13
By holding down the Ctrl key and left-clicking, you can rotate around the click position.
You can also click the scroll (wheel) to rotate the point cloud and LandXML in 3D.



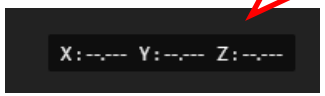


Release item No.15

No.15
Displays the coordinate value to which the tip of the mouse cursor is pointing.

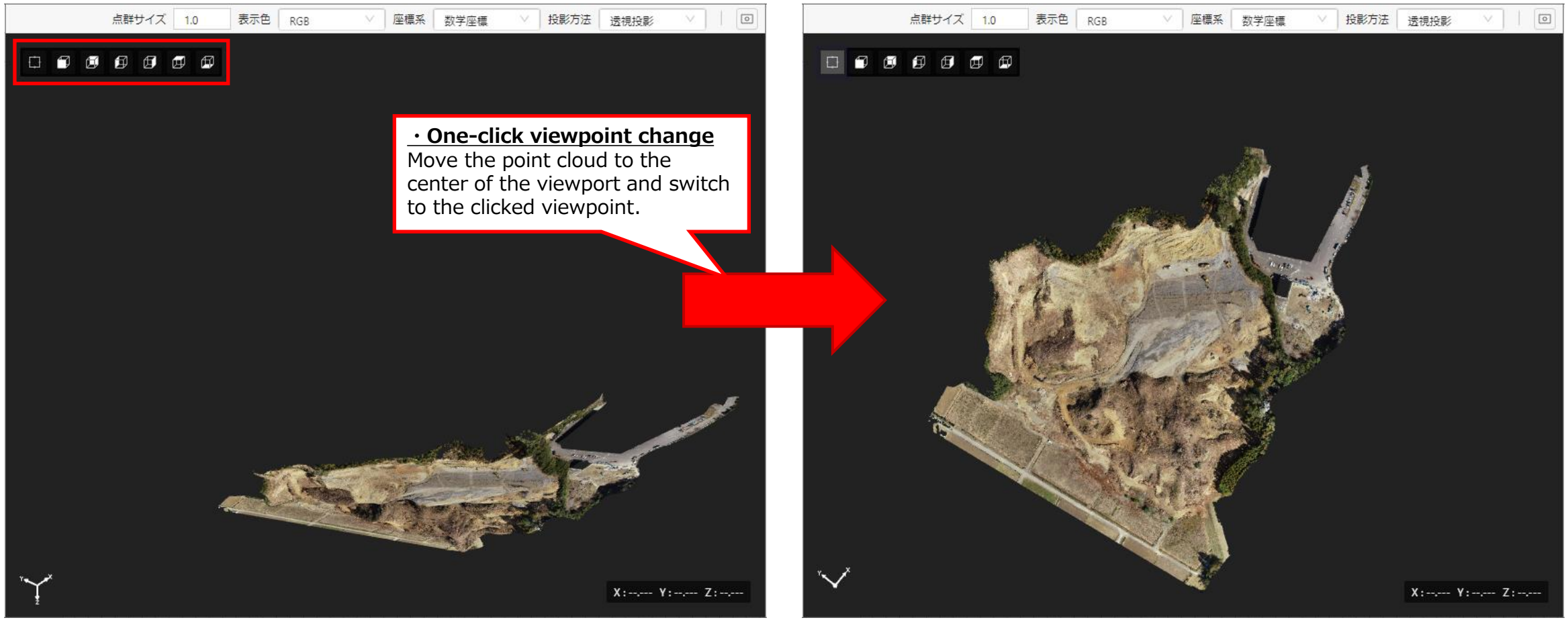
・Coordinate display XYZ
Displays the coordinates indicated by the tip position of the mouse cursor.

・Coordinate display XYZ
If the point cloud does not exist, it will be hyphenated.



Release item No.16

No.16
Change the angle of the point cloud and LandXML so that it is referenced from the selected viewpoint.
The viewpoint that can be selected can be changed from 7 directions: “top w/o changing direction", "front", "back", "left", "right", “top" and “bottom".



Release item No.17

No.17
You can add measurements between points placed by left-clicking.

・Toolbar
Select the Measurement tab and select the measurement tool you want to add.
You can redo adding points by pressing the “Undo Last point" button during editing.

・Layer panel
When the measurement is confirmed, a layer is added under the measurement folder.
You can collapse the underlying layer by pressing the toggle button in the measurement folder.

