

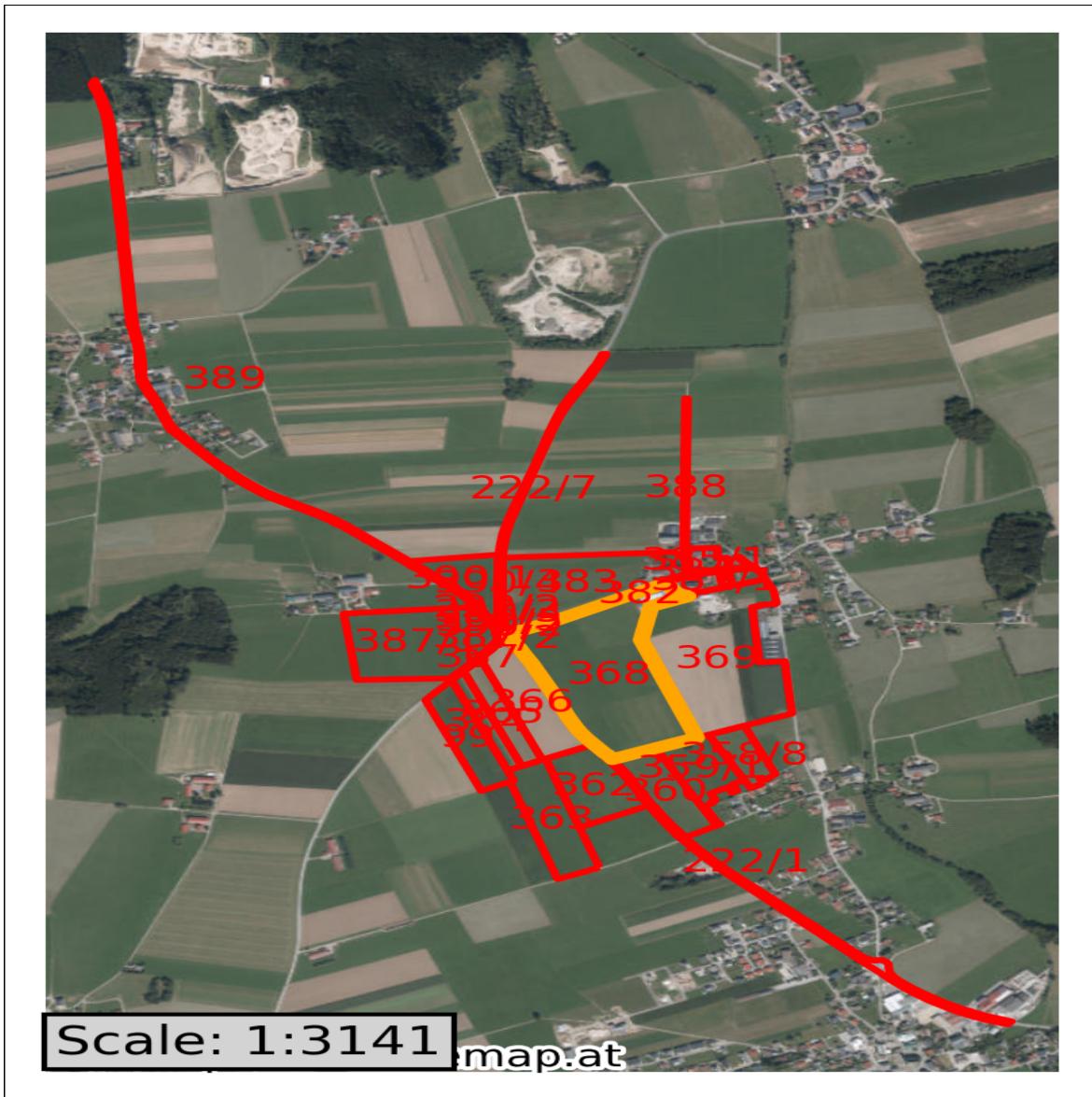


I3 Project: ParcellInsights

**Automated Parcel-based Reports for Different Environmental
Conditions based on Open-source Technologies**

PARCEL (KG: Lochen, GNR: 368)

On a date **14/06/2023 23:41:55** an automated PDF document for the parcel in administrative unit **Lochen** with parcel number **368** is issued. The neighboring parcels that share borders with our primary parcel are presented as their environmental characteristics could provide vital insights into local factors that may influence or interact with conditions within our primary parcel.



