

Recreational area near Herningvej, Jelling - during musicfestival in Jelling

Visualizations
September 2025



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Description of the method

Description of the method

The purpose of the visualizations is to provide a true and fair representation of the project's expression in the landscape towards the public and decision makers. Furthermore the visualizations are used to support the evaluation of the project's visual impact in general and on the landscape.

The photo viewpoints that are chosen for the visualizations have been selected based on an assessment of visibility in the surroundings, considering terrain conditions, buildings and vegetation, along with its relevance in relation to infrastructure and how the new park affects the experience of the horizon when seen from the chosen viewpoints.

The parks visual impact on the experience of the horizon and the landscape is considered as crucial in this project, which is why the multiple viewpoints and visualizations have been made with focal lengths of 24 mm and 35 mm respectively. The height of the viewpoints is set at 1,65 m.

The visualizations are presented as panoramas, providing an impression of how the overall landscape will be experienced on-site when ones view moves along the horizon.

An exception to this is visualization from viewpoint 2, which is presented as singular photos from three different angles taken at the same location. The intention of this is to show an extra wide angle, which is best illustrated with multiple photos.

The visualizations are photo-matched. The photos taken from the viewpoints are combined with the new park and temporary music festival, which are added using a 3D model of the project.

Process of creating photo viewpoints

Photo viewpoints and camera matching have all been carried out by photographer Mikkel Barker. Since 2005, Mikkel Barker has operated under his own name, specializing in combining photography, film, and surveying with 3D to deliver scaled and documented 3D visualizations and camera matches - from ground level, with drones and aircrafts. The combination of photography, surveying, and 3D ensures that public authorities and politicians can make decisions on a credible and trustworthy groundwork. In addition to his many years of experience in solving tasks for public authorities in collaboration with consultants, Mikkel Barker also has a background with the land surveying company Geopartner.

Camera Matching and Adjustment of viewpoints

3D camera matching is a combination of photography, surveying, and a 3D model. Camera matching ensures the correct perspective, placement, and scale of a 3D model within a photograph.

All camera matches are to scale and documented using precisely configured 3D camera, 3D reference points, and a background image. Photos are corrected for lens distortion and surveyed using RTK GPS, which ensures an accuracy of one to two centimetres.

Camera matching is carried out based on surveyed match points. At least 5 match points must be used per match (with 4 or fewer points, matching/verification cannot be performed - therefore, it is recommended to survey using 6-7 points). The match points must lie on the same plane and should be reasonably distributed across the image's height, width, and depth.

In the presented material, between 5 and 11 match points have been utilized for each viewpoint. (See reference points in the appendix with camera information).

All measurement points are correctly placed in the material using the DKTM2 coordinate system, and a file with camera information including the coordinate points is included as well.

3D model

In order to create true and fair visualizations of the project, a 3D landscape model of the project has been constructed from the elevation model provided by the Danish Data Supply (Dataforsyningen), which showcases existing terrain conditions and infrastructure. Within this model, the park's new elements such as embankments, vegetation, new infrastructure, as well as stages and tents - are all modelled based on the developed masterplan for the project.

The model is to scale, georeferenced and in a 1:1 meter ratio, with all elements represented in their correct 1:1 dimensions.

The model is created in the coordinate system DKTM2, in which the camera positions from the individual viewpoints are inserted into the 3D model and photo-matched. The photo-match is verified using both reference points and the landscape model.

Furthermore, the visualizations are geometrically verified using landscape sections that indicate the height of the projects' elements in relation to existing conditions.

Camera information for the photo viewpoints:

Camera: Sony A7R IV with a full size sensor.

Coordinate system: DKTM2.

Image size: 9504 X 6336 pixels, images are uncropped, edited and corrected for geometric distortion.

Time: UTC +2

Method for Post-Processing of Visualizations:

The photo viewpoints are matched with corresponding positions in the project's 3D model based on the DKTM2 coordinate system and are then post-processed in Photoshop.