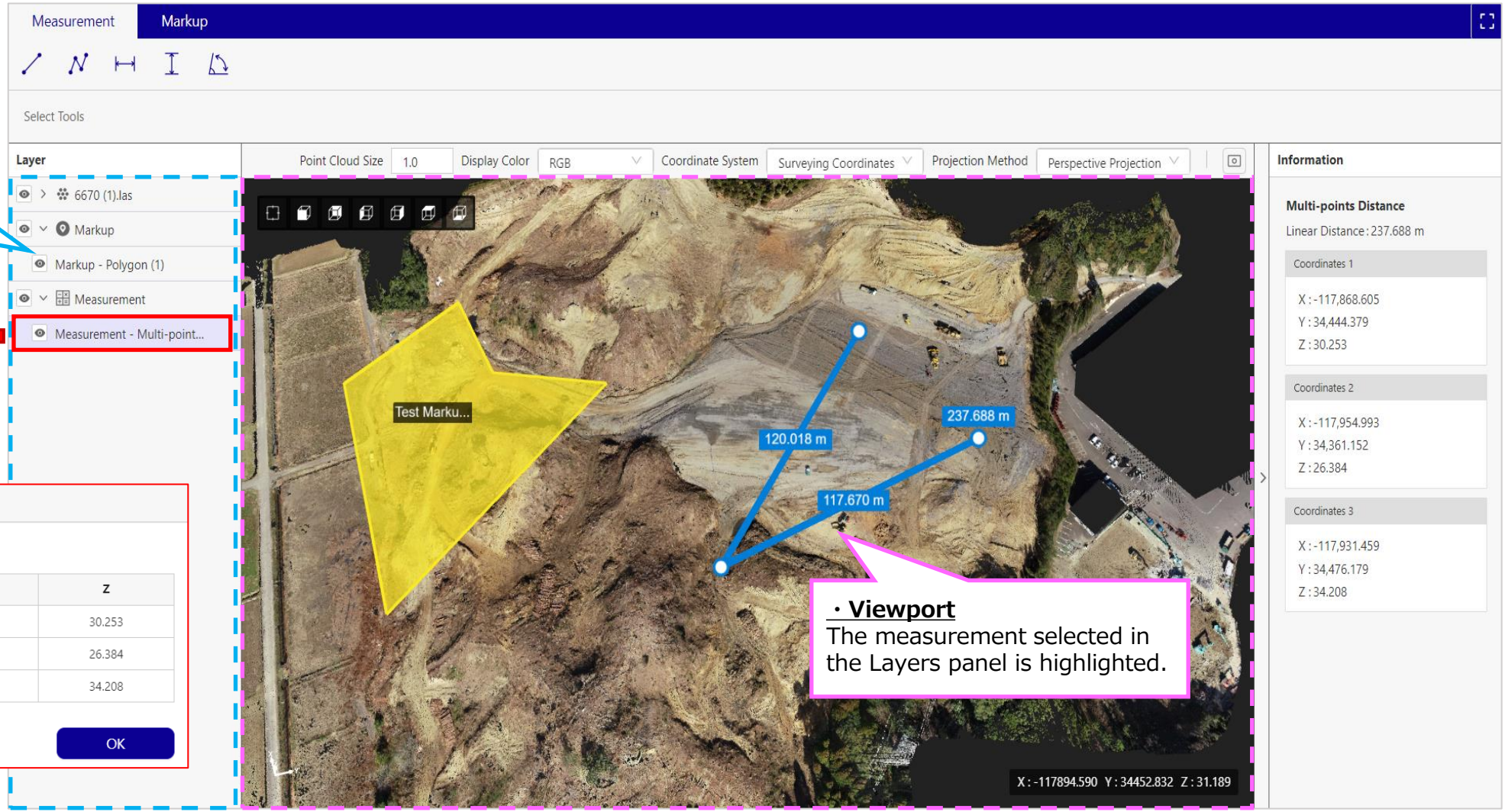
・Viewport
Left-click to place a point on the point cloud / LandXML to perform the measurement selected in the toolbar.

Release item No.18

No.18
You can view detailed information about the measurements that you have added.

・Layer panel
By making a selection, detailed measurement information is displayed in the information panel.

