

Flood Risk Assessment (FRA)

Scattering of Human Ashes in the Inshore Rivers (SHANTIR) Project

Location: Northenden, Manchester, England

Planning Application Reference: 136743/FO/2023

9th June 2025

1. Background

Scattering of ashes is a significant last rite for the deceased. It also carries deep spiritual and emotional meaning for people and is seen as an obligatory stage that marks the end of physical life. The Scattering of Human Ashes in the Inshore Rivers (SHANTIR) project is to build a safe and clean facility for all people where they can scatter the ashes of deceased loved ones in flowing water. Currently, there is no such facility available in the whole of Greater Manchester and there has been a long felt need to have a facility which is inshore within Greater Manchester and has the sanctity and dignity to perform this last rite safely and peacefully.

The law permits scattering of ashes in inland rivers. The Environment Agency has conducted studies and concluded that scattering of ashes can take place provided some simple precautions are taken to ensure that other items should not be placed in the water with the ashes and permission should be taken from landowners and local authority.

The SHANTIR project team has worked with the Environment Agency and Senior Estates Surveyor from the Corporate Estates Department at Manchester City Council to identify the site in Northenden on the banks of the river Mersey. A topographical survey of the site has been carried out and detailed design has been completed.

This report presents the Flood Risk Assessment (FRA) in accordance with the national [Ref 1] and local [Ref 2] guidance in support of the planning application 136743/FO/2023.

2. Site Description

The proposed development site is located on the eastern bank of the River Mersey in Northenden, within the administrative boundary of Manchester City Council. The structure will be a permanent steel/concrete installation for public use, situated very close to the Flood Zone 3, as defined by the Environment Agency. The location of the structure on the river bank is shown in Fig 1.

A public footpath runs along the top of the river bank past the site, and this will provide the means of access to the facility.

3. Structural Design

The proposed design shown in the appendices creates a walkway and viewing platform at the upper level which is at the same level as the existing public pathway. The upper platform with gated entry is connected to a jetty below via a staircase. The jetty below sits above the median 'normal' water level and extends beyond the bank line allowing

safe access to scatter ashes into the Mersey flowing below. Family members who are less mobile will be able to view the ceremony from the viewing platform at the upper level.

The jetty and stair structure will require the installation of piled foundations, which will be connected to a reinforced concrete pad which will sit below normal lower river level. The main part of the structure will be a steel frame, the columns of which will be bolted down to the concrete pad.

The top of the stair and entrance will be linked by a steel bridge structure, whilst the entrance itself sits above the upper expected flood level and will be founded on a reinforced concrete pad again supported on piled foundations. This will be sized to provide support for the bridge bearing, and also the decorative brick walls which announce the entrance from the adjacent footpath.

The structure bridge and stair elements such as treads and balustrade are designed to be largely open and allow the free flow of water through and around them when the river is in flood condition and above its 'normal' range.

4. Flood Risk Context

According to the Environment Agency flood maps, the site is at high risk of fluvial flooding due to its location on the bank of the River Mersey. Flood Zone 3 indicates a 1% or greater annual probability of river flooding. The Manchester Local Flood Risk Management Strategy (LFRMS) confirms that this area is subject to flood risk from main rivers and recommends early consultation with the Flood Risk Management team.

5. Flood Risk Mitigation Measures

a. Design Considerations

The structure will be engineered to resist hydrostatic and hydrodynamic flood loads, including buoyancy and debris impact. Materials used (steel and reinforced concrete) will be flood-resilient and corrosion-resistant. Foundations will be designed to withstand scouring and erosion.

The structure has been designed to allow the flow of water through and around it. We believe it will present a significantly smaller barrier to the flow of flood water than the significantly larger structural RC pillars supporting the M60 motorway bridge just a few metres downstream.

b. Finished Floor Levels

The Jetty part of the structure has been elevated to sit just above the upper limit of the normal river range. When the river is in 'flood' the jetty structure will not be open and available for use.

c. Surface Water Management

Although the access and jetty structure will be somewhat impermeable, incident surface water will drain naturally onto the existing banks to each side and filter directly into the river below.

d. Existing Flood Defences

The existing flood defences, as illustrated in Fig 2, provide robust protection against riverine flooding in the area. The proposed structure will further reinforce these defences by strengthening the existing riverbank, thereby enhancing the overall resilience of the site. Given these factors, no further mitigation measures are deemed necessary.

6. Impact on Flood Risk Elsewhere

The development will not result in a net loss of floodplain storage, nor will it obstruct flood flow paths. The structure will be designed to allow water to flow around or beneath it, ensuring no increase in flood risk to adjacent properties or land.

7. Emergency Planning

Safe access and egress routes will be identified. It is a simple and safe structure as shown in the 3D sketch at the rear of the report. The entrance gate will be kept locked and will be opened only when access is required. The facility will be used only during day time. Flood warning systems from the Environment Agency will be used to close the facility for public use. We expect one or two families per day (about 4 to 6 people) and each visit is expected to last 15 to 30 minutes.

8. Site-Specific Flood Data

The proposed development site is located downstream of the Northenden Weir on the River Mersey. The site is within a high flood risk area, as confirmed by the following data:

- Monitoring Station: Northenden (Environment Agency Gauge ID: 692710)
- Coordinates: 53.408784°N, -2.252674°W (OS Grid: SJ833902)
- Stage Datum: 26.36 m AOD (Above Ordnance Datum)

- Typical River Level Range:
 - Normal: 0.27 m to 1.80 m
 - Recent Typical: 0.25 m to 0.56 m
- Flood Risk Thresholds:
 - 1.80 m: Top of normal range; low-lying land may flood
 - 2.05 m: Property flooding possible
 - 3.32 m: Highest recorded level (21 February 2022)
- Current Level (as of last update): ~0.25 m (falling trend)
- Catchment Area: Upper Mersey
- Operational Area: Bollin, Dean, Upper Mersey
- Downstream Reference Point: Ashton Weir

This data confirms that the site is within a high flood risk zone, especially during peak rainfall or storm events. The structure must therefore be designed to withstand flood levels exceeding 2.05 m, with appropriate freeboard and structural resilience.