The method is as follows: The original image is corrected for lens distortion, meaning that the distortion caused by the camera lens is removed. Subsequently, the individual photos are stitched together into a panorama using the program Image Composite Editor, which creates a slight overlap between the individual photos hereby creating a panorama image.

Reading guide:

All viewpoints are shown on the overview map on the following page, along with the boundaries of the upcoming recreational area and the temporary festival boundary.

Every viewpoint is subsequently presented in three different scenarios:

- Existing conditions: Shows the current situation at the time the photo was taken.

- Future conditions: Shows the recreational area where the planned trees and shrubs have matured to their expected height after 10-15 years.

- Temporary conditions: Shows the area as it will appear during musicfestival in Jelling.

In the visualizations, visible elements from the project area are labeled with text. Elements that are located behind either terrain, buildings or vegetation (either new or existing) are indicated with text in parentheses. Additionally, the extent of the recreational area is marked with 'Park start' and 'Park end'.

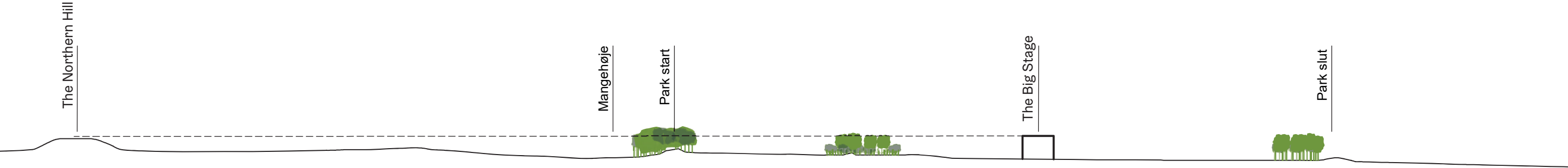
Map of the photo viewpoints

1:5000

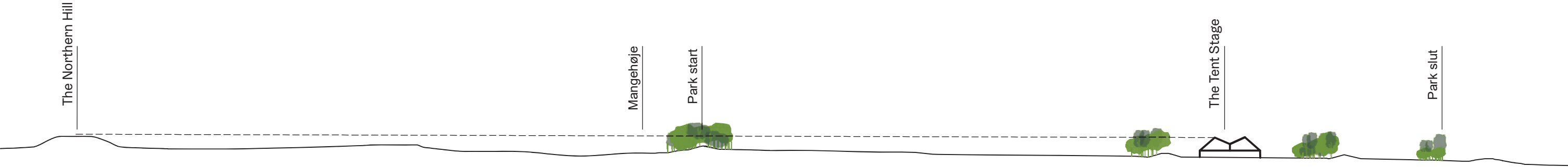


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Landscape sections



Landscape section 1 - 1:3000
Section from The Nothern Hill towards The Big Stage during musicfestival in Jelling
The Big Stage is 17 meters tall above ground level



Landscape section 2 - 1:3000
Section from The Northern Hill towards The Tent Stage during musicfestival in Jelling
The Tent Stage is 15 meters tall above ground level

Viewpoint 1 - Existing conditions



Viewpoint 1:

The Northern Hill - View over the landscape with the palisade facing north

Panorama created from two photos taken on-site November 14th 2024 at 13:46.



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Viewpoint 1 - Future conditions: Recreational area



Viewpoint 1:

The Northern Hill - View over the landscape with the park to the northwest and the palisade in the foreground.

In the background, the planting belts surrounding the park itself can be seen.

The visualization is created from two photos taken at the same view-point on-site with a 24 mm focal length.



Viewpoint 1 - Temporary conditions: musicfestival in Jelling



Viewpoint 1:

The Northern Hill - View over the landscape with the festival area to the northwest and the palisade in the foreground.

The camp area with its surrounding fence can be seen on the fields between the festival area and the palisade. In the background, the planting belts surrounding the park itself can be seen.

