

# DIN EN 16933-1:2022-10 (E)

## Drain and sewer systems outside buildings - Design - Part 1: Layout principles

---

<b>Contents</b>		<b>Page</b>
European foreword .....		3
Introduction .....		4
1	Scope .....	6
2	Normative references .....	6
3	Terms and definitions .....	6
4	General .....	8
4.1	Introduction .....	8
4.2	The design process .....	8
5	Preliminary investigations .....	10
5.1	General .....	10
5.2	Topography .....	10
5.3	Geotechnical survey .....	10
5.4	Groundwater .....	11
5.5	Existing drainage services .....	11
5.6	Other existing utility services .....	11
5.7	Nature and quality of inputs .....	11
6	Layout .....	12
6.1	General .....	12
6.2	Access locations .....	14
6.3	Provision of pumping .....	16
6.4	Drains and sewers near water abstraction areas .....	17
7	Sources of additional information .....	17
Bibliography .....		18