The development will not result in a net loss of floodplain storage, nor will it obstruct flood flow paths. The structure will be designed to allow water to flow around or beneath it, ensuring no increase in flood risk to adjacent properties or land.

9. Conclusion

This FRA demonstrates that:

- The proposed development is appropriately flood-resilient.
- It will not increase flood risk elsewhere.
- It complies with the national and local flood risk policies.

10. References

1. Flood risk assessments: applying for planning permission,
<https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>.
[Flood Risk Assessment Guidance – GOV.UK](#)
2. Manchester's Local Flood Risk Management Strategy (LFRMS),
https://www.manchester.gov.uk/info/500207/planning_and_regeneration/5905/manchesters_local_flood_risk_management_strategy_lfrms/3, [Manchester Local Flood Risk Management Strategy](#)



Figure 1. Aerial view of the site indicating location of the proposed jetty like structure

Ref: <https://flood-map-for-planning.service.gov.uk/map?lyr=mainr,fd,fsa&seg=rsd,pd,mr&cz=383331,390561.1,17.9632>

[Map – Flood map for planning – GOV.UK](#)

The cross hair indicates the location of the SHANTIR structure to be built on the river bank.

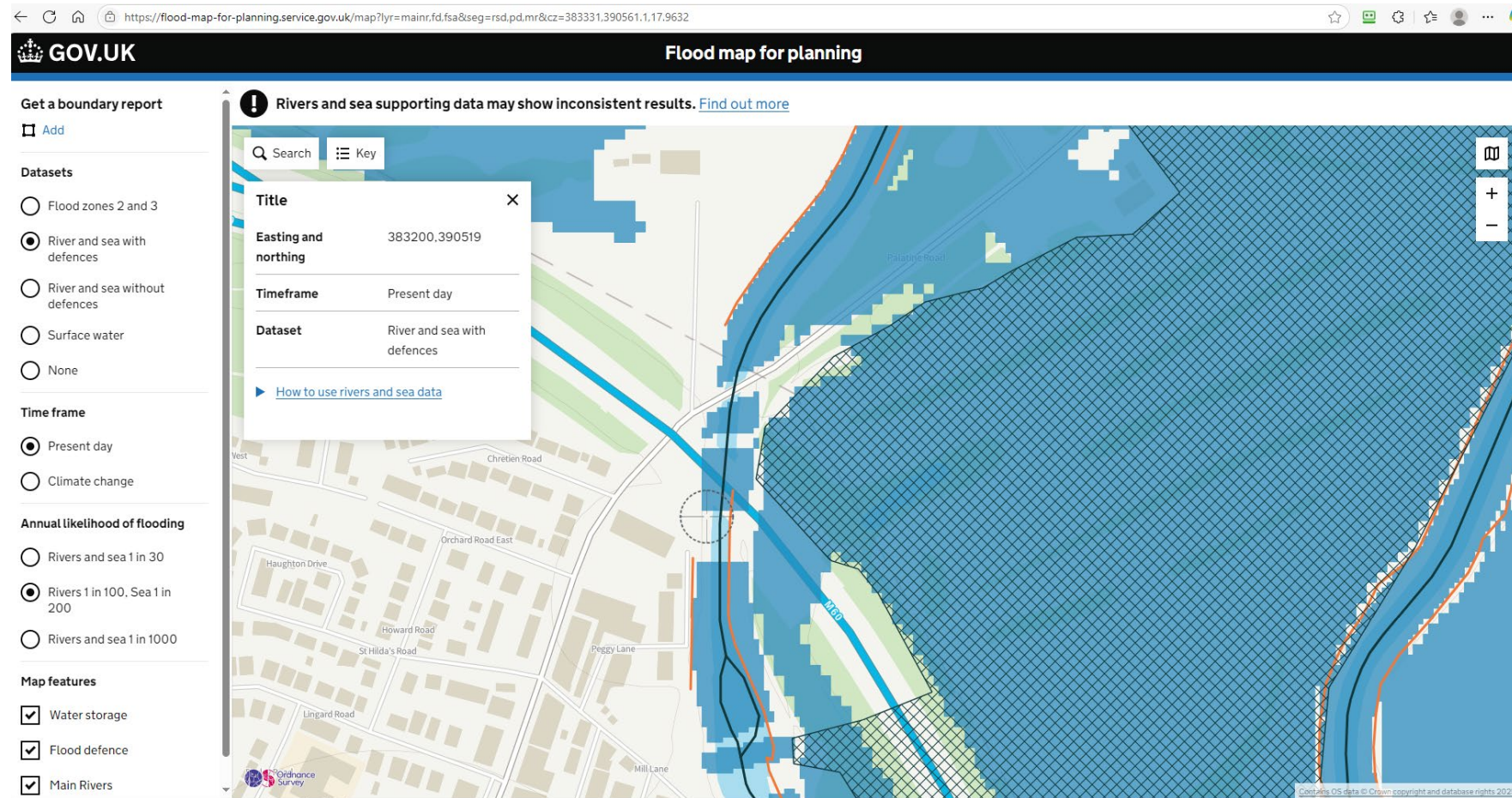
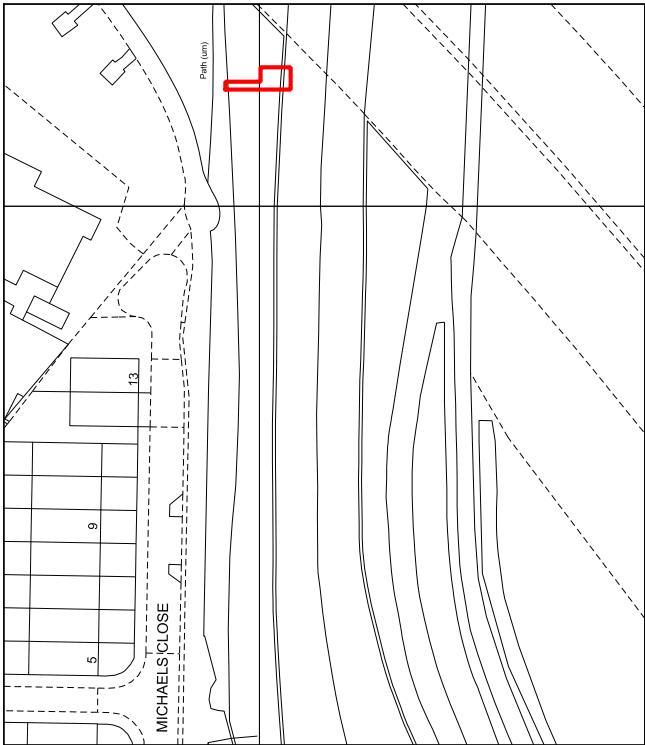


