Earthworks summary: stage by stage

Site strip
4,529 m³
taken off

Dug out
3,950 m³
muck, all stages

Filled
7,010 m³
muck, all stages

Muck shortfall
3,060 m³
to bring in

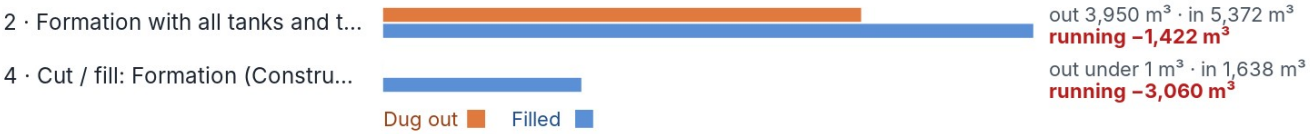
Build-up materials
8,768 m³
stone, asphalt, concrete...

Stage	Material	Generated	Needed	Surplus / shortfall
1 · Site strip	Unspecified strip	42 m³	–	
	Generated Stone	4,487 m³	–	
2 · Formation with all tanks and temporary batter	Muck	3,950 m³	5,372 m³	**–1,422 m³ shortfall**
3 · Construction depth	12 materials (stone, asphalt...)	–	8,768 m³	see its page
4 · Cut / fill: Formation (Construction depth)	Muck	under 1 m³	1,638 m³	**–1,638 m³ shortfall**

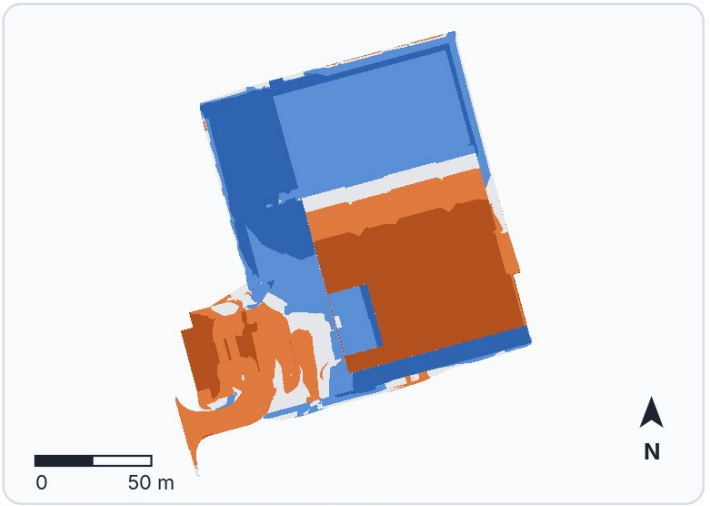
What each stage is

1 · Site strip What comes off the top: the strip depths in “Site strip”, taken down from Topo B.
2 · Formation with all tanks and temporary batter Dig and fill from Stripped topo B to Formation (Construction depth).
3 · Construction depth The stone, asphalt, concrete and so on for the build-ups in “Construction depth”, under FRL.
4 · Cut / fill: Formation (Construction depth) Dig and fill from Temp Batter to Formation (Construction depth).