Map 1. Parcel **Lochen**, **368** Boundary and Neighboring Parcels

Table 1. Comprehensive Summary of Parcel **Lochen**, **368** Attributes

Municipality	District	Province	Country	Size (m ²)	Perimeter	Lat	Lon
Lochen am See	Braunau	Oberösterreich	Österreich	229212.09	2259.34	48.02	13.17

The parcel is located in the municipality of **Lochen am See**, which is part of the **Braunau** district in the **Oberösterreich** province of **Österreich**. The parcel has a size of **229212.09** square meters, which is enclosed within a perimeter of **2259.34** meters. The central geographical location of the



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parcel is given by the latitude **48.02** and longitude **13.17**.

PARCEL (KG: Lochen, GNR: 368): GEOLOGY

Geology can provide invaluable information about specific piece of land, aiding in understanding its past, present and potential future. The geological formation gives insight into the age and type of rock layers present, indicating the land's past environments and processes it underwent, while the lithology reveals the predominant rock types in the parcel, providing hints about soil properties, stability and potential uses.



Map 2. Geological Composition Map of the Parcel Lochen, 368

Table 2. Detailed Geological Features and Coverage Table

Code	Formation	Litho main	Litho nearby	Short title	Coverage (%)
qwNT	Niederterrasse	Kiessand	Sand	Niederterrasse	100.0

The parcel of interest comprises **1** distinct geological feature: The parcel includes **qwNT** geological code, which is associated with the **Niederterrasse** formation. The main lithological types in this