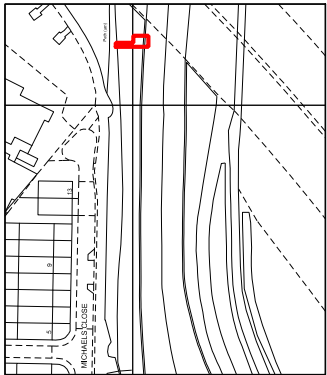
Figure 2. Flood Map for Planning Application

Appendices – Proposed Drawings and Visuals

Location Plan
1:1250



Location Plan
1:2500



A. 24-04-25 First Issue

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Project Title
SHANTIR- Jetty Project
Northenden Riverside Park
Off Mill Lane, Northenden.
Manchester

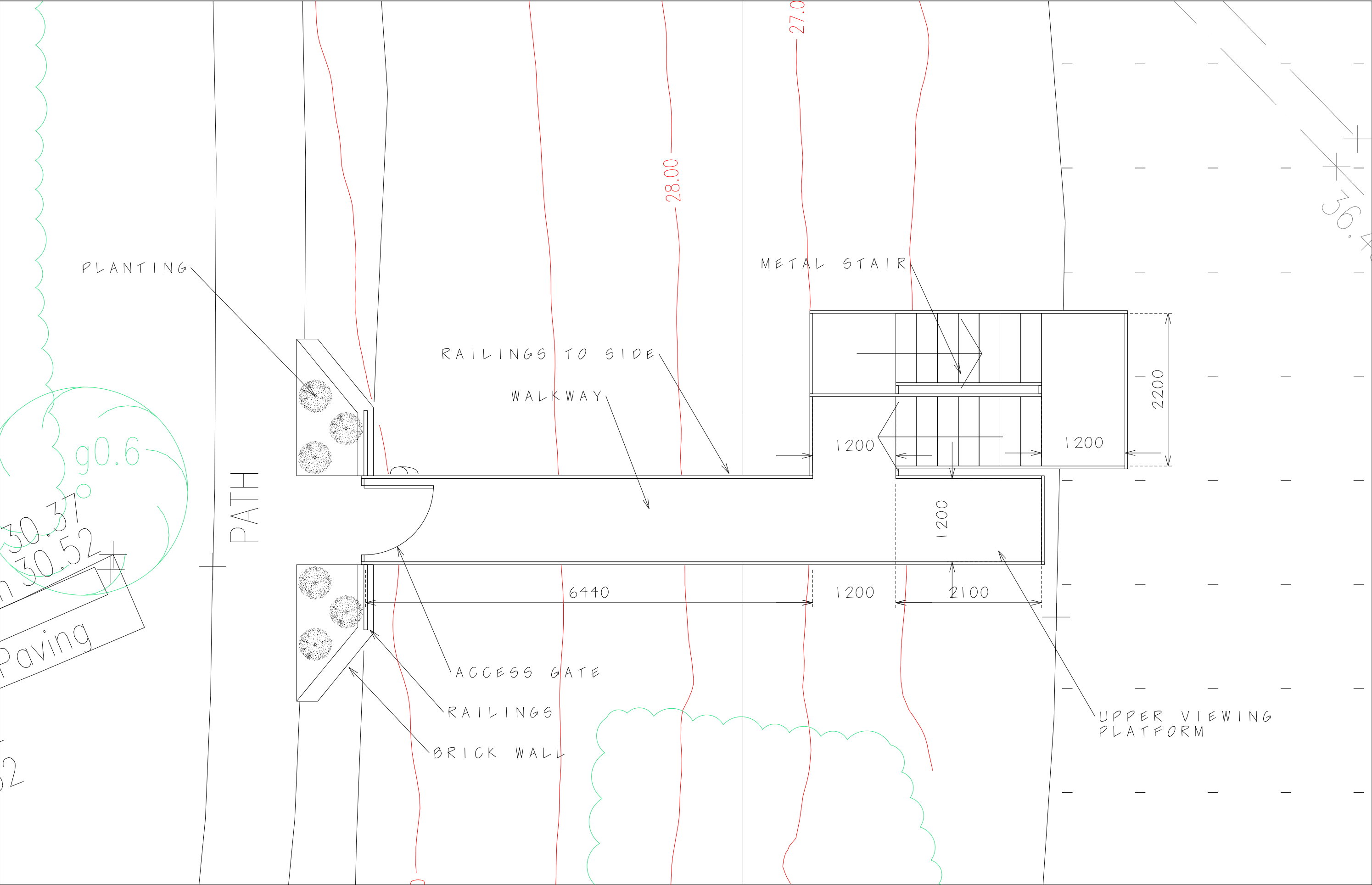
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Dwg. No
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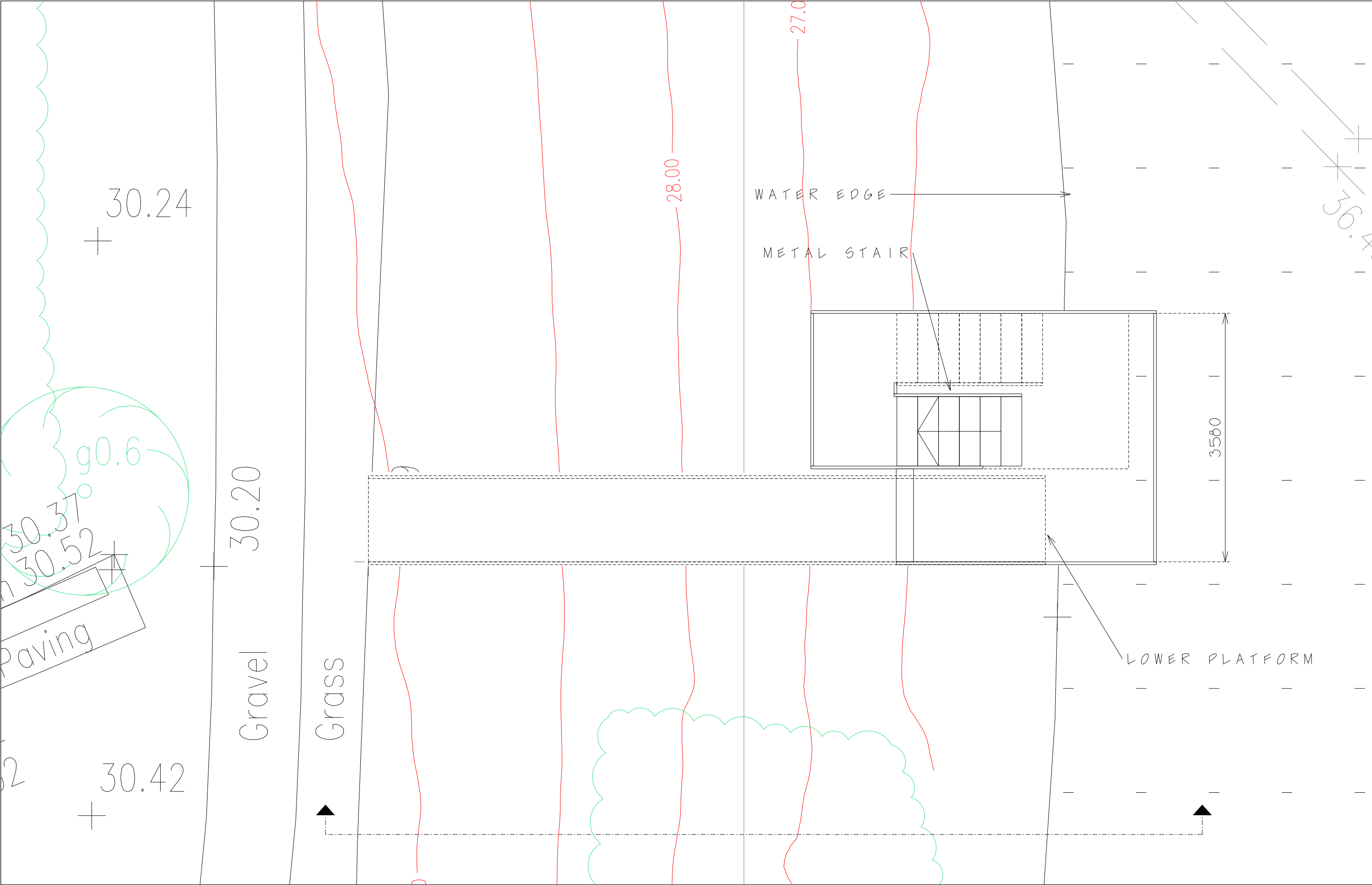