Muck through the stages



Where we dig and fill: stage 2

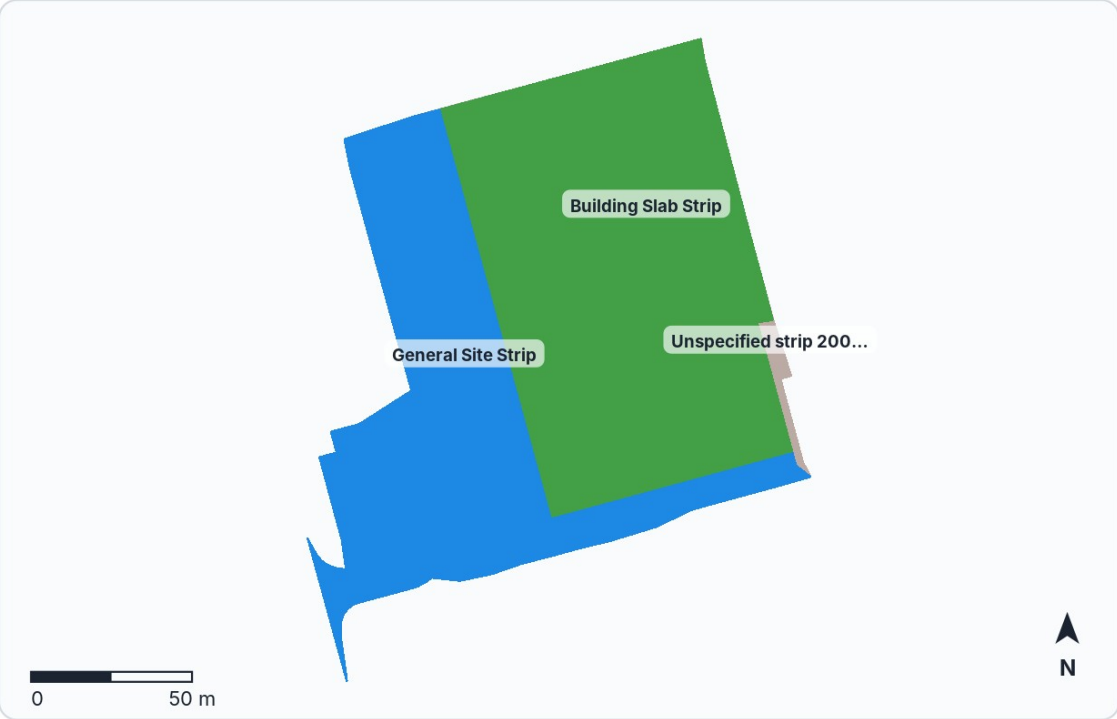


Notes

- Site stripped by 200 mm externally and 284 mm within the building slab.
- Formation level calculated by lowering the levels by the construction depth, with an additional 200 mm allowed over the existing building for clay capping.
- Cut and fill calculated by comparing the stripped topographical levels (from 1st stage) against the formation, including all tanks and temporary batters.
- Reports include the volume of material required to fill the batter back up to formation level after the wall has been constructed.

Volumes are in the ground (solid): bulking has not been accounted for. Only muck is balanced; other materials are listed, not set off against each other.

Generated: Site strip



Generated

Unspecified strip
42 m³

Generated Stone
4,487 m³

Area	Material	Area	Depth	Volume	What happens to it
Rest of the site	Unspecified strip	212 m²	200 mm	42 m³	
General Site Strip	Generated Stone	7,345 m²	200 mm	1,469 m³	
Building Slab Strip	Generated Stone	10,626 m²	284 mm	3,018 m³	

