

## Merksplas Formation

**Unit name:** Merksplas Formation

**Hierarchical unit name:** /

**Type:** Formation

**Code:** Me

**Author(s):**

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- Modification of: Bogemans & Lanckacker (2014)

**Alternative names:** /

**Origin of the name:** The term Merksplas ('Sables grossiers de Merksplas') is used for the first time by Gulinck (1962)

**Status:** Formal

**Date:** 14/02/2023

**How to refer:** Deckers, J., Bogemans, F., Lanckacker, T., Louwye, S., Vandenberghe, N. & Walstra, J., 2023. The Merksplas Formation, 01/09/2023. National Commission for Stratigraphy Belgium. <http://ncs.naturalsciences.be/lithostratigraphy/Merksplas-Formation>

### Characterizing description

Medium to very coarse sand that is grey coloured, quartz-rich. Typical is the presence of peaty material, vegetation remains and wood fragments. Can contain clay laminae or lenses and some glauconite. It can contain some gravel and in the lower part (reworked) shell fragments or grit. The dominant stratification is massive, horizontal and planar. The silt/clay lenses are often deposited as flasers.

Type section, type locality, type borehole, type CPT and/or type geophysical borehole

The type locality is the subsurface of the village of Merksplas in the Campine area in northernmost Belgium.

The type geophysical borehole log is borehole Essen (GSB 001e0044; DOV [B/1-0358](#)) between 46 m and 64 m depth (Figure 0-1).

Concerning the archives of the Geological Survey of Belgium: in the areas where a distinction between the Merksplas Formation and the Brasschaat Member (Malle Formation) could not be made the term Merksplas Sand is used (Louwye et al., 2020).

### Description upper boundary

It is overlain by the overall finer grained Malle Formation. The boundary with the latter is, however, often difficult to depict due to lack of clearly defined distinctive criteria.

### Description lower boundary

It overlies the Lillo Formation. The contact with the Lillo Formation coincides with a downwards decrease in grain size and increase in glauconite content with a related change in colour from grey to

green grey. On geophysical borehole logs this boundary generally coincides with a sharp downwards increase in gamma-ray values and a strong downwards decrease in resistivity values (Figure 0-1).