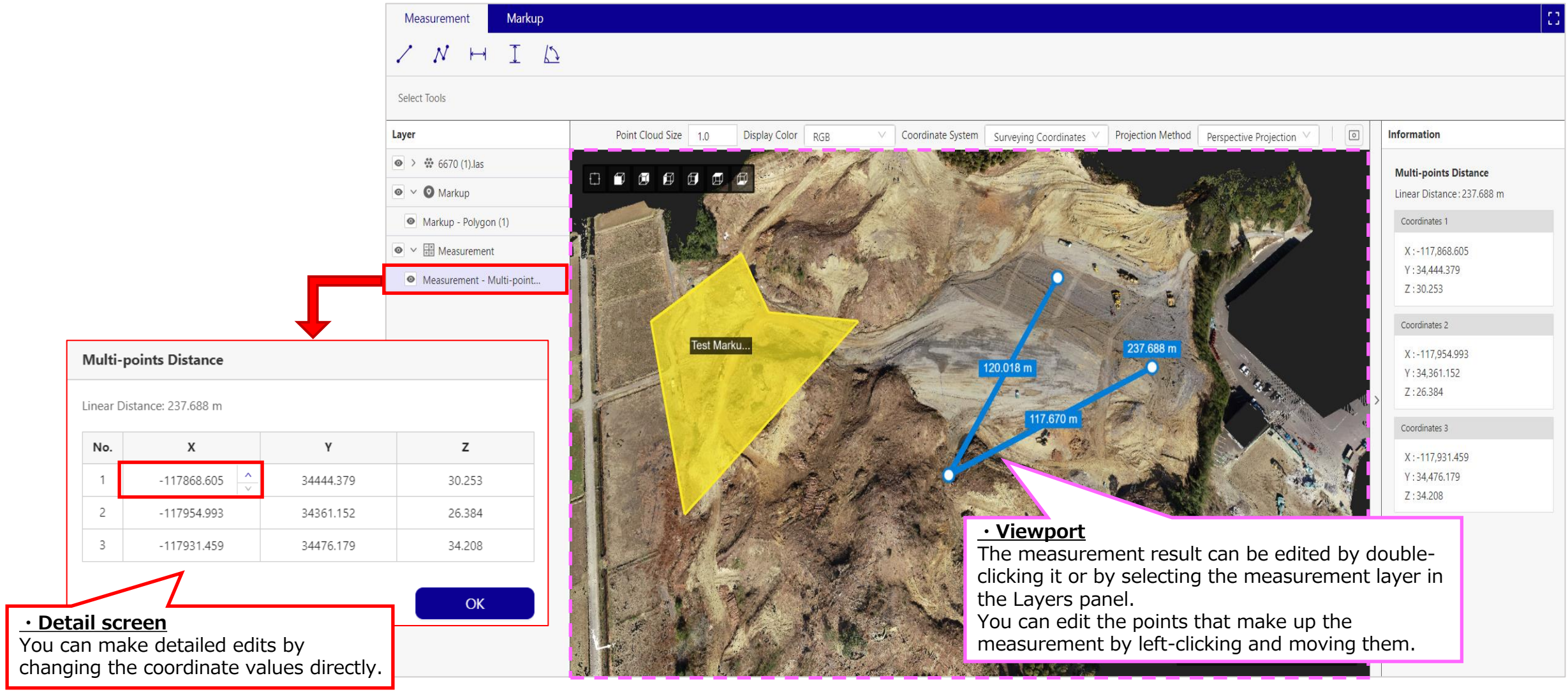
・Detail screen
You can double-click a layer to view detailed information on the child screen.



・Viewport
The measurement selected in the Layers panel is highlighted.

Release item No.19

No.19
You can edit the measurements that you have added.