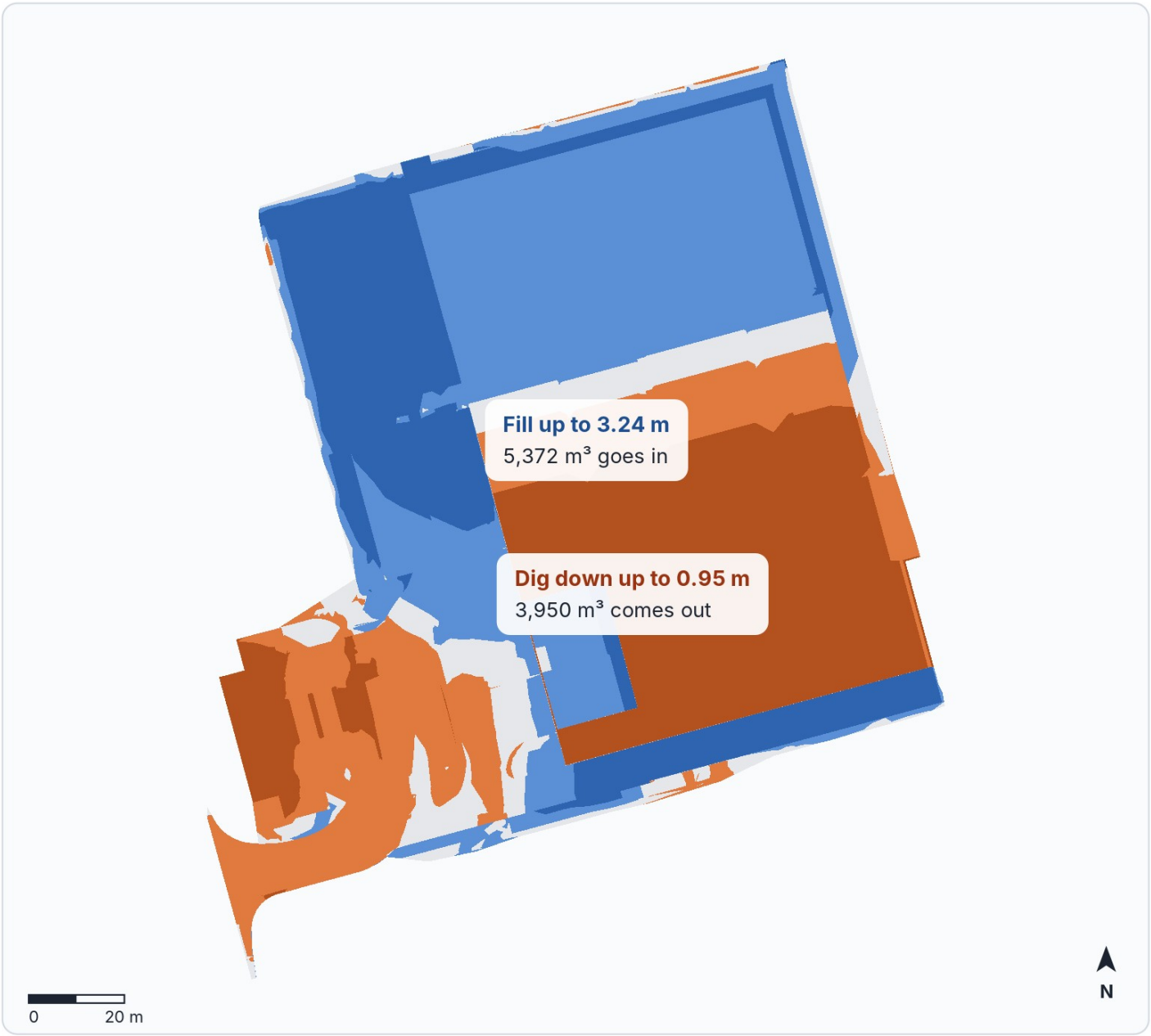
Notes

This Shows Stone expected to be generated

Volumes in the ground (solid): bulking has not been accounted for. What each material is crushed or reused as is up to the site.

Where we dig and where we fill

Stage result: muck −1,422 m³ shortfall



Key

- Fill, more than 0.5 m
- Fill, up to 0.5 m
- About level (±0.1 m)
- Dig out, up to 0.5 m
- Dig out, more than 0.5 m

Balance

Reused as fill 3,950 m³ — **Short 1,422 m³**

5,372 m³ of fill is needed but only 3,950 m³ is dug out here: 1,422 m³ short.

Deepest dig 4.58 m at E 569637.0 N 189937.9
Only a spot, well beyond the rest (98 % of it is within the depths shown on the map): usually a spike at the edge of a surface or a step. Worth a look.