The visualization is created from two photos taken at the same viewpoint on-site with a 24 mm focal length.



Viewpoint 2 - Existing conditions



Viewpoint shown with a yellow orientation on the viewpoint map



Viewpoint shown with an orange orientation on the viewpoint map



Viewpoint shown with a red orientation on the viewpoint map

Viewpoint 2:

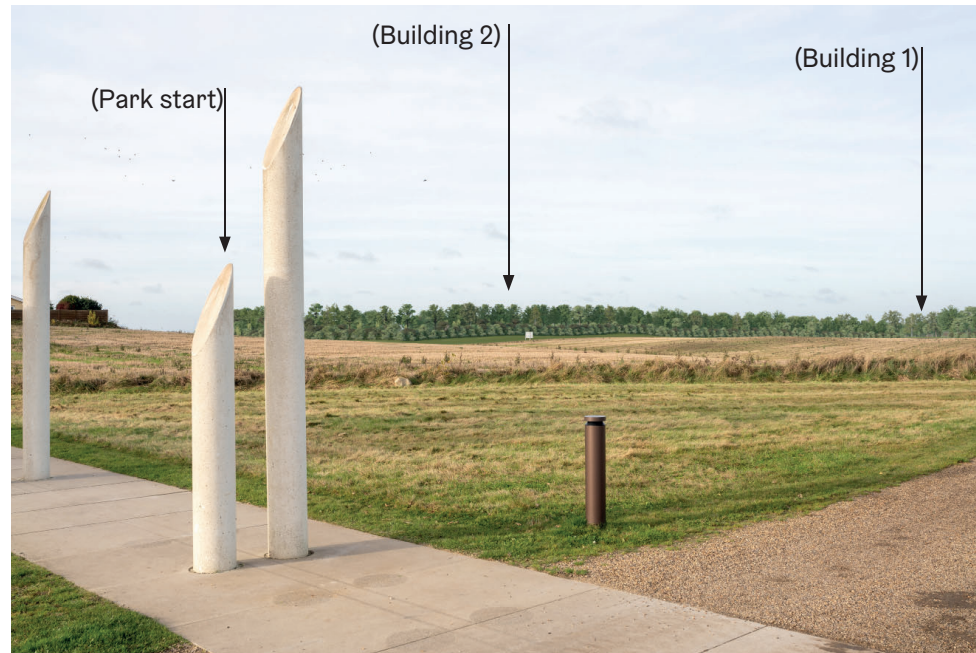
At the crossing between the Pilgrimage Route (Mangehøje) and the palisade. View over the landscape towards northwest.

Photos taken on-site November 14th 2024 at 13:54.



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Viewpoint 2 - Future conditions: Recreational area



Viewpoint shown with a yellow orientation on the viewpoint map



Viewpoint shown with an orange orientation on the viewpoint map



Viewpoint shown with a red orientation on the viewpoint map

Viewpoint 2:

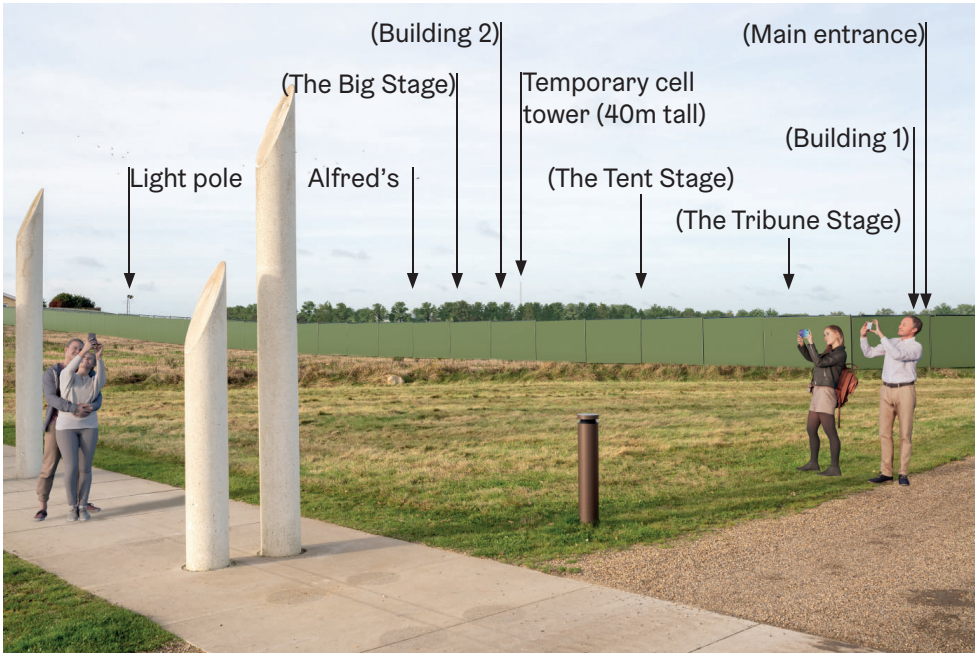
At the crossing between the Pilgrimage Route (Mangehøje) and the palisade. View of the park seen in the background towards northwest.

The permanent buildings are not visible, as they lie low in the terrain and behind the plantings of the park.

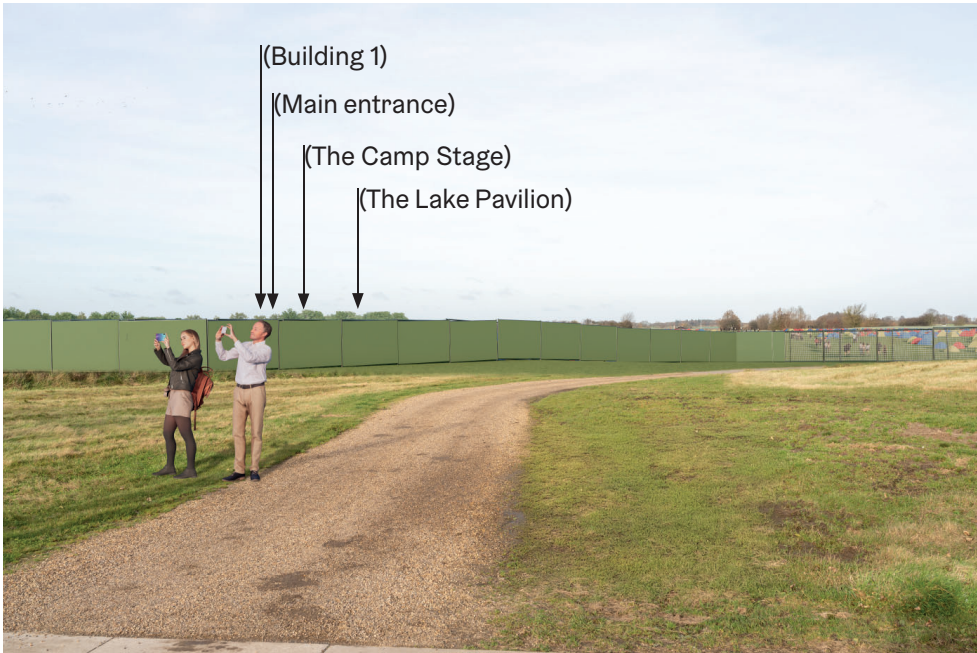
The visualization consists of three photo viewpoints taken at the same location and is presented with a 35 mm focal length.