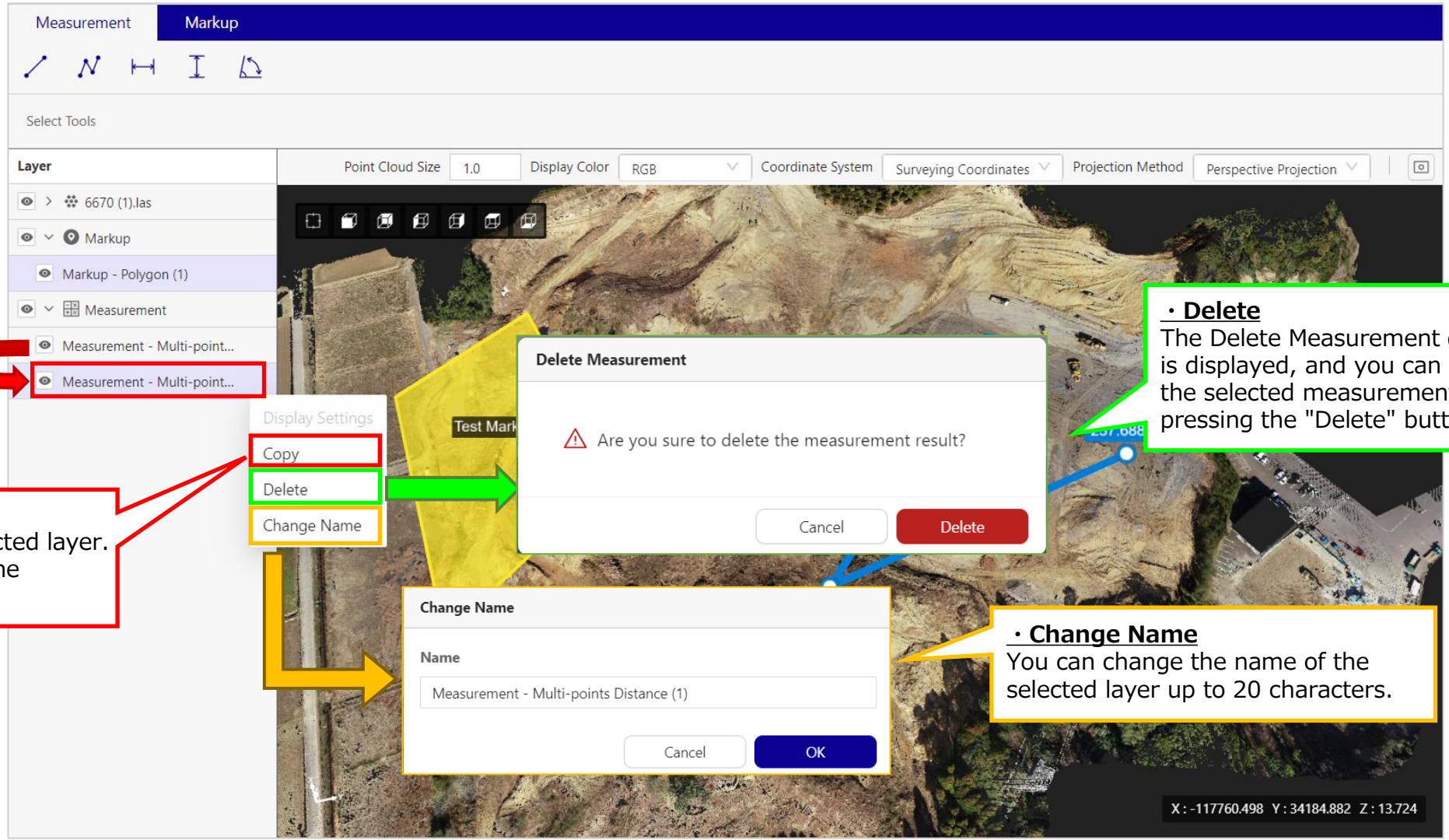
・Detail screen
You can make detailed edits by changing the coordinate values directly.

・Viewport
The measurement result can be edited by double-clicking it or by selecting the measurement layer in the Layers panel.
You can edit the points that make up the measurement by left-clicking and moving them.

Release item No.20

No.20

You can duplicate, delete, or rename a measurement from the context menu of the measurement layer.



・Copy
You can duplicate the selected layer. After duplicating, display the rename dialog.

・Delete
The Delete Measurement dialog is displayed, and you can delete the selected measurement by pressing the "Delete" button.

・Change Name
You can change the name of the selected layer up to 20 characters.

Release item No.22

No.22

Multi-points Distance measures the distance and the total distance between multiple points placed by left-clicking on the point cloud / LandXML.

・Total distance
The end point of the point displays the total distance between all points.
It is not displayed if there are two points.

・Distance between points
The distance between the two points is displayed between the points.

・Points
You can measure the distance of multiple points up to 50 points.
There are two ways to confirm the measurement.
(1) Double-click; Add points and confirm
(2) Right-click; Only confirmed with points that have already been added

Release item No.25

No.25
The angle is measured by left-clicking on the point cloud / LandXML and measuring the angle consisting of two points placed in succession.

