

FLOOD RISK ASSESSMENT

**LAND SOUTH OF A338, EAST GRAFTON,
WILTSHIRE, ENGLAND,
SN8 3DD (NEAREST)**

GRID REFERENCE SU 25517 60542

REV A

JANUARY 2026

JOB REFERENCE: 47326

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1.0 Introduction and Site Context

- 1.1 AAH Consultants have been commissioned to undertake a Flood Risk Assessment (FRA) in support of a planning application for the creation of a new dwelling and a detached garage at Land South of the A338, East Grafton (the 'Site').
- 1.2 A Flood Risk Assessment is to be produced in accordance with the National Planning Policy Framework (July 2021) and the Wiltshire Council Strategic Flood Risk Assessment High Level Executive Summary (June 2009).
- 1.3 The information presented is as follows:
- A background to the Site
 - Development proposals
 - An assessment of existing flood risk
 - Conclusion

The Site

- 1.4 The Site is located within the village of East Grafton, approximately 200m west of the town centre. Access is currently provided, at the western boundary, by an unnamed road leading to the Site from the nearby A338 public highway. The Site measures approximately 0.163Ha.
- 1.5 The Site lies within the administrative area of Wiltshire Council as Local Planning Authority (LPA) and Lead Local Flood Authority (LLFA) and Thames Water as Water and Sewerage Company (WaSC).

Topography

- 1.6 The Site is comprised of open grassland, with trees and hedges bordering the Site at its east and western boundaries. Levels at the Site range from a high of approximately 153.857mAOD at the South of the Site, to a low of approximately 152.936mAOD at the north of the site. The elevation at the current access is approximately 153.211mAOD.
- 1.7 Currently the Site resides in an area with residential developments at the north east, east and west. Agricultural land extends to the north west and south. An aerial image of the Site is provided in **Figure 1** below.



Figure 1: Aerial image of the Site (Google Earth)

Geology

- 1.8 According to British Geological Society (BGS) 1:50,000 scale mapping, the Site is underlain by bedrock geology of Upper Greensand Formation - Sandstone. Superficial geology comprises sand and sandstone, fine-grained, silt, glauconitic, shelly.

Hydrogeology

- 1.9 According to BGS 1:625,000 scale mapping, the Site is underlain by Upper Greensand Formation, a moderately productive aquifer with yields of up to 25l/s. The Site lies within a Principal Aquifer Zone (bedrock only), but lies outside of all Groundwater Source Protection Zones.

Hydrology

- 1.10 The nearest watercourse is 0.2km south east of the Site and appears to be a tributary of Wilton Water.

2.0 Development Proposals

- 2.1 The Development proposal includes the creation of a singular dwelling with a detached garage. To support the Development, a driveway area towards the eastern edge of the Site is also proposed. A Site Location Plan has been attached as Appendix A and the Development proposals are outlined in Appendix B.
- 2.2 For flood risk purposes, the nature of the Development places it within the 'more vulnerable' category.

3.0 Existing Flood Risk

- 3.1 The National Planning Policy Framework (NPPF) sets strict tests to protect people and property from flood risk, which all local planning authorities are expected to follow. Where these tests are not met, national policy is clear that new development should not be allowed.
- 3.2 For the purposes of applying the National Planning Policy Framework, "flood risk" is a combination of the probability and the potential consequences of flooding from all sources – including from rivers and the sea (fluvial and coastal flooding), directly from rainfall on the ground surface (surface water or pluvial flooding) and rising groundwater (groundwater flooding), overwhelmed sewers and drainage systems (sewer flooding), and from reservoirs, canals and lakes and other artificial sources (artificial flooding).
- 3.3 The following assesses the potential for flood risk from all sources to determine the overall flood risk to the Site.
- 3.4 According to the Environment Agency's (EA) Flood Map for Planning service (**Figure 2**), the Site lies within Flood Zone 1 and is therefore, at low risk of flooding from rivers and the sea.