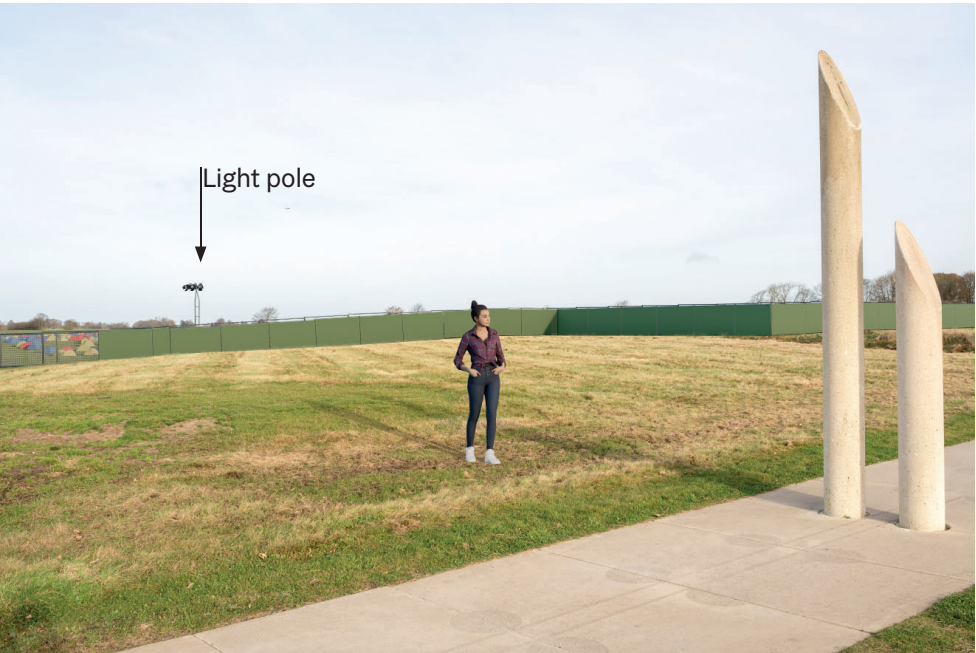
Viewpoint 2 - Temporary conditions: musicfestival in Jelling



Viewpoint shown with a yellow orientation on the viewpoint map
Fence with a unicolored green screen.



Viewpoint shown with an orange orientation on the viewpoint map



Viewpoint shown with a red orientation on the viewpoint map

Viewpoint 2:

At the crossing between the Pilgrimage Route (Mangehøj) and the palisade. View of the festival area towards north with the camp area in the foreground.

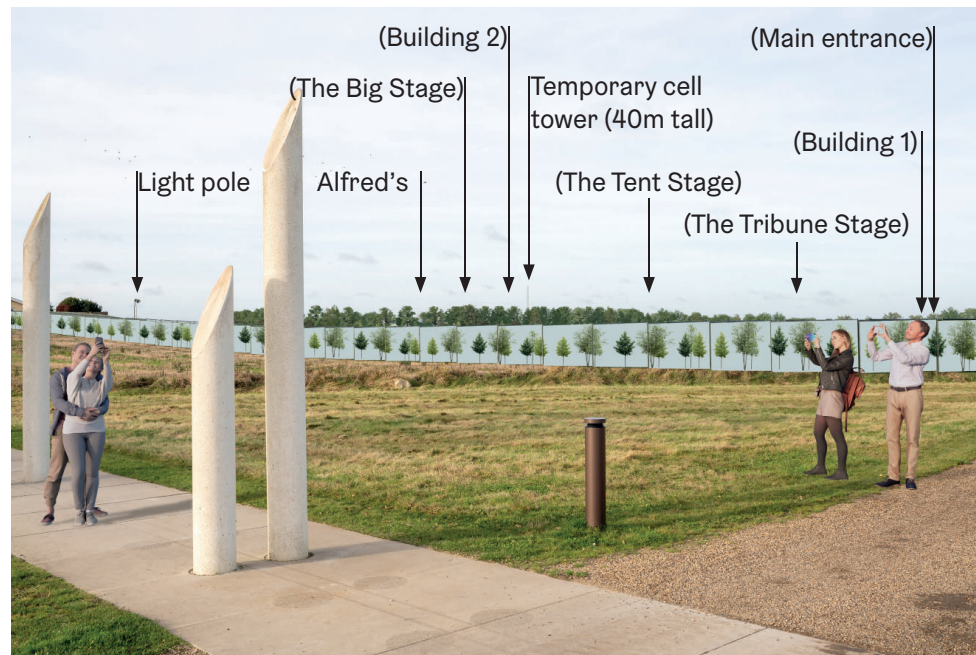
The festival area is fenced off during the time of the festival with moveable steel fences, which has a green screen installed on it.