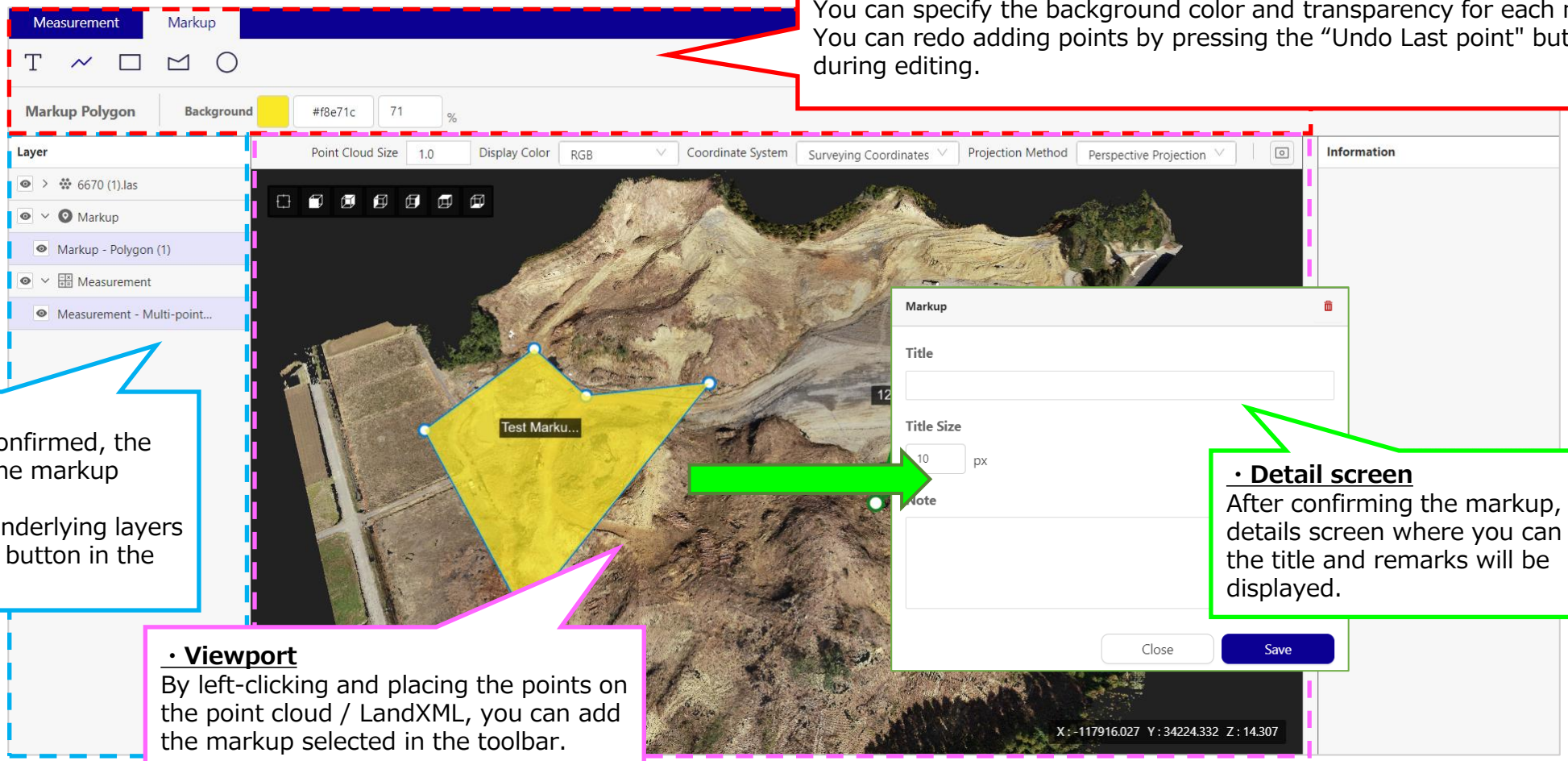
・Reference points and angles
Displays the angle created when the reference point (the first point) and the other two points are connected.

・Points
After adding the reference point (first point), you can measure any angle by adding the second and third points.

Release item No.26

No.26
You can add markup on the point cloud or LandXML by left-clicking.

・Toolbar
Select the Markups tab, and then select the markup tool you want to add
You can specify the background color and transparency for each markup.
You can redo adding points by pressing the “Undo Last point" button during editing.