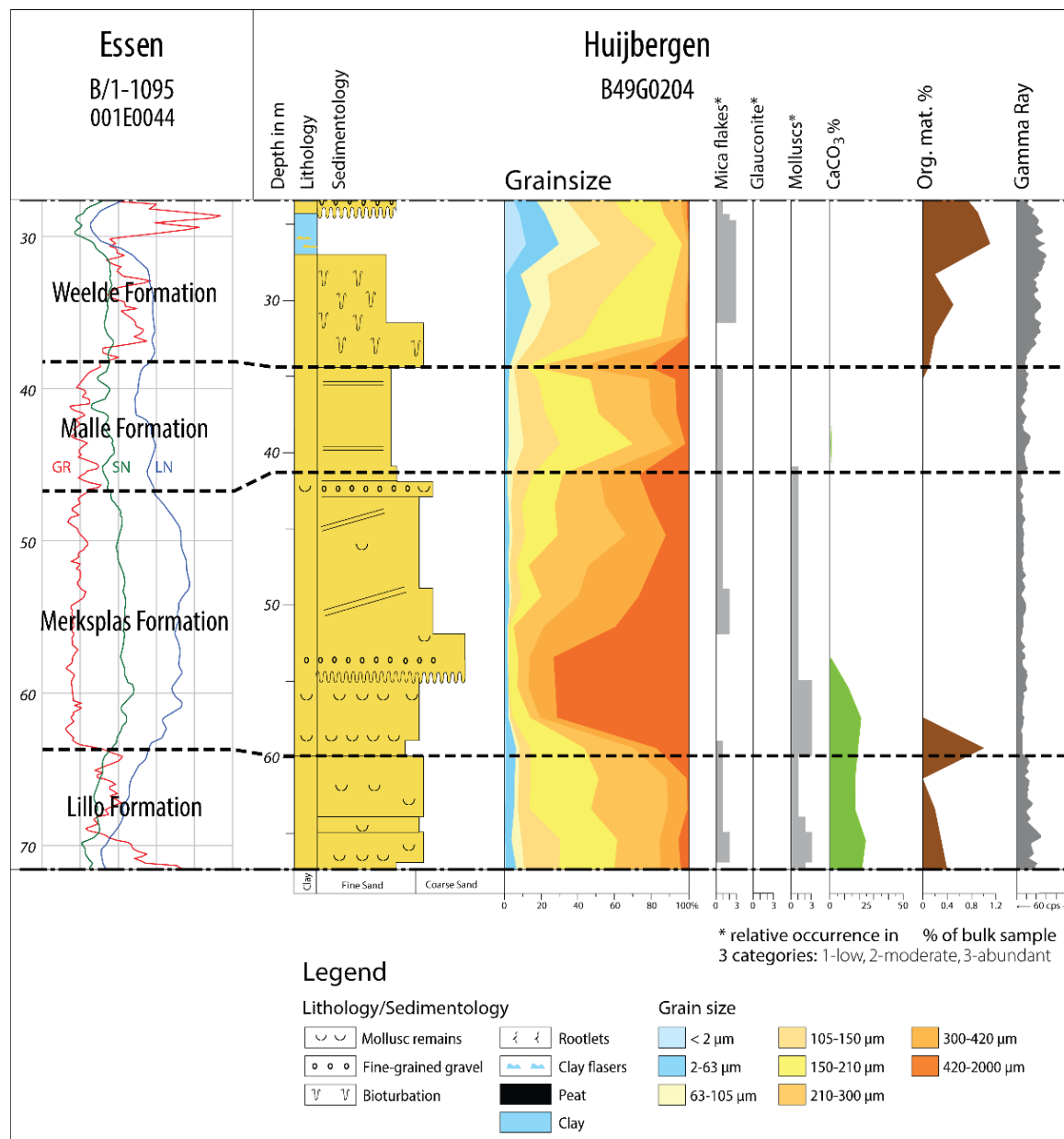


Figure 0-1: Correlation between boreholes Essen and Huijbergen to illustrate the typical geophysical log signature and grain-size of the Merksplas Formation. The figure of borehole Huijbergen was taken from Westerhoff (2009).

### Thickness

On average about 15 m (Deckers et al., 2019).

### Occurrence

In the subsurface of the northern Campine area. In the area around Turnhout, there is a lateral transition in eastern direction into the Mol Formation.

## Regional correlations

It correlates with the Maassluis Formation and the lowermost part of the Waalre Formation in the Netherlands (Vernes et al., 2015).

## Age

Probably late Pliocene and early Quaternary (Pretiglian; Bogemans (2005) and references therein).

## Dataset

Extra data, compared to the [DOV-Neogene data collection, including links to the GSB-collection data sheets](#):

Name	GSB name	DOV name	Alternative name	GSB Collections URL	DOV URL
Borehole Essen	001e0044	<a href="#">B/1-0358</a>		<a href="http://collections.naturalsciences.be/ssh-geology-archives/arch/001e/001e0044.txt">http://collections.naturalsciences.be/ssh-geology-archives/arch/001e/001e0044.txt</a>	<a href="https://www.dov.vlaanderen.be/data/boring/1979-001191">https://www.dov.vlaanderen.be/data/boring/1979-001191</a>
Borehole Huijbergen			B49G0204 (DINOloket ID)		

## References

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Westerhoff, W.E., 2009. Stratigraphy and sedimentary evolution: The lower Rhine-Meuse system during the Late Pliocene and Early Pleistocene (southern North Sea Basin). Ph.D. Thesis, Vrije Universiteit Amsterdam, Amsterdam, 168 p.