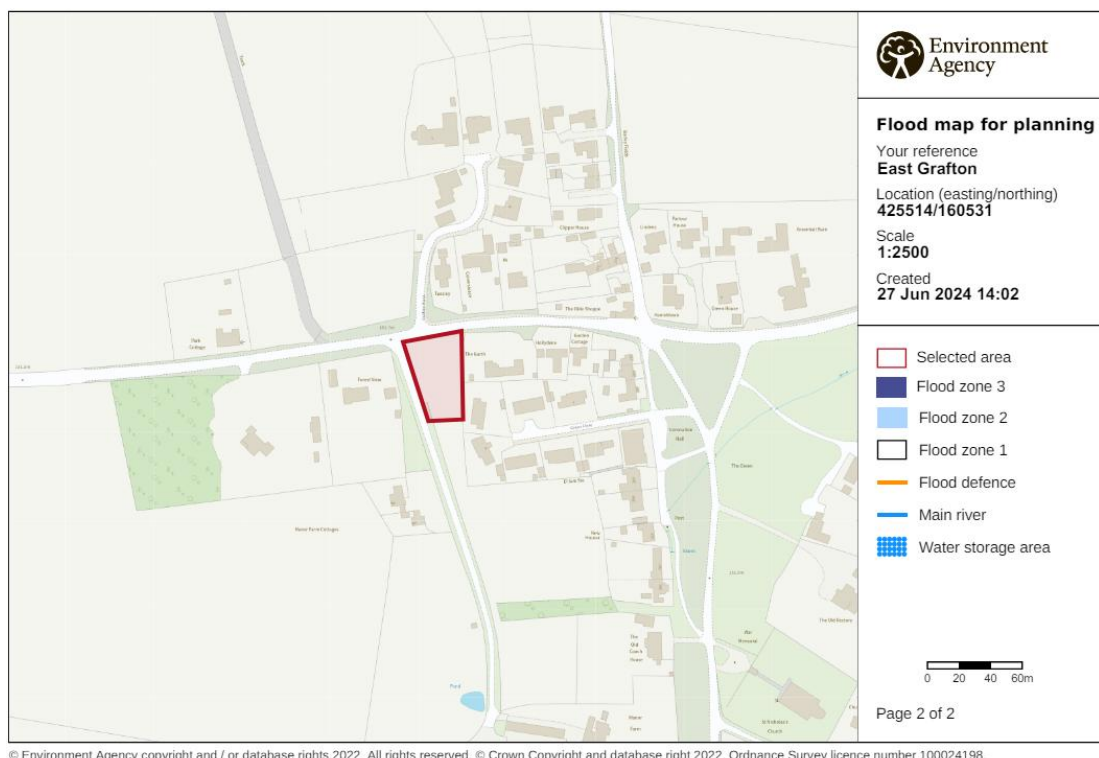


Figure 2: Environment Agency Zonal Flood Map (Site indicated in red)

Tidal and Fluvial Flood Risk

- 3.5 The Environment Agency's Long Term Flood Risk mapping (**Figure 3**) illustrates the Site is not in an area at risk of flooding from rivers or the sea.