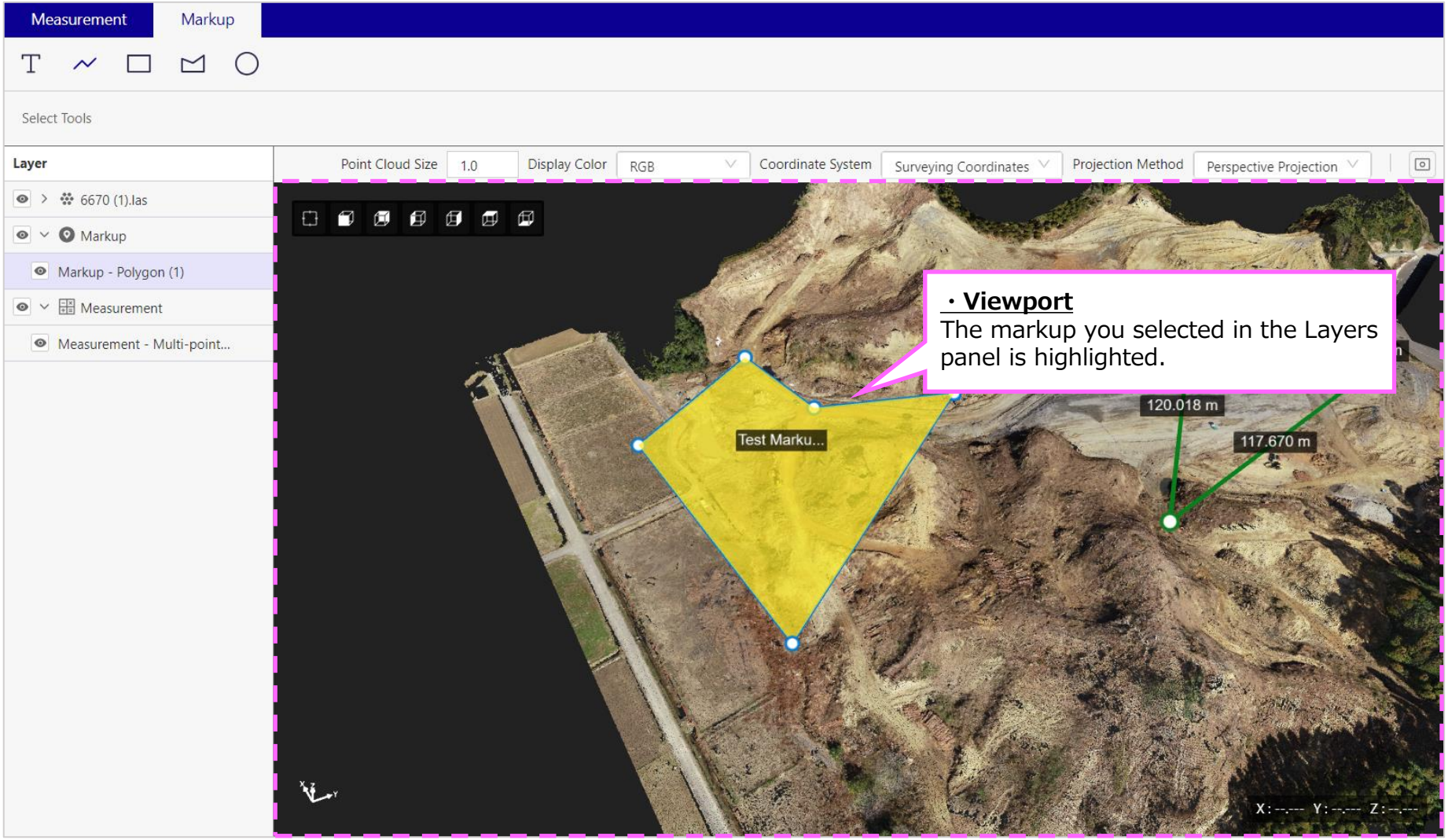
・Layer panel
When the markup is confirmed, the layer is added under the markup folder.
You can collapse the underlying layers by pressing the toggle button in the markup folder.

・Viewport
By left-clicking and placing the points on the point cloud / LandXML, you can add the markup selected in the toolbar.

・Detail screen
After confirming the markup, the details screen where you can enter the title and remarks will be displayed.