Revision
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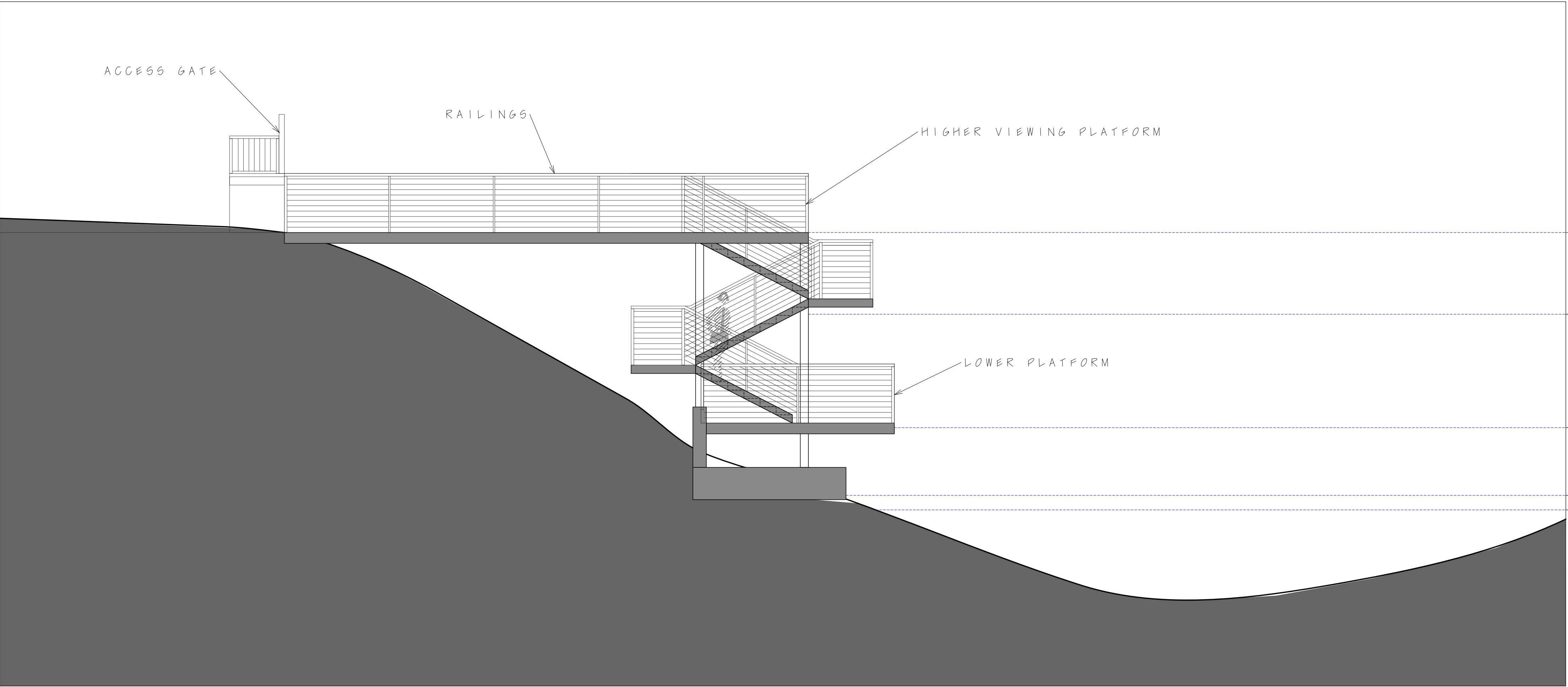
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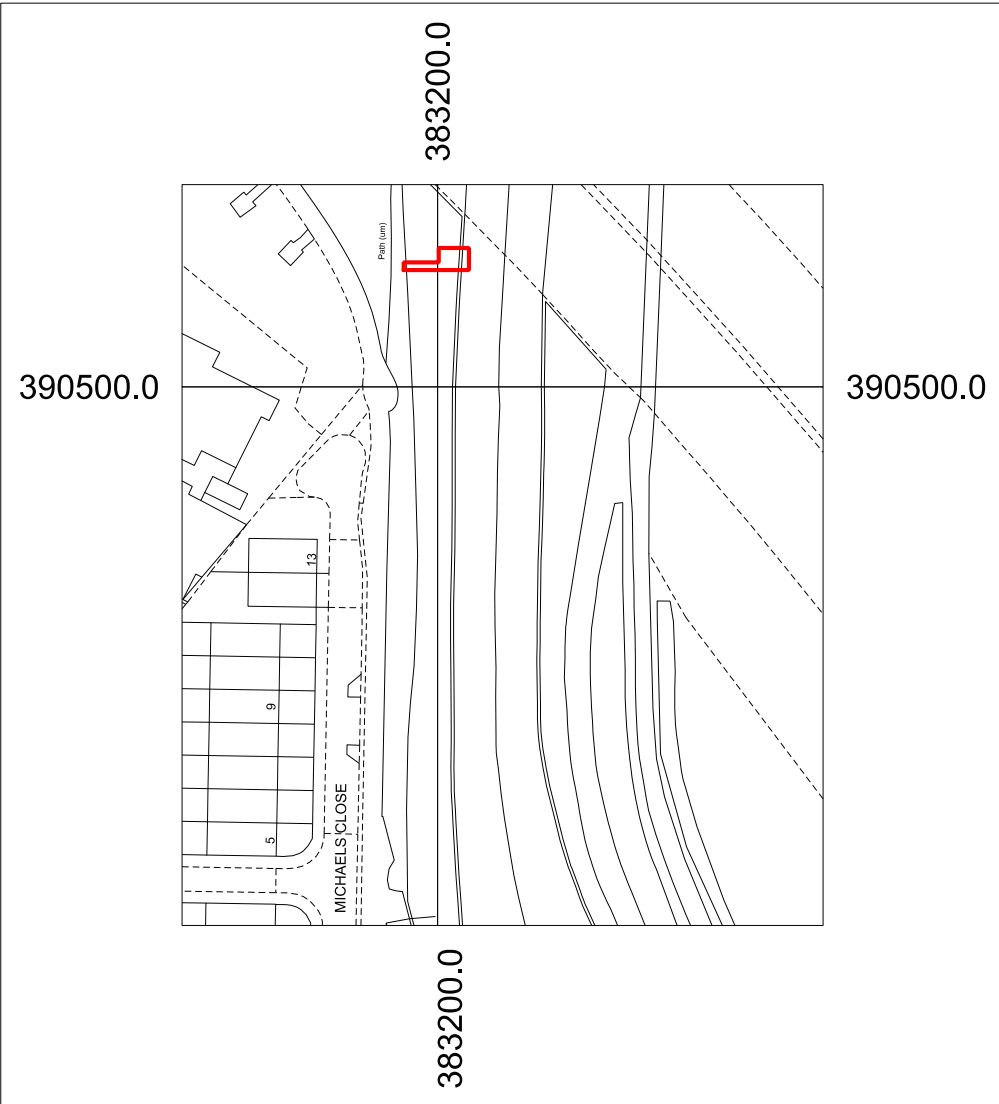
Access - footpath level plan 1:50