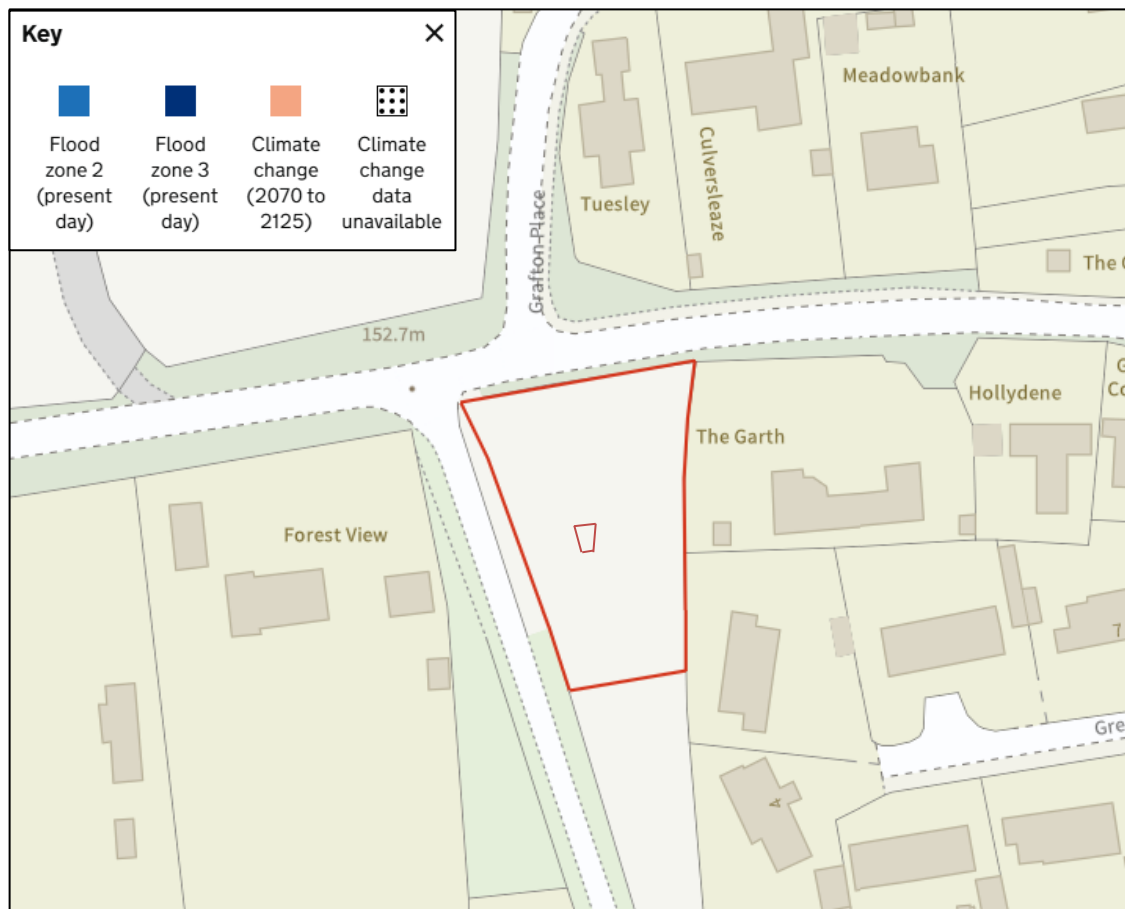


Figure 3: Flood Risk from Rivers or Sea (Site indicated in red)

Pluvial and Sewer Flood Risk

- 3.6 Intense rainfall can create run-off, which temporarily overwhelms the capacity of the local drainage systems. Under these conditions, localised 'flash' flooding can occur. In addition, surface water can flood into the sewer networks and overload both the surface water and combined sewer networks. This type of flooding is especially problematic when these systems become overloaded simultaneously.
- 3.7 According to the Gov.uk 'Flood Map for Planning' for surface water (**Figure 4**), the Site is at very low risk of surface water flooding, and as such, the pluvial flood risk to the Site is deemed to be low and acceptable.