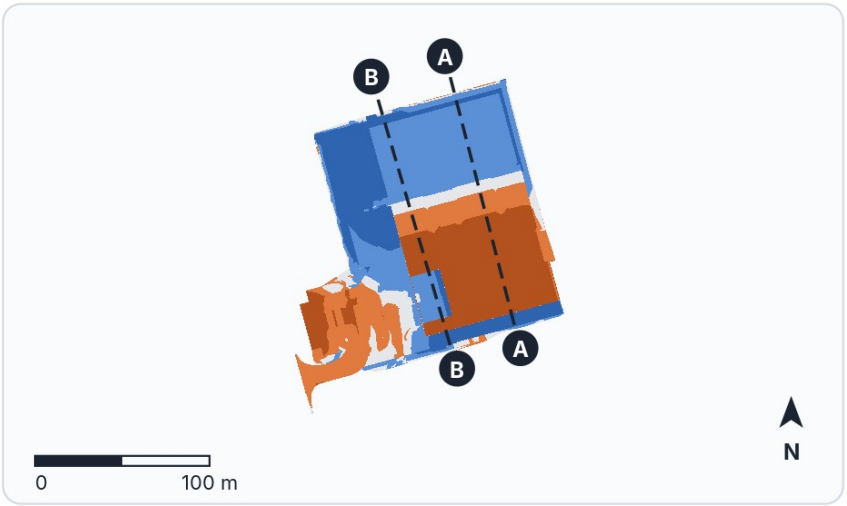
Notes

Cut and Fill Site Site has already been Stripped, And the formation includes all tanks and Tempory batters

Volumes are in the ground (solid): bulking has not been accounted for. Depths on the map: 98 % of the area dug / filled is within them.