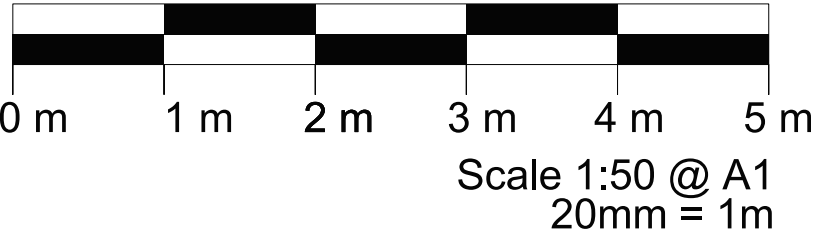
Jetty - lower level plan 1:50



Side Elevation
1:50

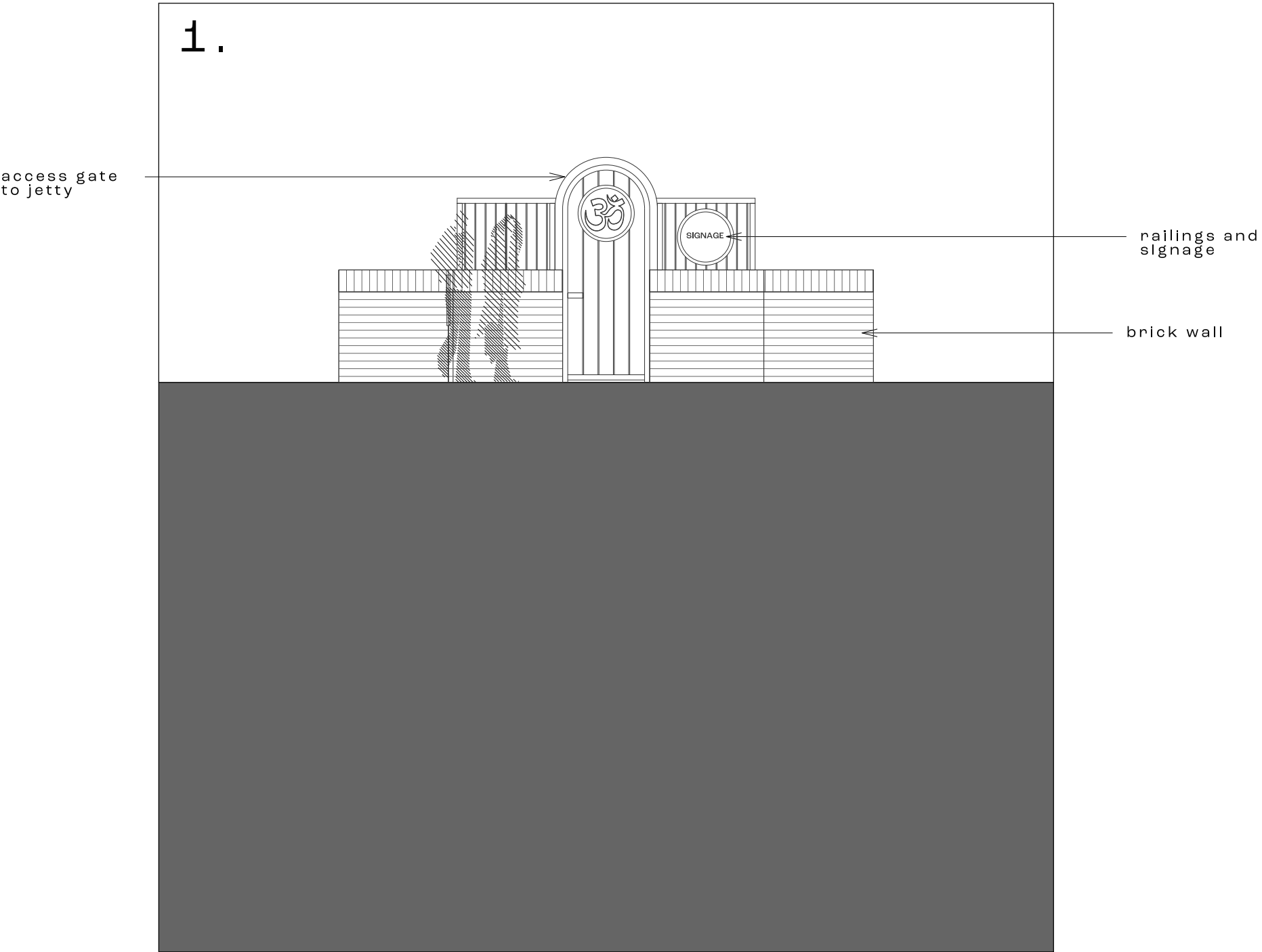


location plan 1 : 1250

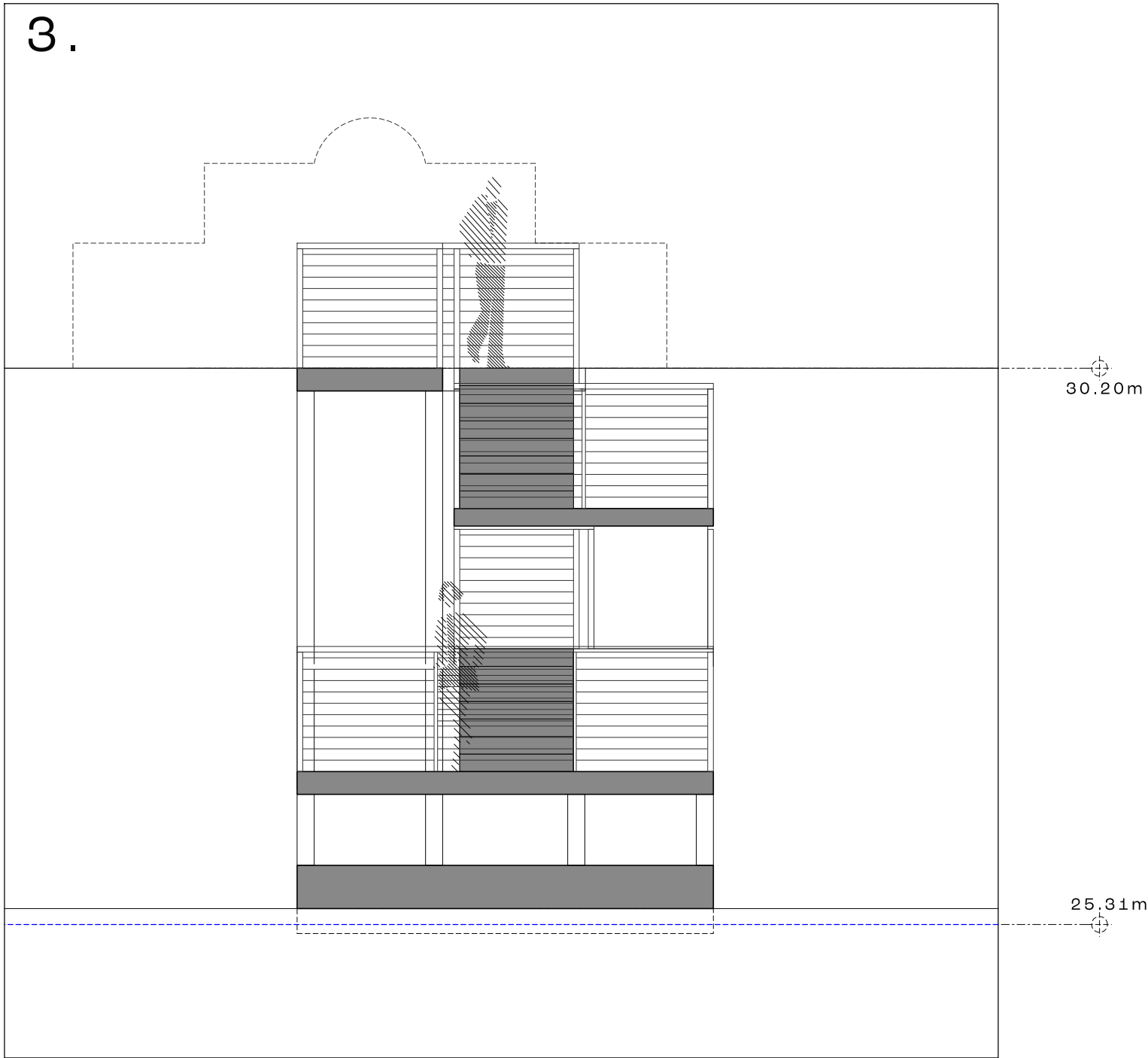


A. Planning Application 08-06-25	
