

Bosbeek facies (Diest Formation)

Unit name: Bosbeek facies

Hierarchical unit name: Diest Formation

Type: Facies

Code: DiBs

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Alternative names: Opoeteren Sand used by Gulinck in borehole description GSB 064W0234/DOV kb26d64w-B242 to refer to the Diest Formation outcrop in the Bosbeek valley a few km south of the borehole.

Origin of the name: newly introduced name to refer to the outcrops of the Diest Formation in the Bosbeek valley

Status: informal

Date: 01/05/2022

How to refer: Houthuys, R., Vandenberghe, N. & Matthijs, J., 2023. The Bosbeek facies, 01/09/2023. National Commission for Stratigraphy Belgium.
<http://ncs.naturalsciences.be/lithostratigraphy/Bosbeek-facies>

Characterizing description

The Bosbeek facies is the local expression of the Diest Formation in the northern part of the Kempen Plateau, such as found in outcrop in the flanks of the Bosbeek Valley (Figure 0-1). It consists of fine, poorly sorted, glauconiferous sand. The sand is bioturbated and has a subhorizontal stratification. It contains thin subhorizontal clay layers. It contains no carbonates or fossils. The outcrops are rare. They show a weathered facies.

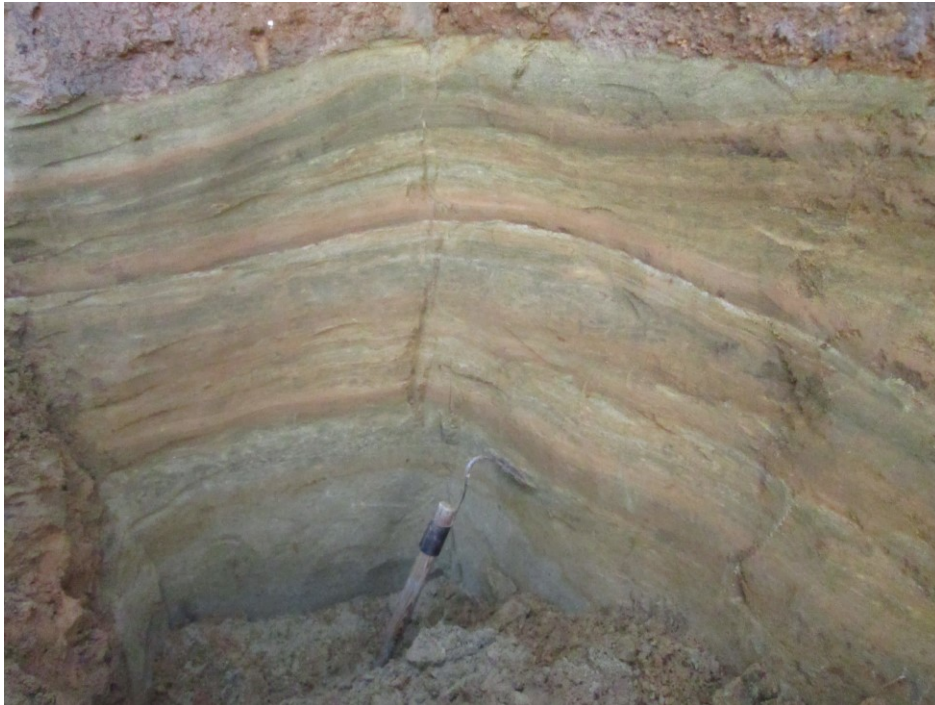


Figure 0-1. Outcrop at Opoeteren-Dorne, Dornerstationsstraat 6, in 2017.

In the present state of understanding, it is assumed that the "facies of Opoeteren" described by Gulinck (1964) between 6 and 22 m in the Neeroeteren borehole (<http://collections.naturalsciences.be/ssh-geology-archives/arch/064w/064w0234.txt>, accessed 14/01/2022) as fine, glauconiferous sand with pale burrows, sporadic clay lenses and some coarse quartz is at least in part comparable to the Bosbeek facies identified in outcrops. The uncertainty in the correlation of this borehole interval and the Bosbeek valley outcrops is due to the presence between both of the Rotem and Neeroeteren Faults.

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

Outcrops are scarce. The disused sandpit at Opoeteren, Dorperberg, Eggestraat (Lambert72 X 239965, Y 195400) could be refreshed and re-examined.

Description upper boundary

Unknown. In the outcrop area, the facies is covered by Pleistocene gravel (Zutendaal Formation).

Description lower boundary

Unknown. In the outcrop area, the facies covers the Genk Member of the Bolderberg Formation.

Thickness

15-20 m, to be verified.

Occurrence

The Bosbeek facies is found in outcrop in North-Limburg, in Opoeteren, Dorne and Opglabbeek in the flanks of the Bosbeek valley; possibly in the Maas Valley left flank near Bergerven and probably in the Neeroeteren subsurface. Mapping the extent and the correlation to the other Diest Formation members requires new observations.

Regional correlations

Not clear. This facies may be a local representation of the Hageland Diest Member: the Wijshagen borehole, 8 km to WNW, contains biozone DN8 for the level interpreted there as the Diest Formation (Louwye & Laga, 2008). However, the Opoeteren facies in the Neeroeteren borehole (GSB 064W0234/DOV kb26d64w-B242) and according to Gulinck correlated to the Bosbeek facies contains biozone DN9 (Louwye et al., 1999).

Age

Middle to late Tortonian. Biozones DN8 and/or DN9. Remains to be established.

Dataset

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References

Louwye, S., De Coninck, J. & Verniers, J., 1999. Dinoflagellate cyst stratigraphy and depositional history of Miocene and Lower Pliocene formations in northern Belgium (southern North Sea Basin). *Geologie en Mijnbouw* 78: 31-46

Louwye, S. & Laga, P., 2008. Dinoflagellate cyst stratigraphy and palaeoenvironment of the marginal marine Middle and Upper Miocene of the eastern Campine area, northern Belgium (southern North Sea Basin). *Geological Journal*, 43, 75–94. <https://doi.org/10.1002/gj.1103>