

## Maatheide Member (Mol Formation)

**Unit name:** Maatheide Member

**Hierarchical unit name:** Mol Formation

**Type:** Member

**Code:** MIMh

**Author(s):**

- Compiled by: Vandenberghe Noël, Berwouts Isaac, Vos Koen

**Alternative names:** -

**Origin of the name:** -

**Status:** Formal

**Date:** 01/05/2022

**How to refer:** Vandenberghe, N., Berwouts, I. & Vos, K., 2023. The Maatheide Member, 01/09/2023. National Commission for Stratigraphy Belgium. <http://ncs.naturalsciences.be/lithostratigraphy/Maatheide-Member>

### Characterizing description

The Maat Lignite Bed subdivides the Mol Formation into a Donk Member below the lignite and a Maatheide Member above the bed.

Both sand units are pale grey to white quartz sand with an exceptionally high quartz content. The Maatheide Sand Member can occasionally be stained dark due to finely dispersed lignite. The Maatheide Member has a modal size generally above 250  $\mu\text{m}$  in contrast with the underlying Donk Member which is somewhat finer grained (Gullentops & Vandenberghe, 1995). The Maatheide Member has a substantial size fraction 250 to 355  $\mu\text{m}$ . It can contain some clayey-lignitic horizons such as the Russendorp lignite mapped on the Geological Map 17 Mol, west of the Reusel Fault and north of the Campine Canal (Russendorp sand pit). No macrofossils are present.

### Type section, type locality, type borehole, or type geophysical borehole

The 2 close to each other boreholes RUS 04/03 between 5 and 39 m and SCK3/Postel 2 (032W/0415;kb17d32w-B385) between 2 and 39 m depth, can be considered as reference boreholes for the Maatheide Member. RUS 04/03 is a continuously sampled pulsed borehole and has in addition gamma ray and resistivity logs and sediment analyses (Vandenberghe et al., 2020).

Also in the Stevensvennen MHL03/01 (032W0460/GEO-03/071-B2) borehole the Maatheide Member section between 3,5 and 22,5 m is documented by geophysical well logs, cores and sediment analyses.

### Description upper boundary

The upper boundary is made up by the base of the Quaternary deposits.

### Description lower boundary

The lower boundary is always at the top of the Maat Lignite Bed.

## Thickness

Obviously the thickness depends on the depth of the Maat Lignite Bed, down warped by the normal faults. The thickness measured in the study by Vandenberghe et al. (2020) varies between 19 and 37 m.

## Occurrence

The Maatheide Member occurs east of the Rauw -1 Fault above the down warped Maat lignite Bed. On the geological maps, the Mol Formation, including the Maatheide Member, is conventionally limited in the east by the major Roer Valley Graben (RVG) western boundary fault of Reppel to the east of which occurs the quartz sand of the Kieseloolite Formation.

## Regional correlations

Only geometrical considerations suggest a possible correlation with part of the Kieseloolite Formation in the RVG, and possibly with the Merksplas Formation in the west (Louwye et al., 2020 fig. 5).

A limiting condition for correlations is the palynology of the underlying Maat Lignite Bed situating it in the late Pliocene (Reuverian) based on analyses by Vanhoorne (1962).

## Age

See LIS file Mol Formation for information on the age of this member.

## Dataset

Data in the LIS are part of the [DOV-Neogene data collection](#), including links to the GSB-collection data sheets.

Name	GSB name	DOV name	GSB Collections URL	DOV URL
MHL 03/01 Stevensven nen	032W0 460	GEO- 03/071- B2	<a href="https://collections.naturalsciences.be/ssh-geology-archives/arch/032w/032w0460.txt">https://collections.naturalsciences.be/ssh-geology-archives/arch/032w/032w0460.txt</a>	<a href="https://www.dov.vlaanderen.be/data/boring/2016-133443">https://www.dov.vlaanderen.be/data/boring/2016-133443</a>
SCK 13/Postel2 borehole	032W0 415	kb17d3 2w- B385	<a href="https://collections.naturalsciences.be/ssh-geology-archives/arch/032w/032w0415.txt">https://collections.naturalsciences.be/ssh-geology-archives/arch/032w/032w0415.txt</a>	<a href="https://www.dov.vlaanderen.be/data/boring/1982-022507">https://www.dov.vlaanderen.be/data/boring/1982-022507</a>
RUS 04/03	-	RUS04/ 03	-	<a href="https://www.dov.vlaanderen.be/data/boring/2018-158885">https://www.dov.vlaanderen.be/data/boring/2018-158885</a>

## References

Gullentops, F. & Vandenberghe, N. , 1995. Geologische kaart van België, Vlaams Gewest: Mol, kaartblad 17. 1/50 000. Belgische Geologische Dienst en Afdeling Natuurlijke Rijkdommen en Energie, Brussel.

Louwye, S. , Deckers, J. & Vandenberghe, N. , 2020. The Pliocene Lillo, Poederlee, Merksplas, Mol and Kieseloolite Formations in northern Belgium: a synthesis. *Geologica Belgica* [En ligne], Volume 23, number 3-4 - The Neogene stratigraphy of northern Belgium, 297-313 URL : <https://popups.uliege.be/1374-8505/index.php?id=6841>.

Vandenberghe, N., Wouters, L., Schiltz, M., Beerten, K., Berwouts, I., Vos, K., Houthuys, H. Deckers, J., Louwye, S., Laga, P., Verhaegen, J., Adriaens, R. & Dusar, M., 2020. The Kasterlee Formation and its



relation with the Diest and Mol Formations in the Belgian Campine. *Geologica Belgica* [En ligne], Volume 23, number 3-4 - The Neogene stratigraphy of northern Belgium, 265-287 URL : .  
<https://popups.uliege.be/1374-8505/index.php?id=6530>

Vanhoorne, R., 1962. La superposition des Sables de Mol et des Argiles de Campine. *Mémoires de la Société belge de Géologie, de Paléontologie et d'Hydrologie*, série in-8°, 6, 83–95.