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Drawing Title Proposed Plans and Section	
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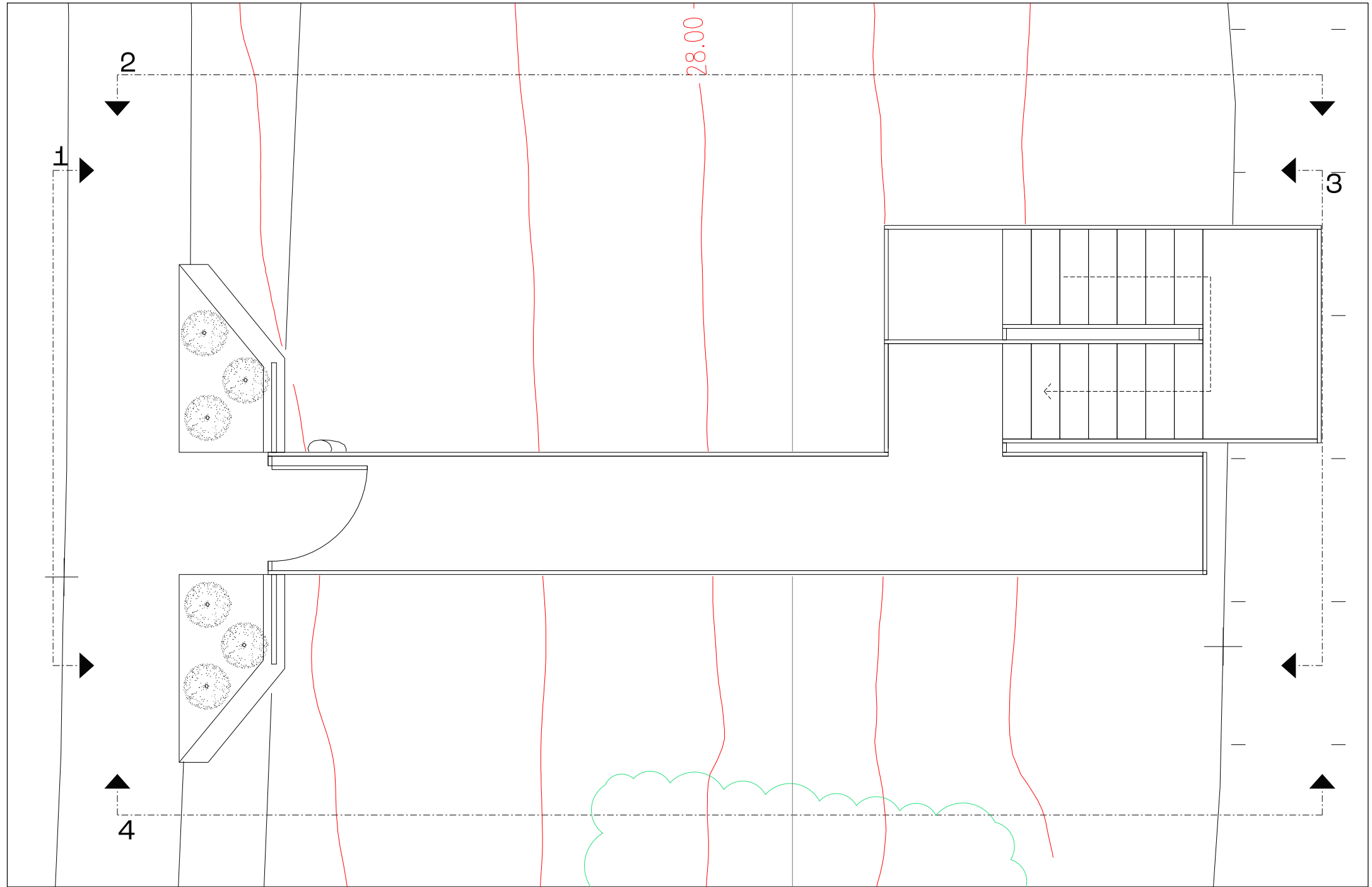
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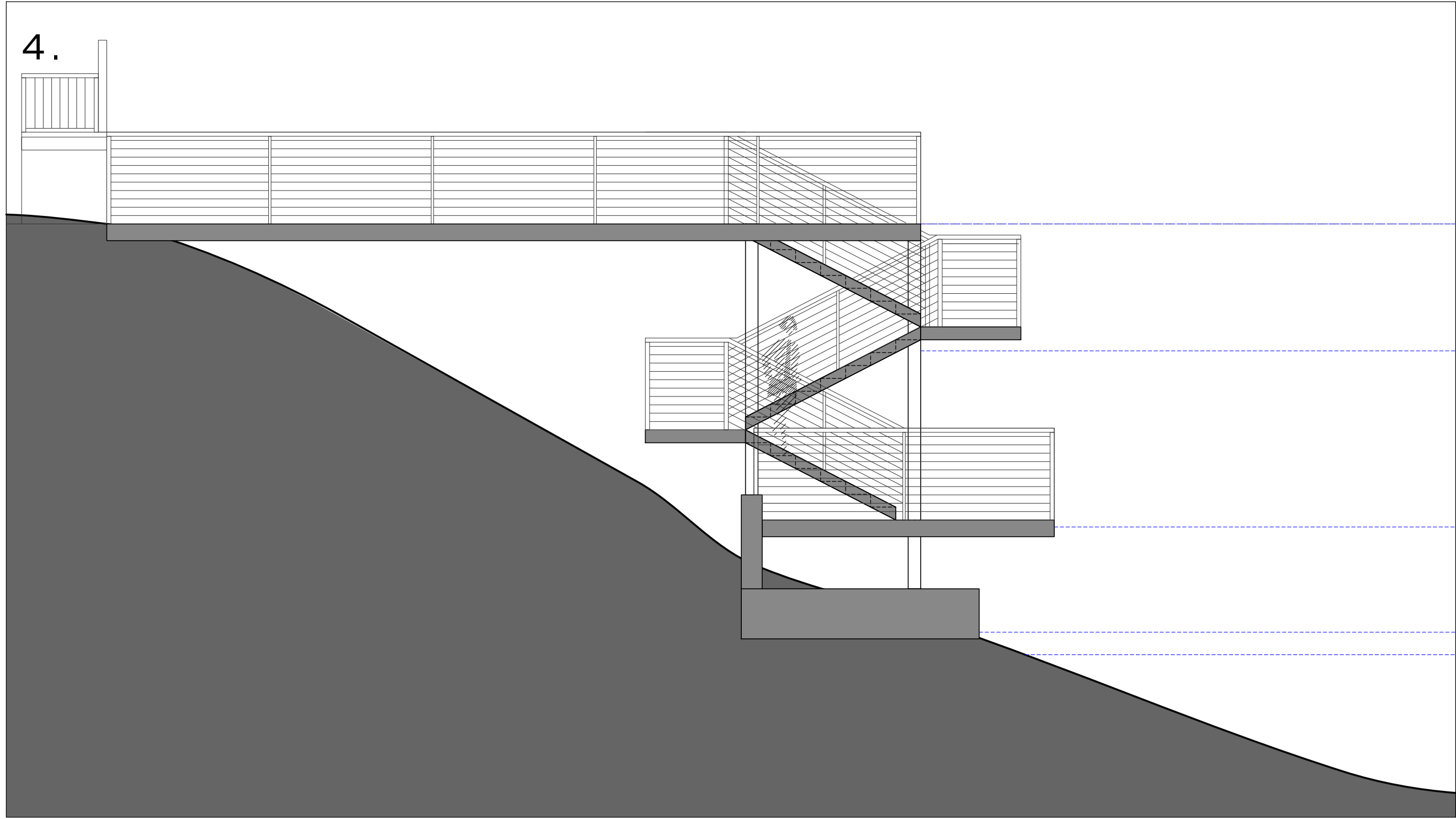
