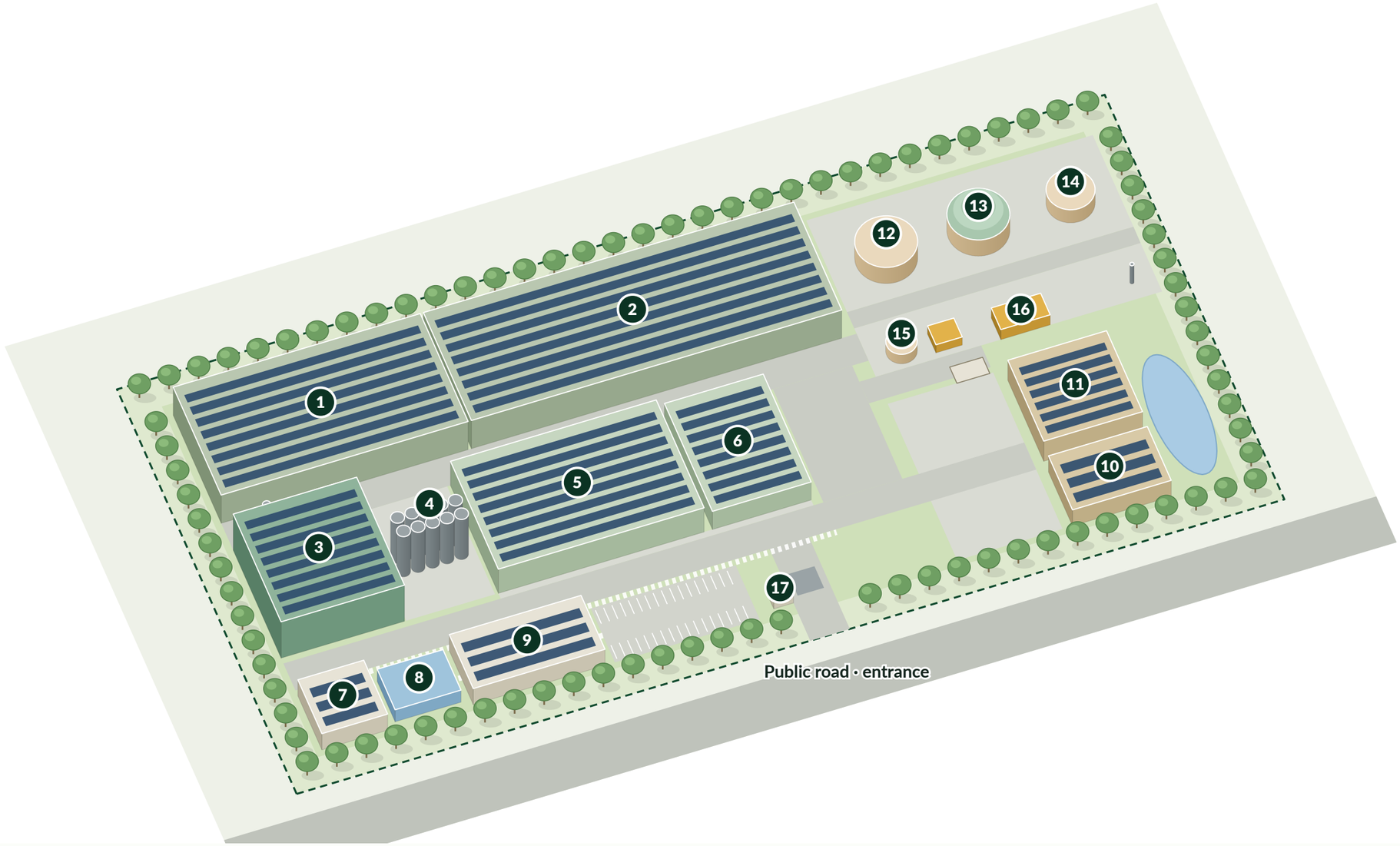
SITUATION PLAN · 4.5 HECTARES

The Danish plant at 50,000 t, seen from above

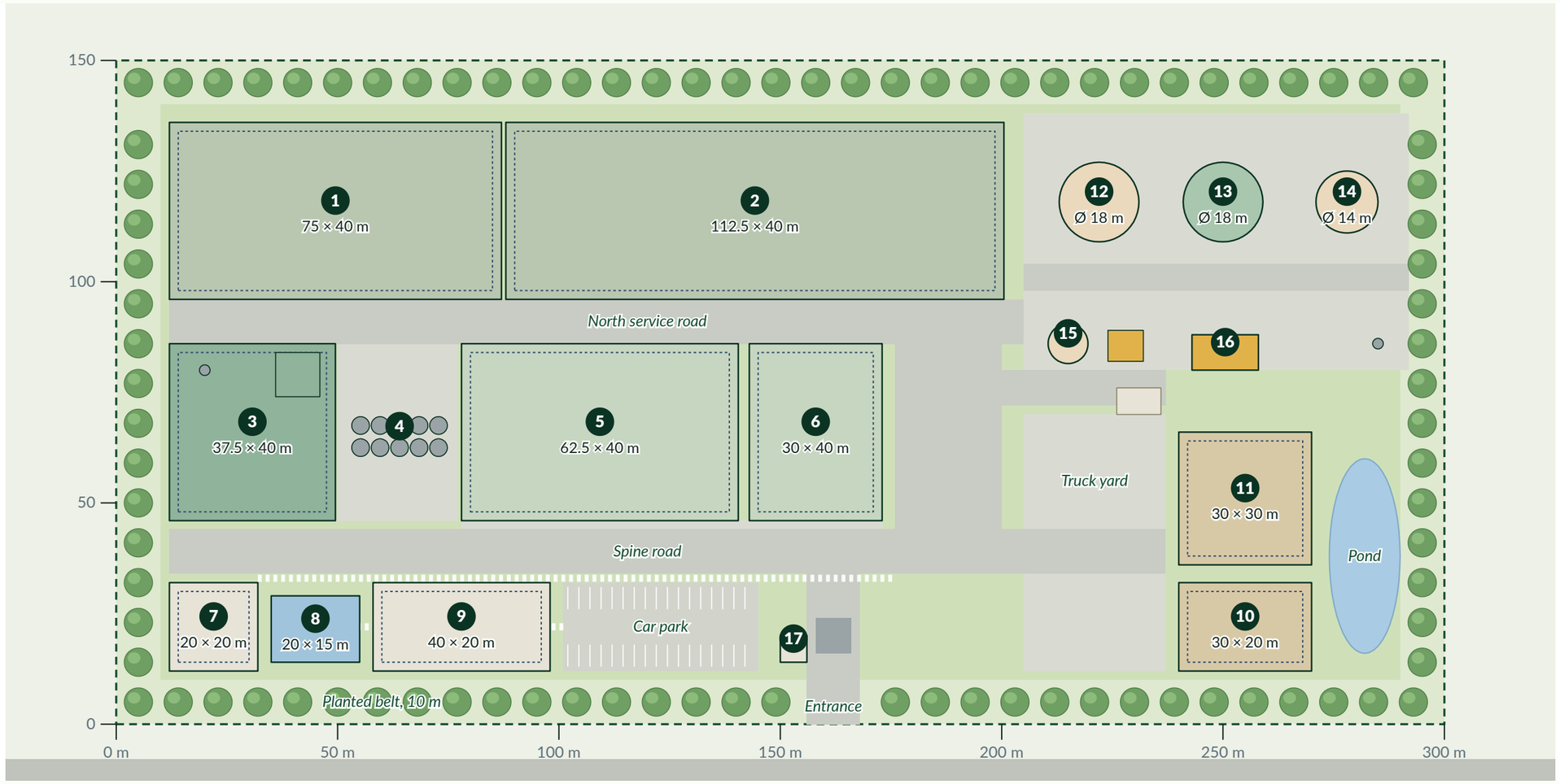


1. Bulk store, one shipload
2. Strategic store, six months of rock
3. Process hall: dryer, screens, mill
4. Ten silos of 100 t
5. Finished goods
6. Retail packing
7. Office and quality laboratory
8. Showroom and visitor centre
9. Research and development
10. Pickup hall
11. Fertiliser unit
12. Digester, 1,900 m³
13. Post-digester and gas store
14. Digestate buffer, 1,000 m³
15. Reception tank, 300 m³
16. Engine house, 280 kW
17. Gate and weighbridge

One plot, three zones. People and visitors at the entrance in the south-west; the factory in the middle, with the rock stores along the north; energy and nutrients in the east, downwind and furthest from the offices. Solar panels (dark blue) on every roof that can carry them.