Formation with all tanks and temporary batter: profile

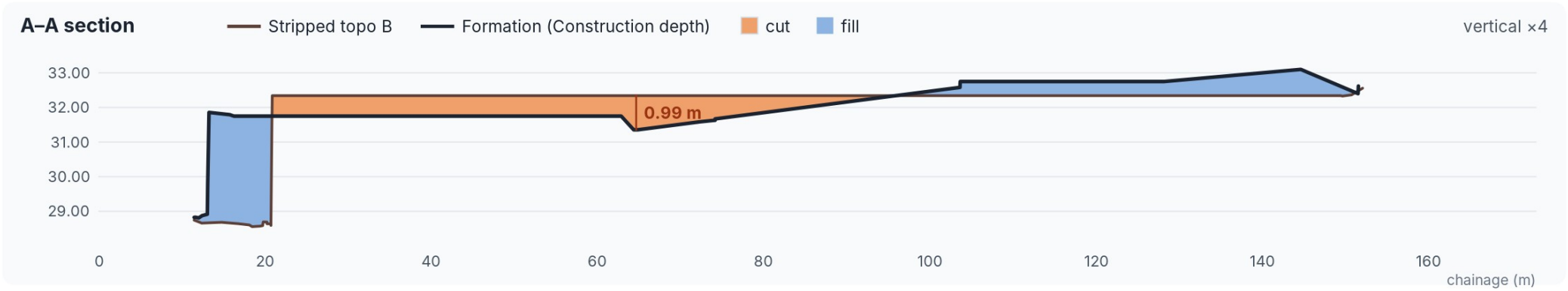
Dug out 3,950 m³ · filled 5,372 m³

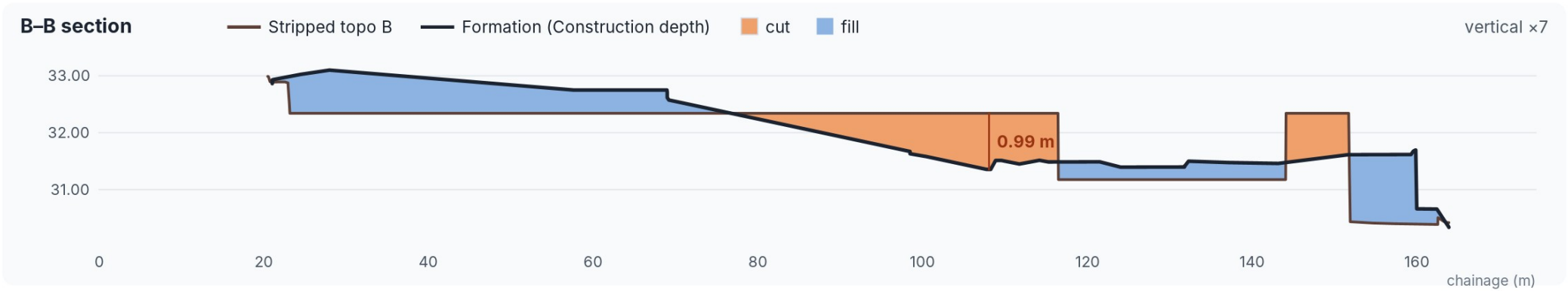


General cut / fill

Dug out	3,950 m³
Filled	5,372 m³
Dug down up to	0.95 m
Deepest	4.58 m
Plan area dug	8,540 m²
Highest fill	4.19 m
Plan area filled	9,569 m²

Between Stripped topo B and Formation (Construction depth). Sections: a long section, through the middle and past the ends so the tie-in shows.

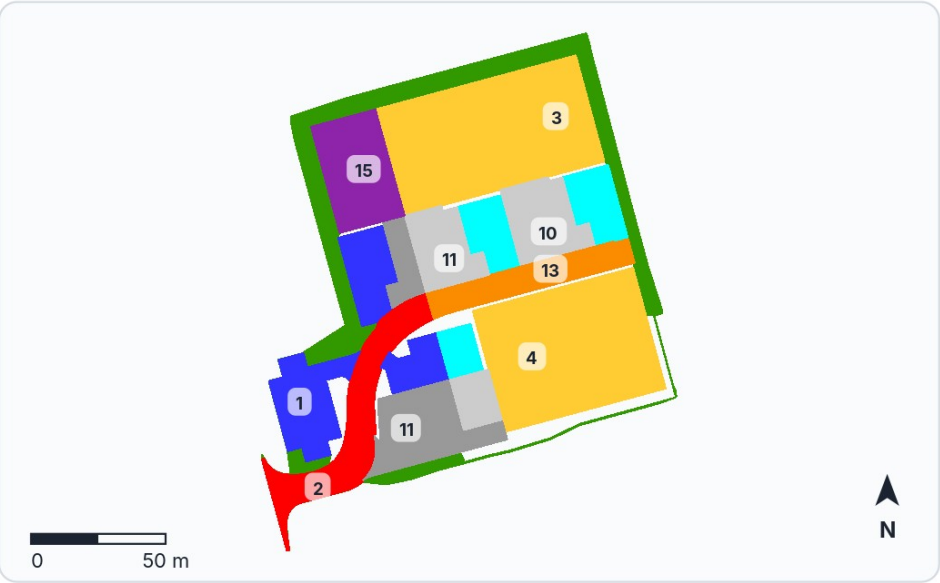




Cut shaded orange (dug out), fill blue. Heights are exaggerated to show the shape (see each section). Volumes in the ground: bulking not accounted for.

Materials needed: Construction depth

9 constructions · 16,995 m² Stage 3 · Construction depth · page 5 of 8



Key

PFA Building	550 mm	6,035 m²
Topsoil	200 mm	2,344 m²
Permable	510 mm	1,636 m²
PFA Yard	680 mm	1,628 m²
Yard	530 mm	1,271 m²
Tarmac Road	570 mm	1,191 m²
PFA Permable BAS	660 mm	1,105 m²
Building	400 mm	1,024 m²
PFA Tarmac Road	720 mm	760 m²

Materials needed

Topsoil	469 m³
Block paving	219 m³
Grit	82 m³
4-20 Stone	274 m³
Void Stone	822 m³
Asphalt wearing course	78 m³
Asphalt binder course	117 m³
Asphalt base course	234 m³
Type 1 sub-base	1,897 m³
Type 2 sub-base	1,213 m³
Concrete	1,934 m³
Clay capping	1,429 m³

Notes

Constructions

PFA Building
3, 4
6,035 m²
- Concrete 200
- Type 1 sub-base 200
- Clay capping 150