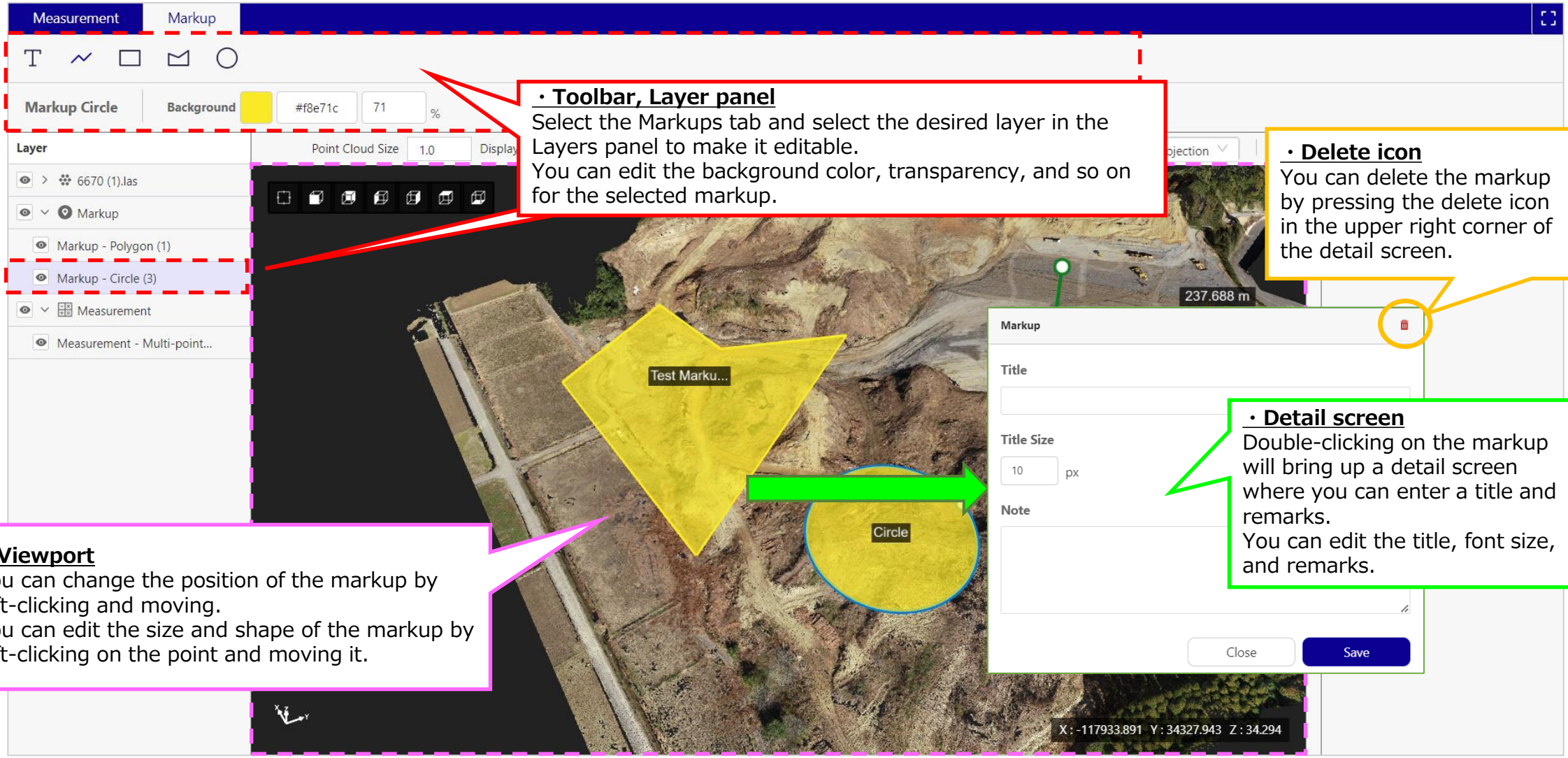
Release item No.27

No.27
You can highlight the markup that you added.



Release item No.28

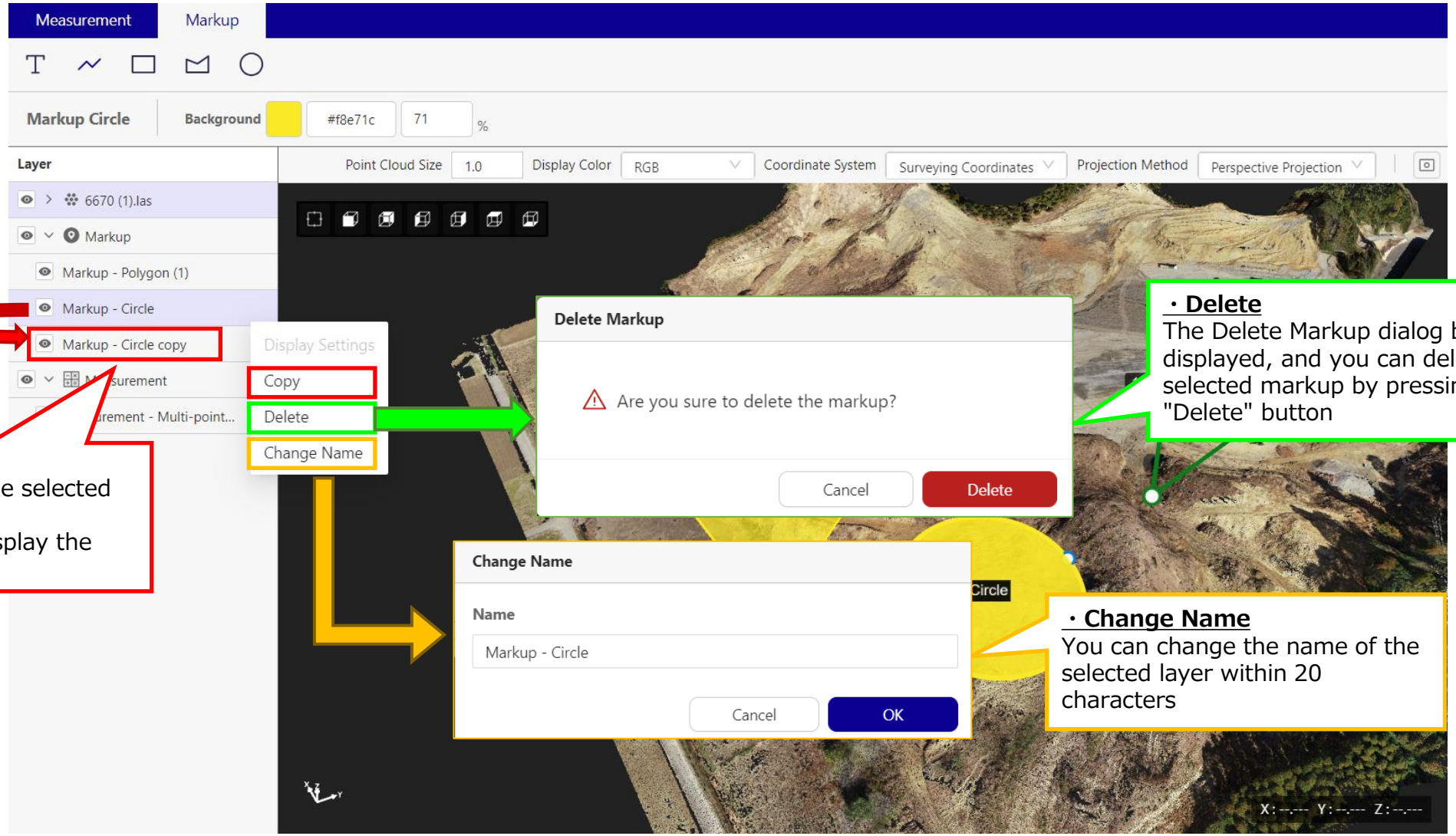
No.28
You can edit the markup that you have added.