SITUATION PLAN · TO SCALE

The plan seen straight down



	Building	Size	Height	m²
1	Bulk store, one shipload	75 × 40 m	14 m	3,000
2	Strategic store, six months of rock	112.5 × 40 m	14 m	4,500
3	Process hall: dryer, screens, mill	37.5 × 40 m	18 m	1,500
4	Ten silos of 100 t	22 × 10 m	20 m	220
5	Finished goods	62.5 × 40 m	12 m	2,500
6	Retail packing	30 × 40 m	9 m	1,200
7	Office and quality laboratory	20 × 20 m	8 m	400
8	Showroom and visitor centre	20 × 15 m	6 m	300
9	Research and development	40 × 20 m	8 m	800

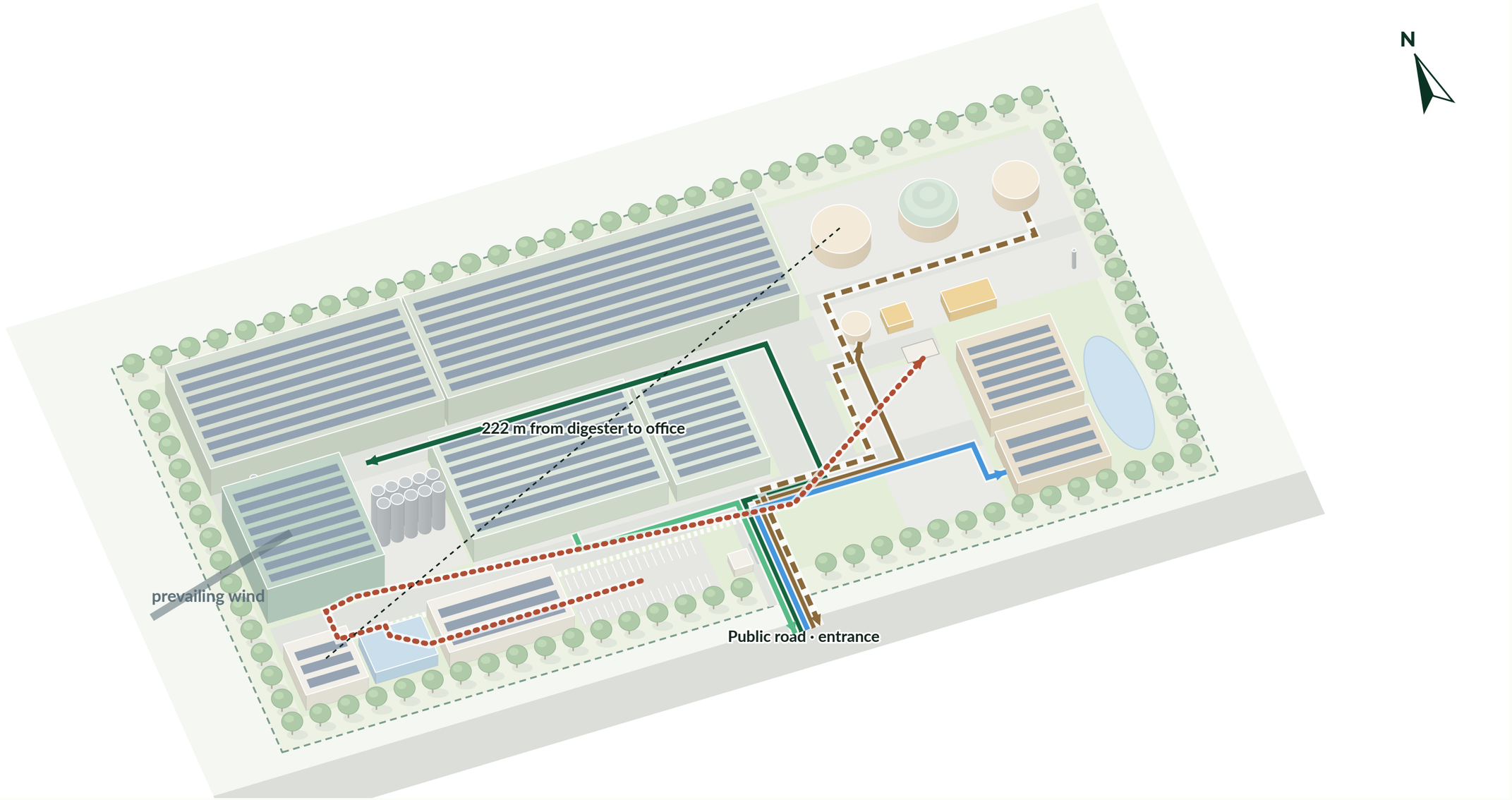
	Building	Size	Height	m²
10	Pickup hall	30 × 20 m	8 m	600
11	Fertiliser unit	30 × 30 m	10 m	900
12	Digester, 1,900 m³	Ø 18 m	8 m	254
13	Post-digester and gas store	Ø 18 m	8 m	254
14	Digestate buffer, 1,000 m³	Ø 14 m	6.5 m	154
15	Reception tank, 300 m³	Ø 9 m	4.7 m	64
16	Engine house, 280 kW	15 × 8 m	5 m	120
17	Gate and weighbridge	6 × 6 m	4 m	36