= 550 mm

Topsoil
Site edge
2,344 m²
- Topsoil 200

= 200 mm

Permable
1, 5 +1 more
1,636 m²
- Block paving 80
- Grit 30
- 4-20 Stone 100
- Void Stone 300

= 510 mm

PFA Yard
10, 11 +1 more
1,628 m²
- Concrete 180
- Type 1 sub-base 100
- Type 2 sub-base 250
- Clay capping 150

= 680 mm

Yard
9, 11
1,271 m²
- Concrete 180
- Type 1 sub-base 100
- Type 2 sub-base 250

= 530 mm

Tarmac Road
2
1,191 m²
- Asphalt wearing course 40
- Asphalt binder course 60
- Asphalt base course 120
- Type 1 sub-base 100
- Type 2 sub-base 250

= 570 mm

PFA Permable BAS
7, 8 +1 more
1,105 m²
- Block paving 80
- Grit 30
- 4-20 Stone 100
- Void Stone 300
- Clay capping 150

= 660 mm

Building
15
1,024 m²
- Concrete 200
- Type 1 sub-base 200

= 400 mm

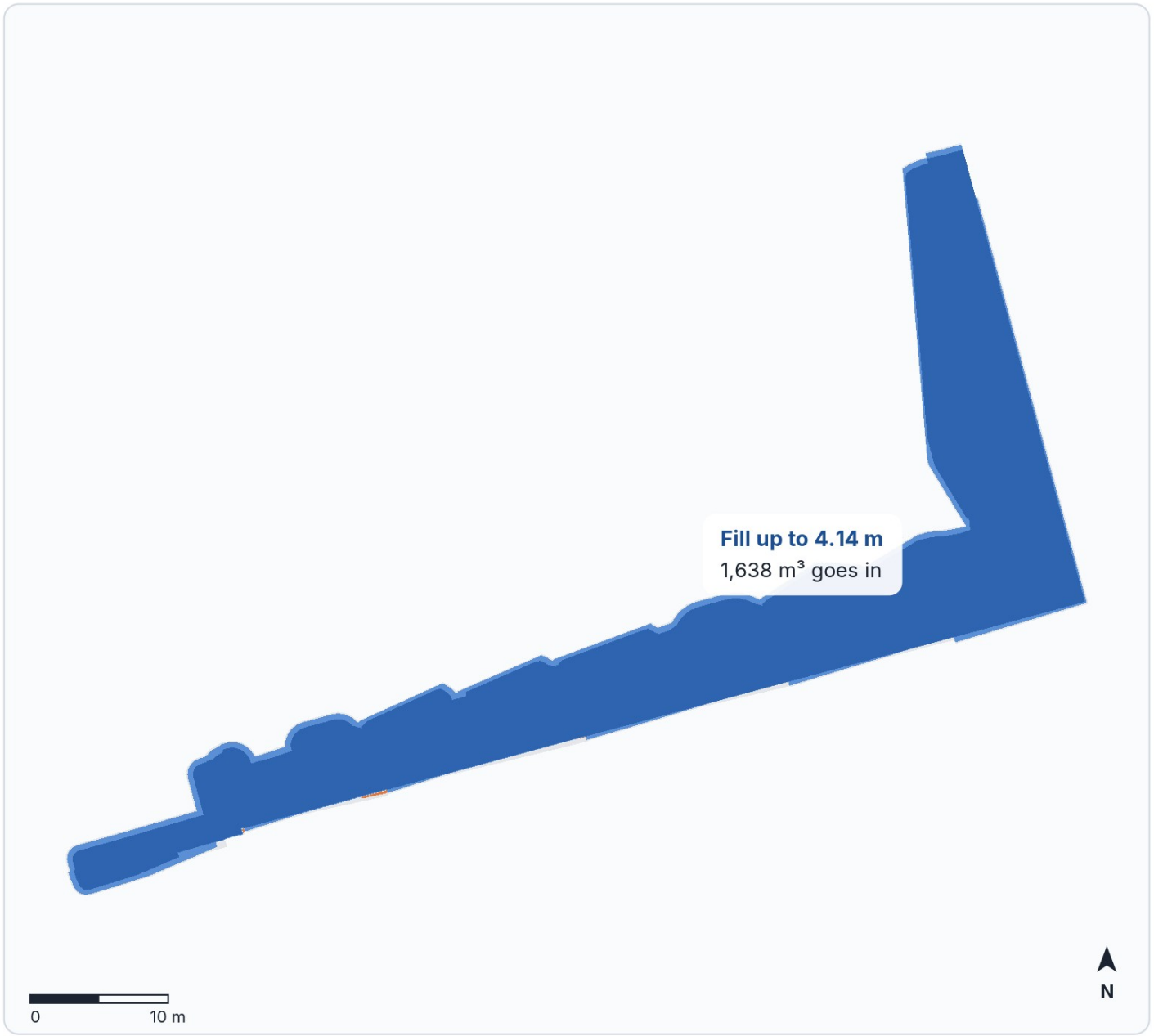
PFA Tarmac Road
13
760 m²
- Asphalt wearing course 40
- Asphalt binder course 60
- Asphalt base course 120
- Type 1 sub-base 100
- Type 2 sub-base 250
- Clay capping 150