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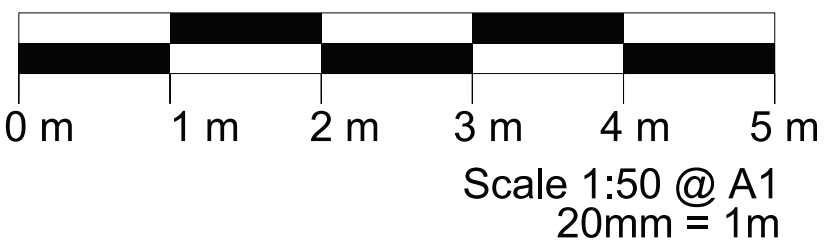
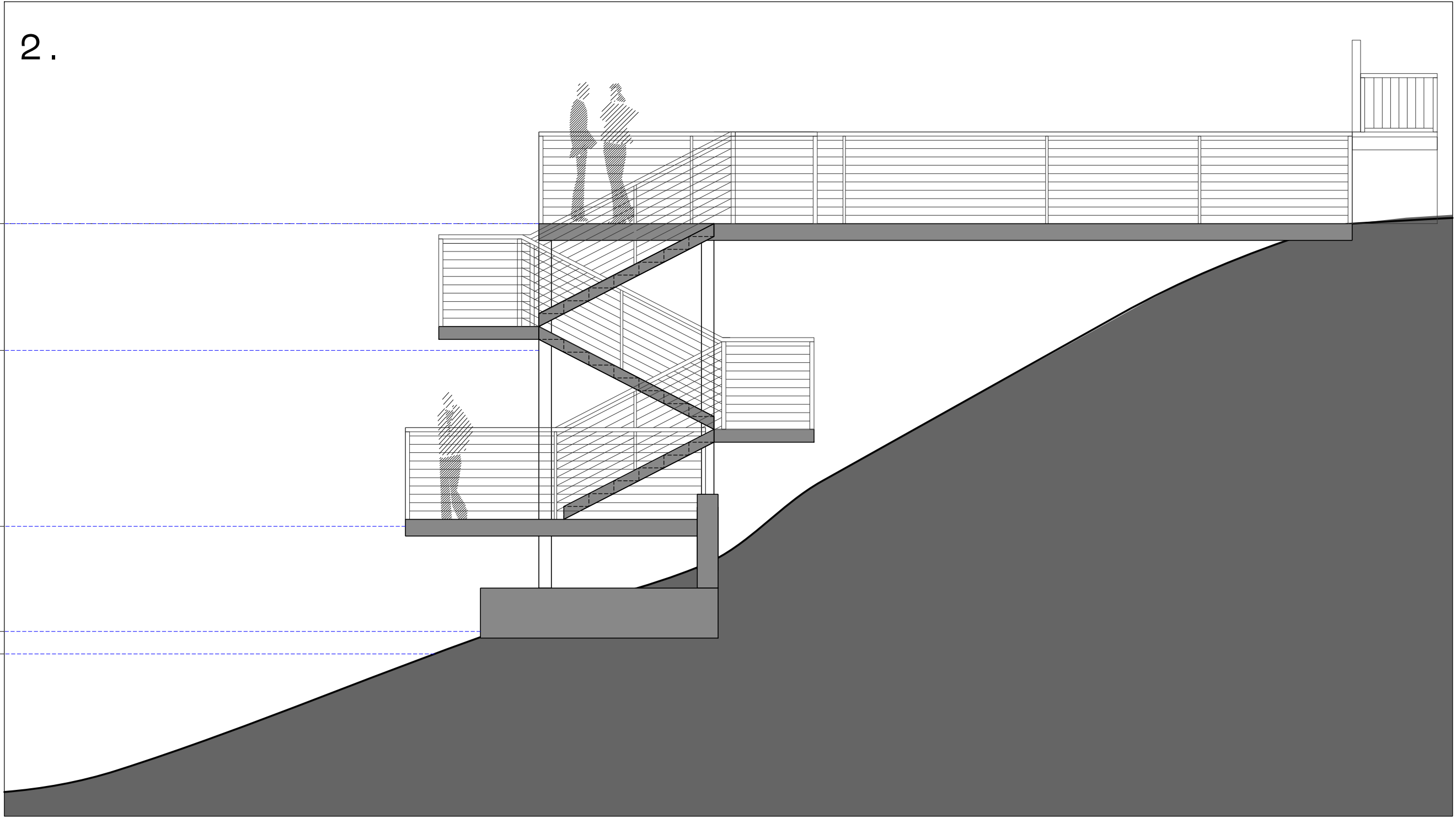
Elevation Key 1:50



RHS



LHS



Proposed Visuals



Proposed Visuals