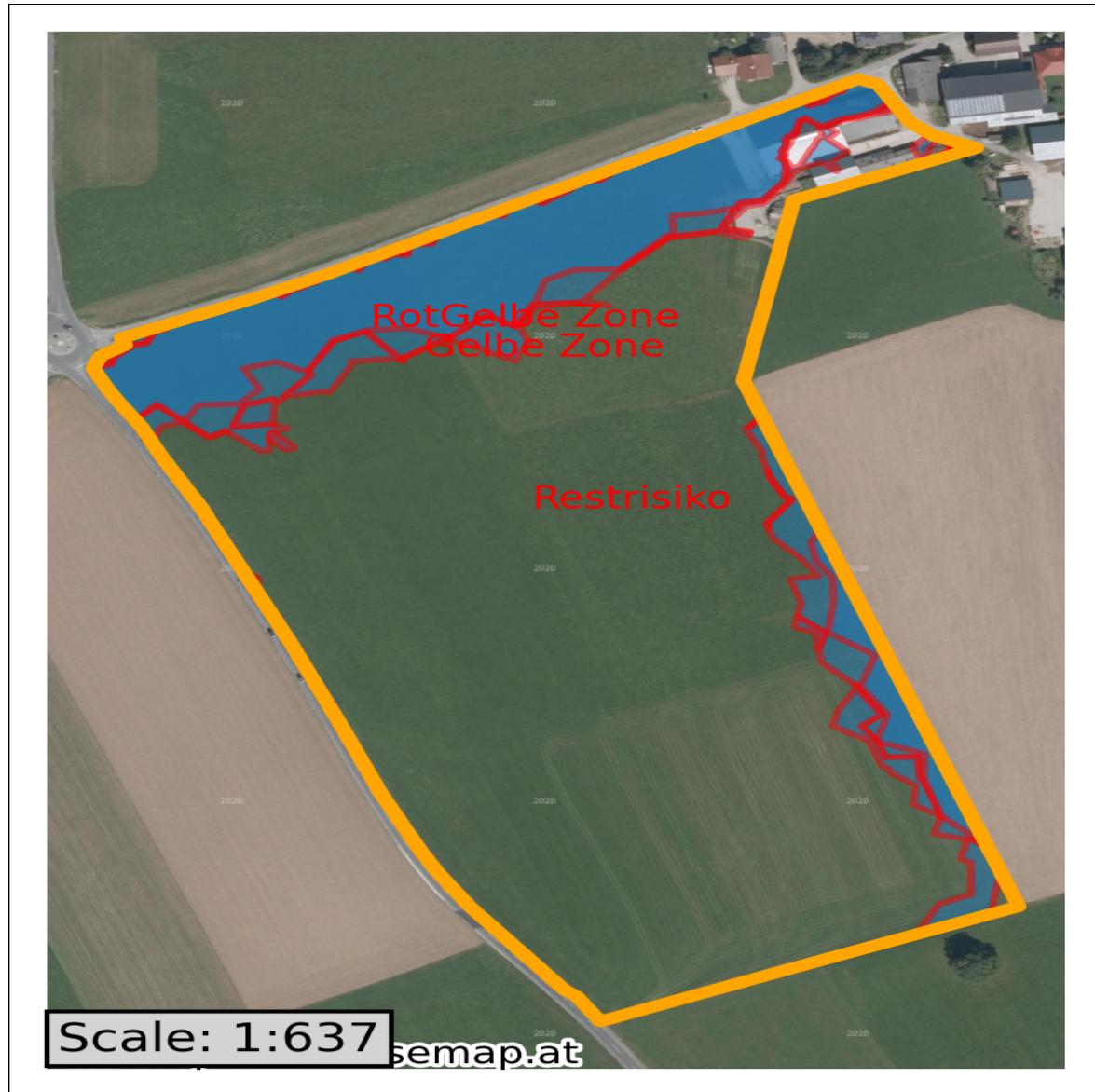


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formation are **Kiessand**, and nearby, one can also find **Sand**. In the geological records, this formation is referred to as '**Niederterrasse**'. This geological formation covers **100.0%** of the total parcel area, providing unique soil and groundwater characteristics that may impact the use and management of the land.

PARCEL (KG: Lochen, GNR: 368): WATER RISKZONES

The parcel under discussion is located within an area that is susceptible to certain flood risks. These risks are categorized into six distinct zones: Red, Formerly a Red Zone, Red-Yellow, Yellow, Blue and Residual Risk zone. Each of these zones represents varying levels of flood risk, necessitating different degrees of management and precautionary measures. The categorization of these zones is integral to comprehending the safety, developmental potential, and environmental implications of the parcel.



Map 3. Spatial Distribution of Flood Risk Zones in the Parcel **Lochen, 368**

Table 3. Classification and Proportions of Flood Risk Zones within the Parcel

Land ID	Zone	Coverage (%)
BR_MAT_005	Gelbe Zone	18.979



BR_MAT_005	Restrisiko	3.441
BR_MAT_005	RotGelbe Zone	15.093

The parcel of interest comprises **3** distinct flood risk zone(s):