= 720 mm

Compacted volumes in place (plan area × layer thickness): bulking has not been accounted for. Each construction's area is the total of all the areas built that way.

Where we dig and where we fill

Stage result: muck −1,638 m³ shortfall



Key

- Fill, more than 0.5 m
- Fill, up to 0.5 m
- About level (±0.1 m)
- Dig out, up to 0.5 m
- Dig out, more than 0.5 m

Balance

Reused as fill under 1 m³ — **Short 1,638 m³**

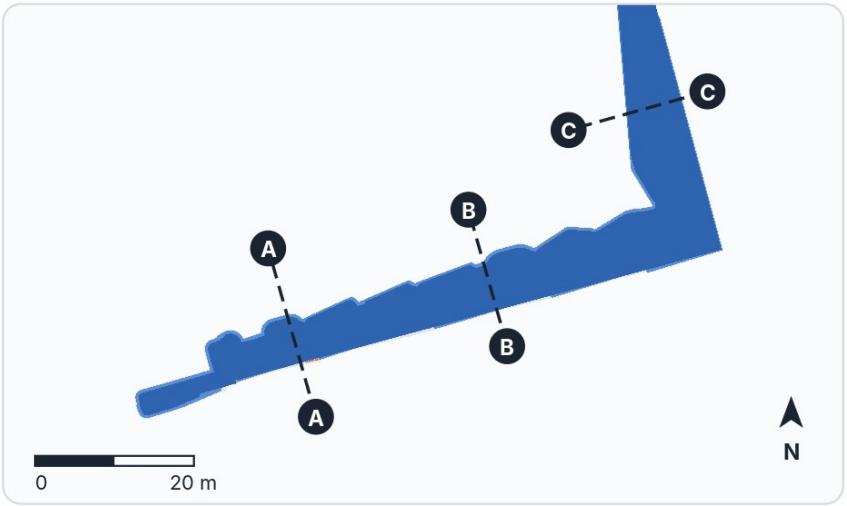
1,638 m³ of fill is needed but only under 1 m³ is dug out here: 1,638 m³ short.

Notes

Volumes are in the ground (solid): bulking has not been accounted for. Depths on the map: 98 % of the area dug / filled is within them.

