IN SITU PRESERVATION OF A MEDIEVAL MOUND IN ONE OF THE OLDEST DUTCH TOWNS (VLAARDINGEN-3)

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THE INTEGRATIVE STUDY OF BOTH ARCHAEOLOGICAL REMAINS, LOCAL GEOLOGY AND VARIOUS ENVIRONMENTAL PARAMETERS OFFERED THE OPPORTUNITY TO COME TO GUIDELINES FOR GOOD PRESERVATION IN SITU OF THE MEDIEVAL MOUND OF VLAARDINGEN.

INTRODUCTION

The preservation of archaeological remains in situ is the preferred option in the Dutch law. The management of archaeological sites that are preserved in situ should be based on relevant environmental conditions of that site. Examples of important site conditions are current hydrology, oxidation status of the soil and expected land use and/or developments. The Medieval mound in the center of the city of Vlaardingen (the Netherlands) has a rich archaeological history. The combined study of archaeology, geology and preservation conditions offered a unique option to create a scientific sound risk assessment for in situ preservation.

BASELINE STUDY

Field monitoring
- Groundwater table surrounding mound
- Groundwater (continuous) at mound
- Redox potential
- Soil temperature
- Quality in field and laboratory
- Bone quality
- Soil colours
- Moisture content of soil

RISK ASSESSMENT

Risks near the mound
1. Lowering of groundwater table
2. Lowering of moisture content
3. Greater fluctuations in groundwater table
4. Higher redox potential
5. Superficial disturbance, e.g. digging

The risks that piling can have on the mound have been assessed. Additionally, the geological model shows that there is no specific layer that should not be penetrated by piling.

GUIDELINES

The risk analysis, in combination with environmental monitoring revealed that persistence of local water infiltration is the best guarantee for future preservation of the organic rich soil and archaeology therein. The methodology used in Vlaardingen to create guidelines for in-situ preservation will be used in other cities.

WHAT IS CAUSE FOR GOOD PRESERVATION?

The environmental parameters that cause the excellent preservation should be guarded from possible threats by local developments in future. Previously, high quality material was recovered and the hypothesis was made that the local high water table in combination with a low penetration for water causes a slow flowing, reducing environment.

MORE INFORMATION

www.redoxpotential.info
www.archeomonitoring.nl
www.archeomw.nl

REFERENCES AND ACKNOWLEDGEMENTS