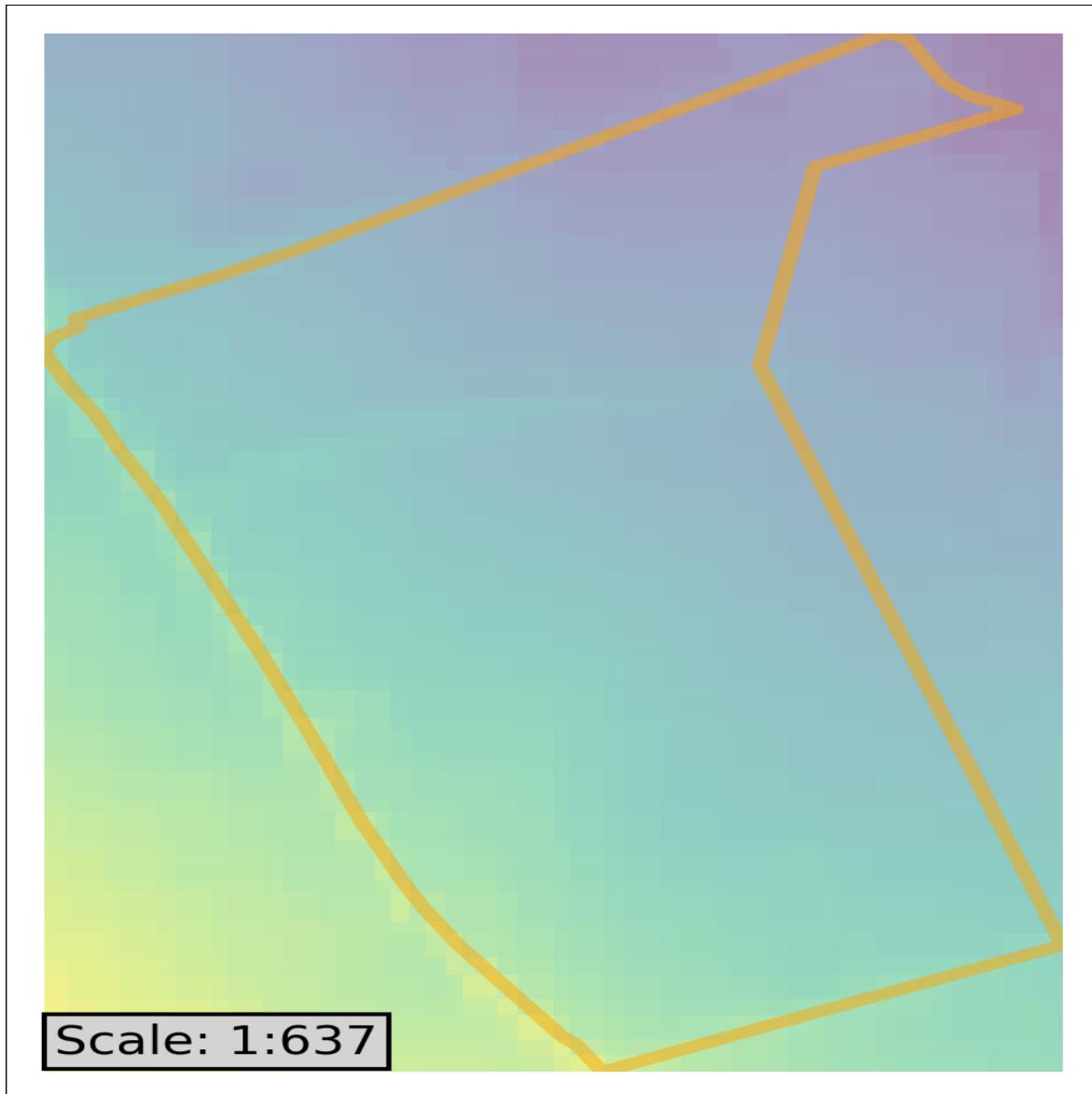
The '**Yellow Zone**' mandates precautions and signifies a lower risk, yet still potential for flooding. This zone covers approximately **18.979%** of the total parcel area.

The '**Residual Risk**' category in flood danger zones represents areas that are safeguarded by flood protection measures such as dams or levees, but are still at risk in the event of a failure or overtopping of these defenses. While protection measures considerably reduce the risk, they cannot entirely eliminate it. This zone covers approximately **3.441%** of the total parcel area.

The '**Red-Yellow Zone**' is a priority area for the implementation of retention, runoff, and water management strategies. This zone covers approximately **15.093%** of the total parcel area.

PARCEL (KG: Lochen, GNR: 368): DIGITAL ELEVATION MODEL

The Digital Elevation Model provides valuable topographical information about the parcel in question. It presents a three-dimensional view of the terrain, providing the detailed insights into the physical attributes of the parcel, allowing for better planning and decision-making.