Cut / fill: Formation (Construction depth): profile

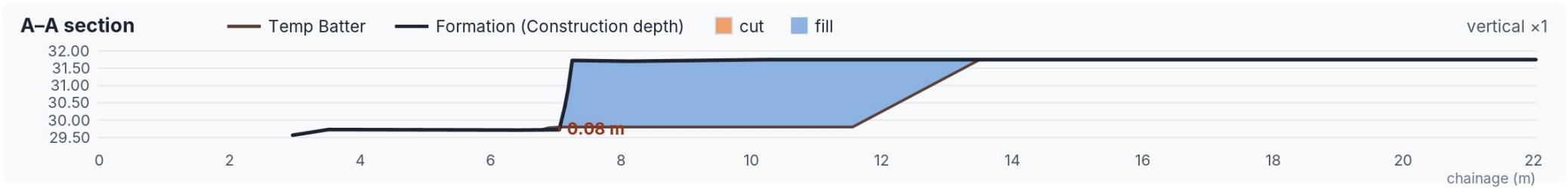
Dug out under 1 m³ · filled 1,638 m³

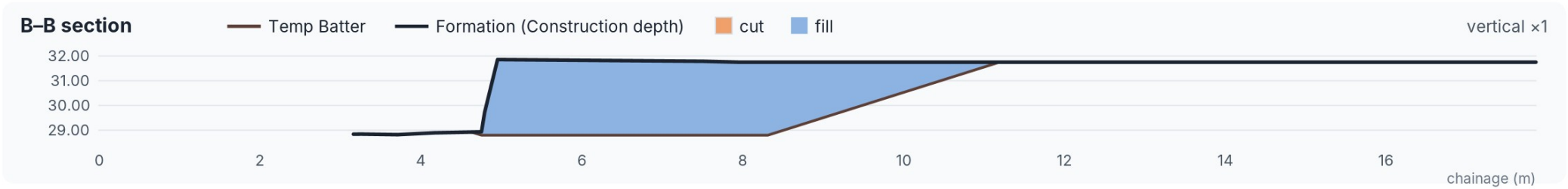


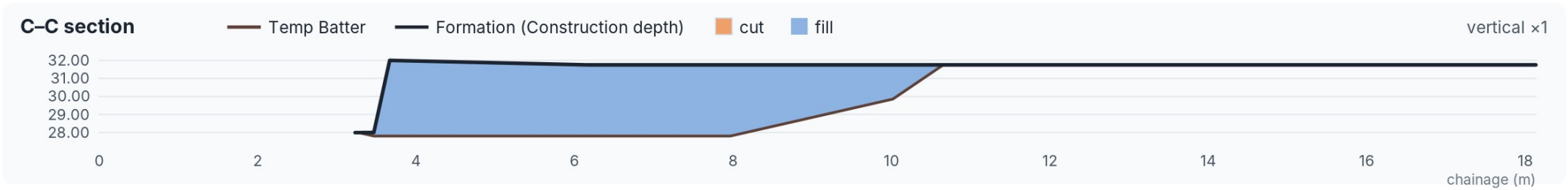
General cut / fill

Dug out	under 1 m³
Filled	1,638 m³
Dug down up to	0.07 m
Deepest	0.26 m
Plan area dug	5 m²
Highest fill	4.20 m
Plan area filled	676 m²

Between Temp Batter and Formation (Construction depth). Sections: a long section, through the middle and past the ends so the tie-in shows.







Cut shaded orange (dug out), fill blue. Heights are exaggerated to show the shape (see each section). Volumes in the ground: bulking not accounted for.

Materials generated and needed

What the strip and dig-outs generate, and what the build-ups need, material by material. They aren't set off against each other: use it to plan what to crush on site (e.g. concrete into 6F2 or Type 1) and what to bring in.

Generated

Stage	Material	Volume	What happens to it
1 · Site strip	Unspecified strip	42 m³	
	Generated Stone	4,487 m³	

Needed for the build-ups

Material	Volume
Topsoil	469 m³
Block paving	219 m³
Grit	82 m³
4-20 Stone	274 m³
Void Stone	822 m³
Asphalt wearing course	78 m³
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Type 1 sub-base	1,897 m³
Type 2 sub-base	1,213 m³
Concrete	1,934 m³
Clay capping	1,429 m³

Notes

Volumes in the ground (solid) and compacted in place: bulking has not been accounted for.