Sizes from the knowledge chapters: the core factory from the cost document, the modules from chapter 1, the tanks from chapter 3 (digester volume over a working height of about 7.5 m). Heights are our own estimates.

SITUATION PLAN · TRAFFIC

Who drives where, and why the biogas plant is in the east

Rock in from the quay · Goods out · Manure in, digestate back · Digestate out · Teabags: crane truck · Visitors on foot



TRUCKS*

- **Rock:** about 1,560 loads of 32 t a year from the quay to the north door of the bulk store, by the link road; never past the offices.
- **Goods:** out from the south side of the finished-goods hall, along the spine road to the gate.
- **Manure:** 3.2 tanker loads a working day to the reception tank; the same tanker takes digestate back from the buffer.
- **Teabags:** one crane truck a day to the pickup hall, next to the fertiliser unit.
- **Visitors:** car park, showroom, office, along the spine road on foot to the viewing platform over the biogas yard. Trucks and visitors cross only at the spine road.

Smell and safety. Danish winds come mostly from the west, so the digesters stand in the east, downwind and about 222 m from the offices. ❓ The distance to the nearest neighbour depends on the plot and is not known.

How the 4.5 hectares are used

Land use*	m²	Share
Halls and buildings	16,076	36%
Tanks	726	2%
Roads	6,414	14%
Yards and aprons	6,740	15%
Car park	880	2%
Rain-water pond	553	1%
Green: planted belt, grass, verges	13,611	30%
Plot, 300 × 150 m	**45,000**	**100%**

Built over: 37% of the plot. Danish local plans for industrial land often allow 40–50% ⚠️; this layout stays below. Roofs with solar panels: 15,400 m², close to the 15,400 m² in the energy chapter.

IN THE ORDER OF BUILDING

Stage	Floor and tank area, m²	Numbers on the plan
With the core factory	9,956	1, 3, 4, 5, 6, 7, 8, 9, 17
When sales need the stock	4,500	2
With the loop: pickup, biogas, fertiliser	2,346	10, 11, 12, 13, 14, 15, 16

> The strategic store and the whole east zone can wait for their stage. Until then the ground is grass, and the plan still works for the core factory alone.

WHAT THE PLAN ASSUMES

- **A rectangular plot of 300 × 150 m** with road access from the south. A real plot will change the layout, not the areas.
- **An inland site, about 8 km from the quay** (cost chapter 9): rock comes by truck, so the bulk store opens onto a service road, not a quay.
- **A planted belt of 10 m** all round, for screening and noise.
- **Heights:** stores 14 m, process hall 18 m with a 27 m dryer stack, silos 20 m. Local plans often cap heights; ❓ not checked.
- **Rain water** from roofs and yards to a pond in the south-east before it leaves the site; the yards round the digesters drain to the reception tank.

ROOM TO GROW

The 100,000 t plant needs about 6.5 ha: twice the bulk store and a second finished-goods hall. On this plot there is no room for that; it would need about 2 ha more along the north or east side ⚠️. The 25,000 t plant fits in about 3.5 ha, with the strategic store and part of the east zone left as grass.

> **Open:** the plot, its local plan (use, height, built share), the distance to neighbours for a biogas plant, and the fire and explosion zones round the gas store, which can push buildings further apart.