Release item No.29

No.29

You can duplicate, delete, and rename markups from the context menu of the markup layer.



・Copy

You can duplicate the selected layer
After duplicating, display the rename dialog

・Delete

The Delete Markup dialog box is displayed, and you can delete the selected markup by pressing the "Delete" button

・Change Name

You can change the name of the selected layer within 20 characters

Release item No.31, 33

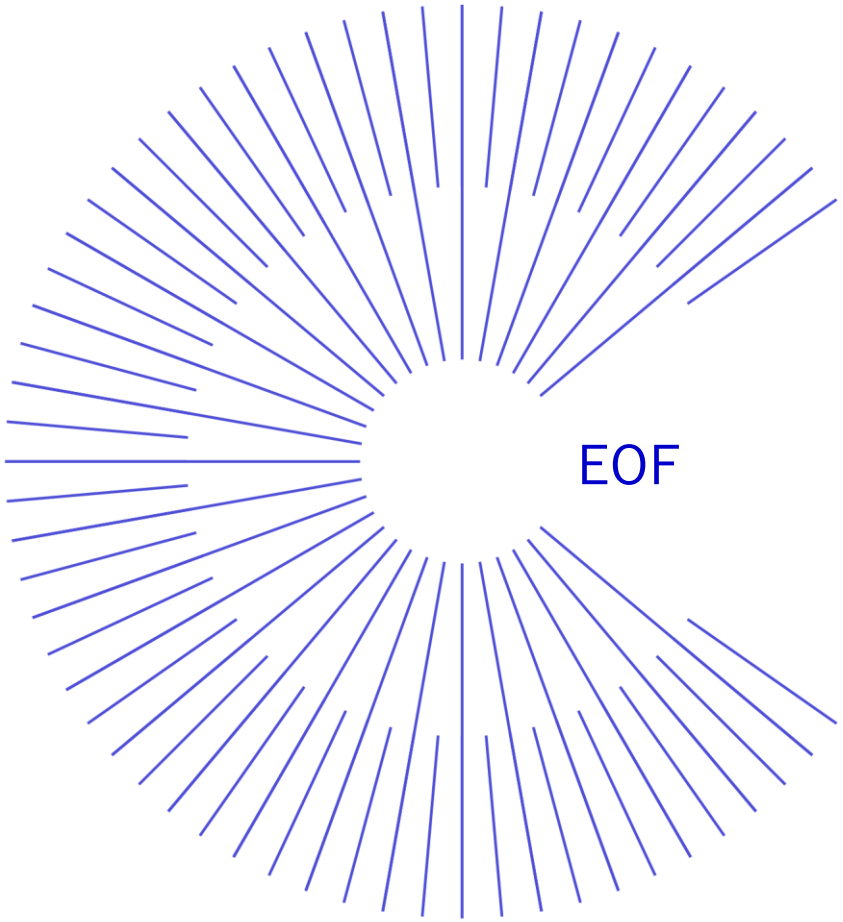
No.31, 33

You can place line and polygon markups that connect multiple points placed by left-clicking on the point cloud or LandXML.

・Line markup
A markup that connects each point with a straight line, with the title appearing above the first point

・Points
You can create lines, polygons, and markups up to 10 points
There are two ways to finalize the markup
(1) Double-click; Add points and confirm
(2) Right-click; Only confirmed with points that have already been added

・Polygon markup
It is a markup that connects all the points with a straight line and fills the inside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