Map 4.. Topographical Representation of Parcel **Lochen, 368**

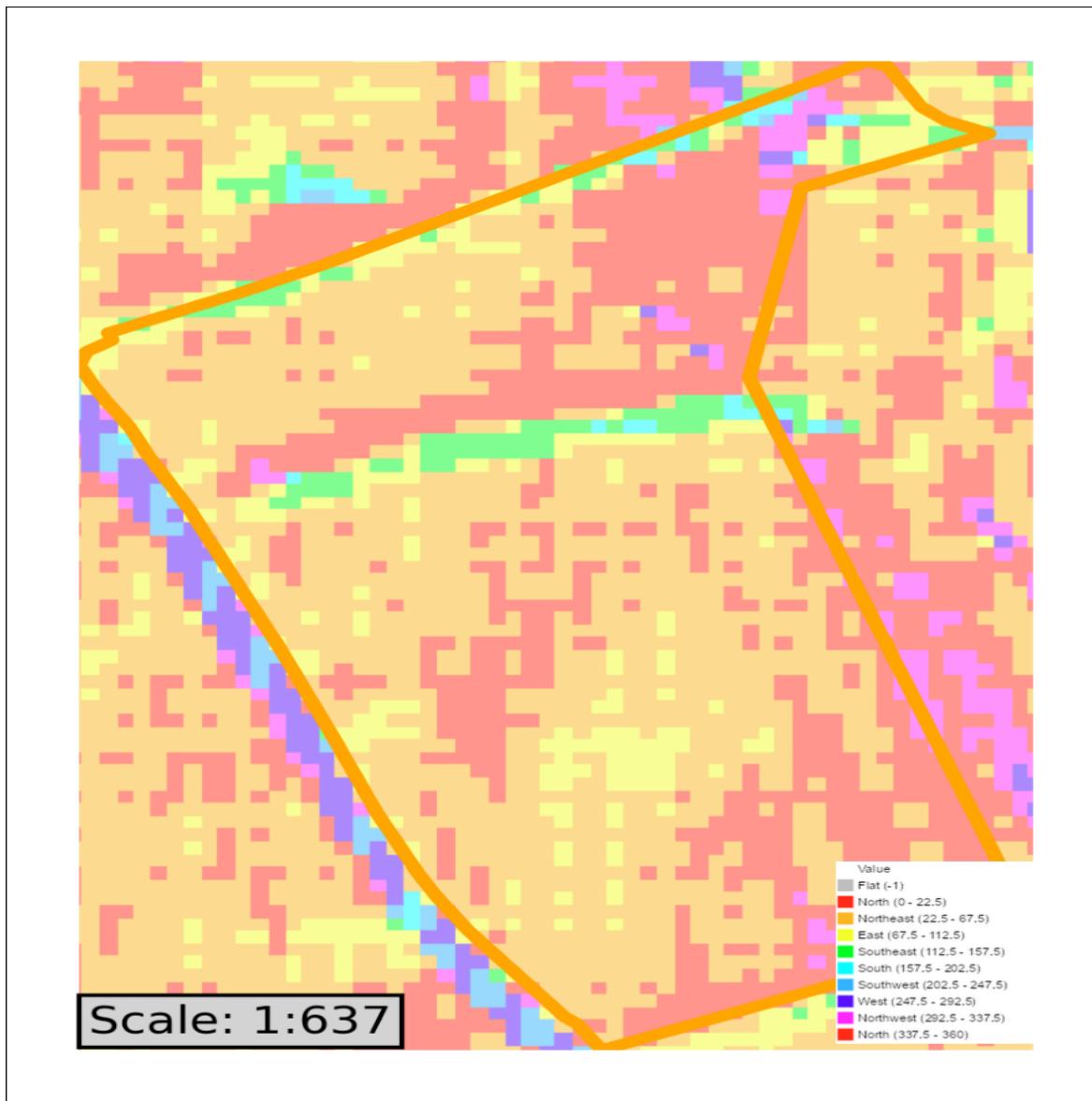
Table 4. Elevation Characteristics Summary in Meters

Min value	Avg value	Max value
502.44	505.48	508.61

The analysis of the DEM reveals that the elevation within the parcel varies, indicating a diverse terrain. The minimum elevation recorded is **502.44** meters, while the maximum stands at **508.61** meters. The average elevation across the parcel is around **505.48** meters.

PARCEL (KG: Lochen, GNR: 368): ASPECT

This aspect can play an essential role in determining the microclimate, soil properties, and vegetation types within the parcel, as it influences sun exposure and moisture levels. An in-depth understanding of the aspect within a parcel can guide decisions related to land use and management, construction planning, or environmental studies.



Map 5.. Aspect Orientation of the Parcel Lochen, 368

Table 5. Distribution of Aspect Orientations within the Parcel

Flat	N	NE	E	SE	S	SW	W	NW
22.07	52.4	9.91	3.56	0.77	0.1	0.23	1.84	9.13

In terms of the parcel's terrain orientation, the most dominant aspects are **Flat** and **N**, which cover approximately **22.07%** and **52.4%** of the total parcel area respectively. On the other hand, the least represented orientations in the parcel are **S** and **SW**, which account for approximately **0.1%** and