In the background, the planting belts surrounding the festival area can be seen on the left.

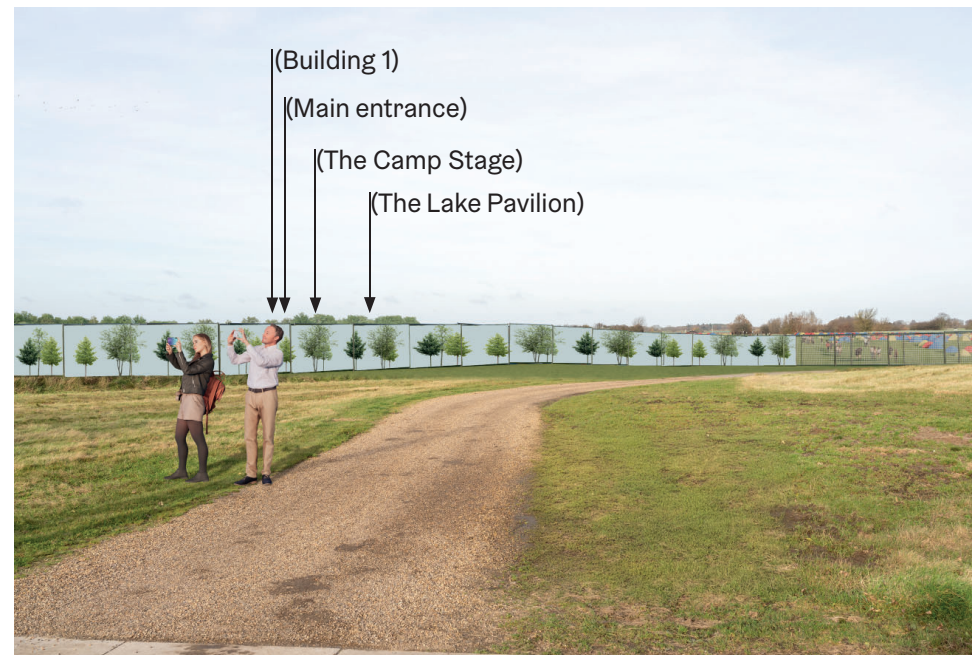
The visualization consists of three photo viewpoints taken at the same location and is presented with a 35 mm focal length.