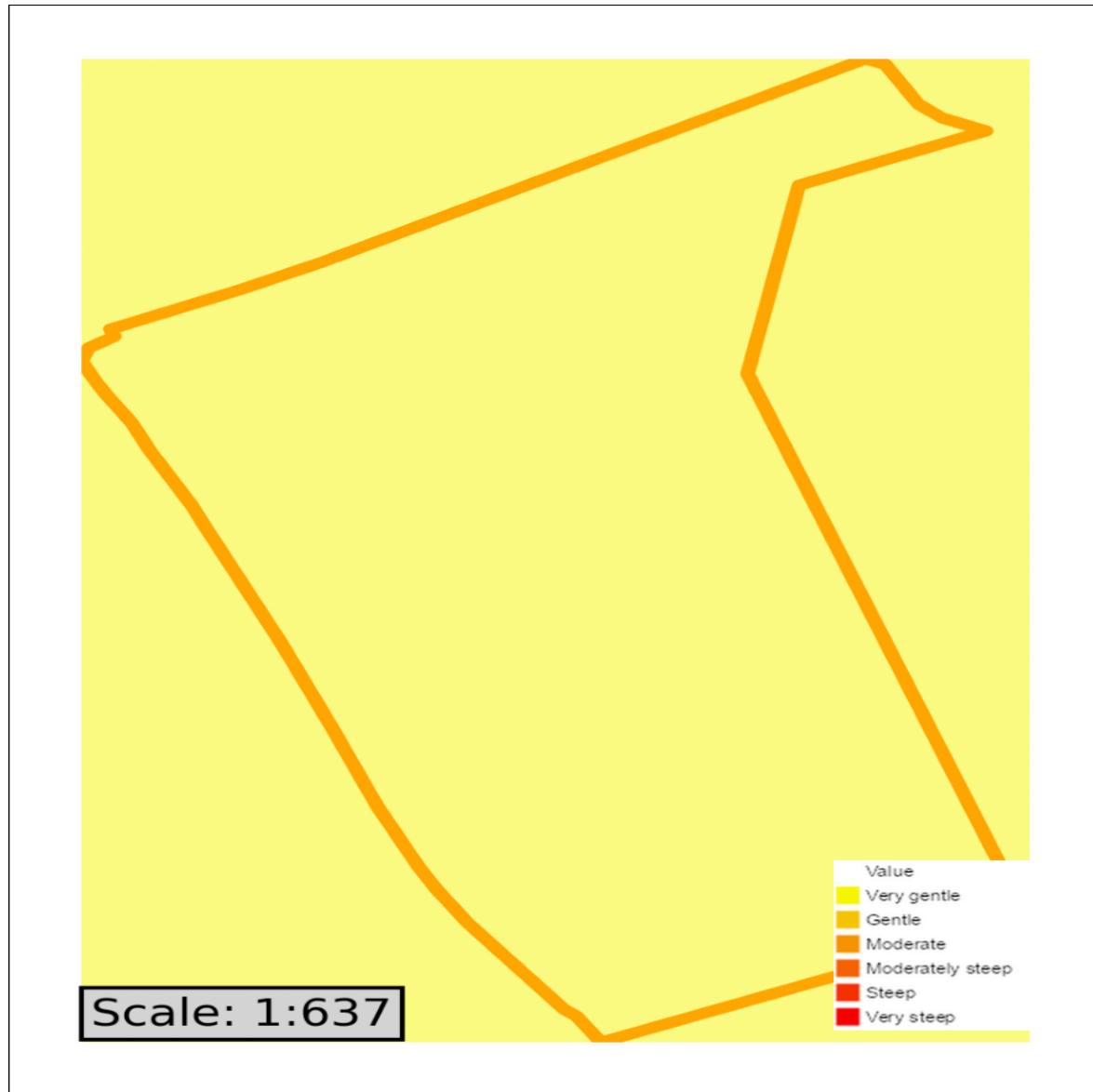


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0.23% of the area respectively.

PARCEL (KG: Lochen, GNR: 368): SLOPE

Slope provides significant insights into the steepness of the terrain in the parcel under concern. This information is crucial when it comes to drainage patterns and for soil erosion. Understanding the slope aspects of the parcel can benefit to informed land management and planning, ensuring stability, safety and sustainable use of the parcel's terrain. The following information illustrates the distribution of different slope categories within the parcel.



Map 6.. Slope Distribution Map of the Parcel Lochen, 368

Table 6. Slope Categories and their Distribution within the Parcel

Very gentle	Gentle	Moderate	Moderately steep	Steep	Very steep
100.0	0.0	0.0	0.0	0.0	0.0

The parcel displays a diversity of slopes, influencing various environmental factors and potential uses of the land. The most dominant slopes in this parcel are '**Very gentle**' at **100.0%** and '**Gentle**'



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at **0.0%**, accounting for the majority of the area. On the other hand, the '**Steep**' slope at **0.0%** and '**Very steep**' slope at **0.0%** are the least common, representing the smallest portion of the parcel.