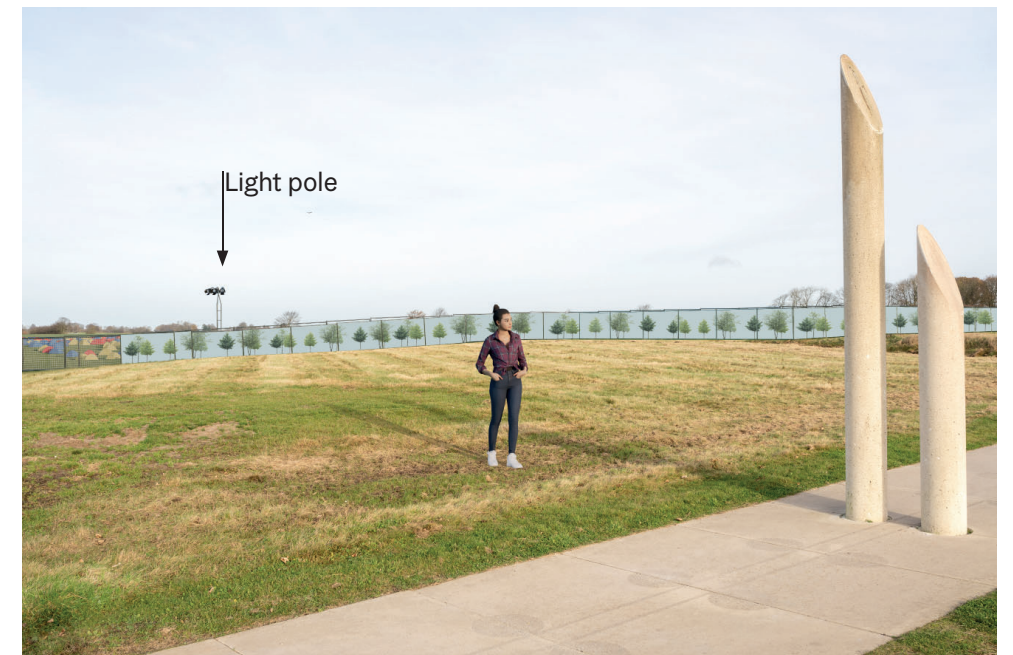
Viewpoint 2 - Temporary conditions: musicfestival in Jelling



Viewpoint shown with a yellow orientation on the viewpoint map
Fence with an alternative tree motif.



Viewpoint shown with an orange orientation on the viewpoint map



Viewpoint shown with a red orientation on the viewpoint map

Viewpoint 2:

At the crossing between the Pilgrimage Route (Mangehøj) and the palisade. View of the festival area towards north with the camp area in the foreground.

The festival area is fenced off during the time of the festival with moveable steel fences, which has a green screen installed on it.

In the background, the planting belts surrounding the festival area can be seen on the left.

The visualization consists of three photo viewpoints taken at the same location and is presented with a 35 mm focal length.



Viewpoint 3 - Existing conditions



Viewpoint 3:

Situated on Mangehøje with a view towards southwest, and with the Monument Area towards south.

Panorama created from two photos taken on-site January 2nd 2025 at 14:24.



Viewpoint 3 - Future conditions: Recreational area



Viewpoint 3:

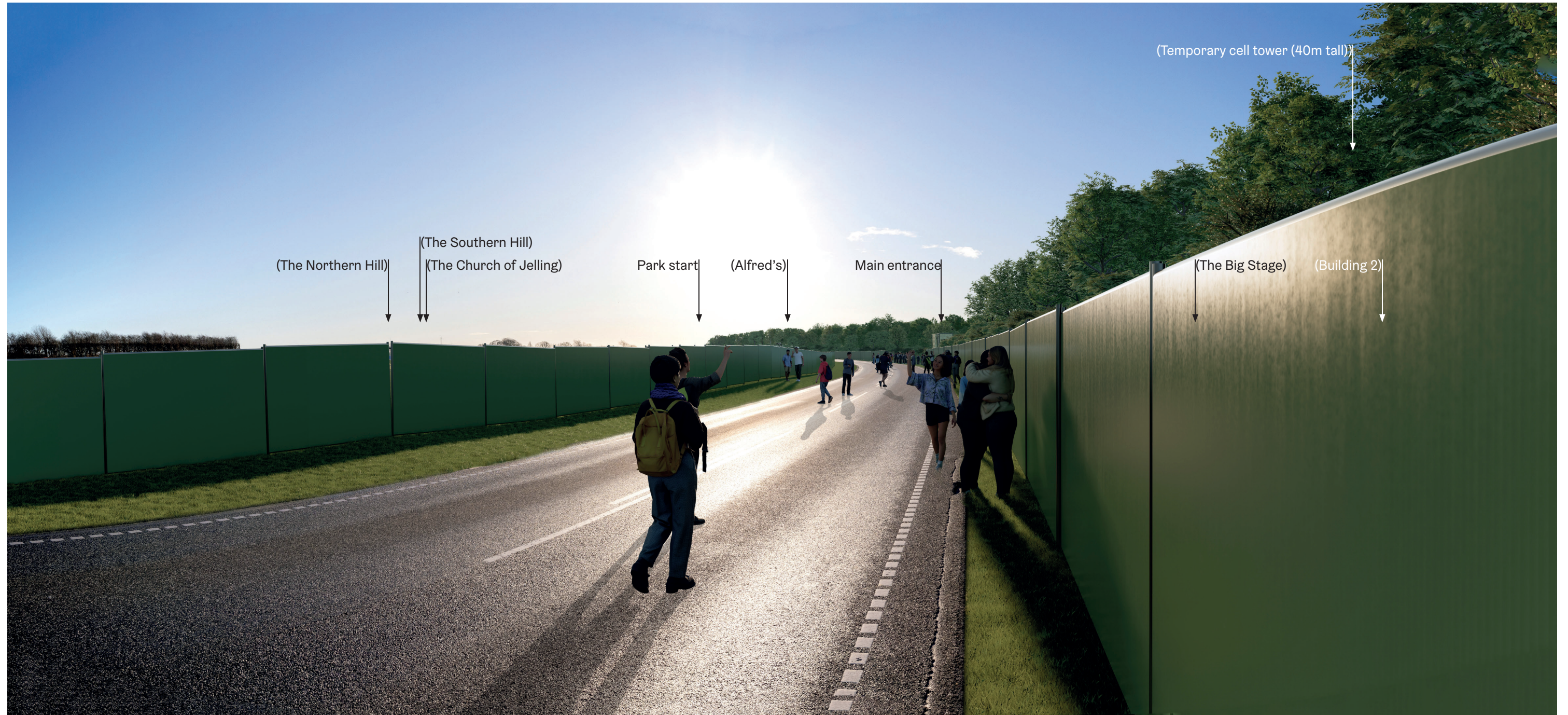
Situated on Mangehøje with a view towards southwest, and with the Monument Area towards south.

The park is circumscribed by embankments covered by screening planting in varying heights.

The visualization is created from two photos taken at the same viewpoint on-site with a 24 mm focal length.



Viewpoint 3 - Temporary conditions: musicfestival in Jelling



Viewpoint 3:

Situated on Mangehøje with a view towards southwest, and with the Monument Area towards south. Mangehøje is blocked off during the music festival and acts as an access road to the main entrance towards west.

The camp area towards south is fenced off with moveable fences.

The main entrance to the festival area is situated towards west. The Big Stage and Alfred's are situated towards southwest behind the planting belts.

The visualization is created from two photos taken at the same viewpoint on-site with a 24 mm focal length.



Viewpoint 4 - Existing conditions



Viewpoint 4:

Situated on the Pilgrimage Route (Mangehøje) with a view south towards the Monument area and the Church of Jelling.

Panorama created from two photos taken on-site January 2nd 2025 at 14:49.



Viewpoint 4 - Future conditions: Recreational area



Viewpoint 4:

Situated on the Pilgrimage Route (Mangehøje) with a view south towards the Monument area and the Church of Jelling. The planting belts can be seen circumscribing the park on the right.

The visualization is created from two photos taken at the same viewpoint on-site with a 24 mm focal length.



Viewpoint 4 - Temporary conditions: musicfestival in Jelling



Viewpoint 4:

Situated on the Pilgrimage Route (Mangehøje) with a view south towards the Monument area and the Church of Jelling with the camp area in the foreground. The planting belts can be seen circumscribing the festival area on the right.

The Pilgrimage Route is temporarily moved to the Mangehøje road towards west during the music festival.

The visualization is created from two photos taken at the same viewpoint on-site with a 24 mm focal length.