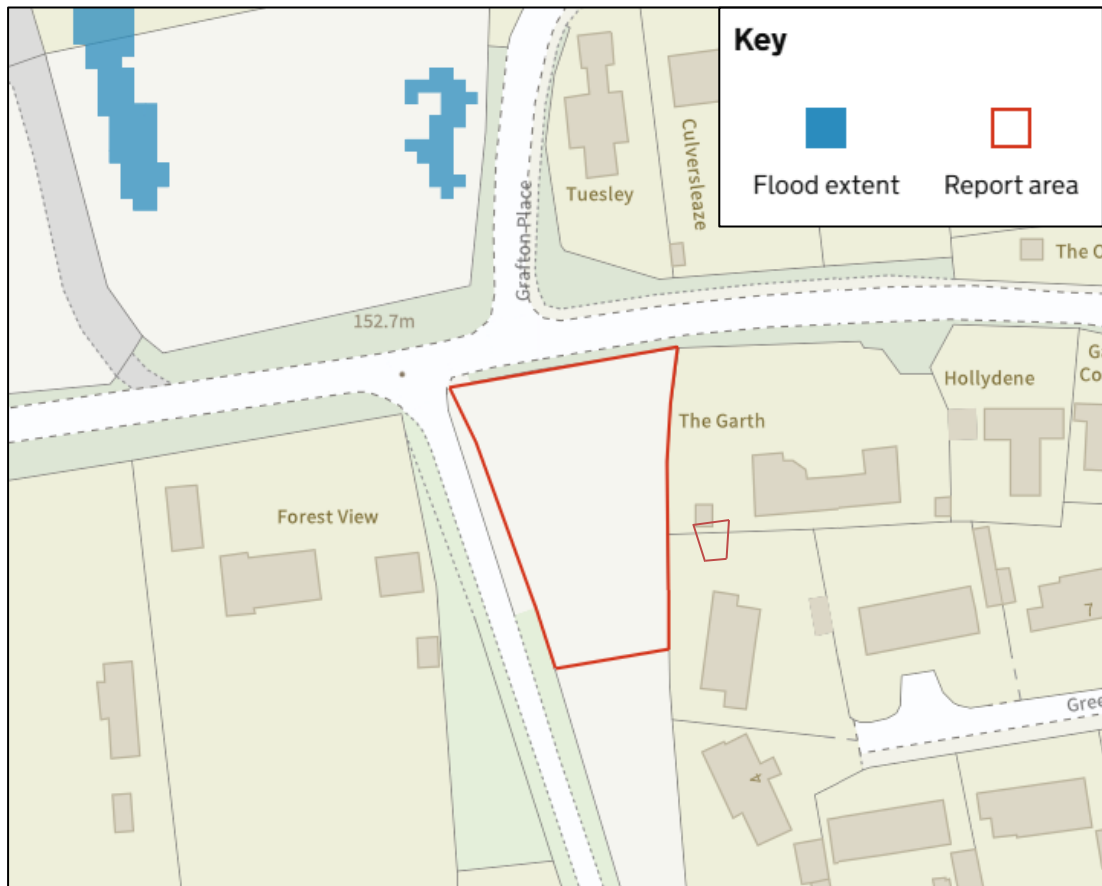


Figure 4 : Flood Risk from Surface Water (Site indicated in red)

- 3.8 Topographically, the Site resides at a higher elevation than the adjacent public highway and surrounding area, as such and in the event of surcharging within the public sewer system, it is not expected that flows will enter the Site and thus flood risk from sewers is also deemed to be low and acceptable.

Groundwater Flood Risk

- 3.9 Infiltration testing was undertaken in June 2024 and included the excavation of two trial pits at the Site. Trial Pit 1 was excavated to a depth of 1.5m, and Trial Pit 2 was excavated to a depth of 1.7m. No groundwater was encountered in either of the two trial pits. A copy of the infiltration test results are attached as appendix C.
- 3.10 The above withstanding, Appendix G of the Wilshire Council SFRA alludes to groundwater being present at the Site within 0.025m and 0.5m below ground level. However, this is based on ground models created by BGS, which can be limited to isolated locations and is not representative of a whole area where groundwater flooding is known to occur, neither is it representative of the likelihood of groundwater flooding.
- 3.11 As mentioned prior, the Site resides at a higher elevation than the public highway which fronts the Site. A review of online mapping software reveals the presence of gullies and manhole

covers within this public highway and thus alludes to the presence of surface water sewers. As such, any groundwater emergence at the surface of the Site would be conveyed away with the topography of the land, towards the public highway, the A338, which fronts the site.

Artificial Flood Risk

- 3.12 The EA's Risk of Flooding from Reservoirs' map indicates areas where peoples' lives would be in danger as a result of an uncontrolled release of water from a reservoir or static body of water. In terms of the probability of occurrence, the EA acknowledges in their flood map annotations that reservoir flooding is extremely unlikely to happen. There has been no loss of life in the UK from reservoir flooding since 1925, with all large reservoirs inspected and supervised by reservoir panel engineers. As the enforcement authority for the Reservoirs Act 1975 in England, the Environment Agency ensures that reservoirs are inspected regularly, and essential safety work is carried out. The EA Risk of Flooding from Reservoirs map indicates that the Site is not at risk from this source.

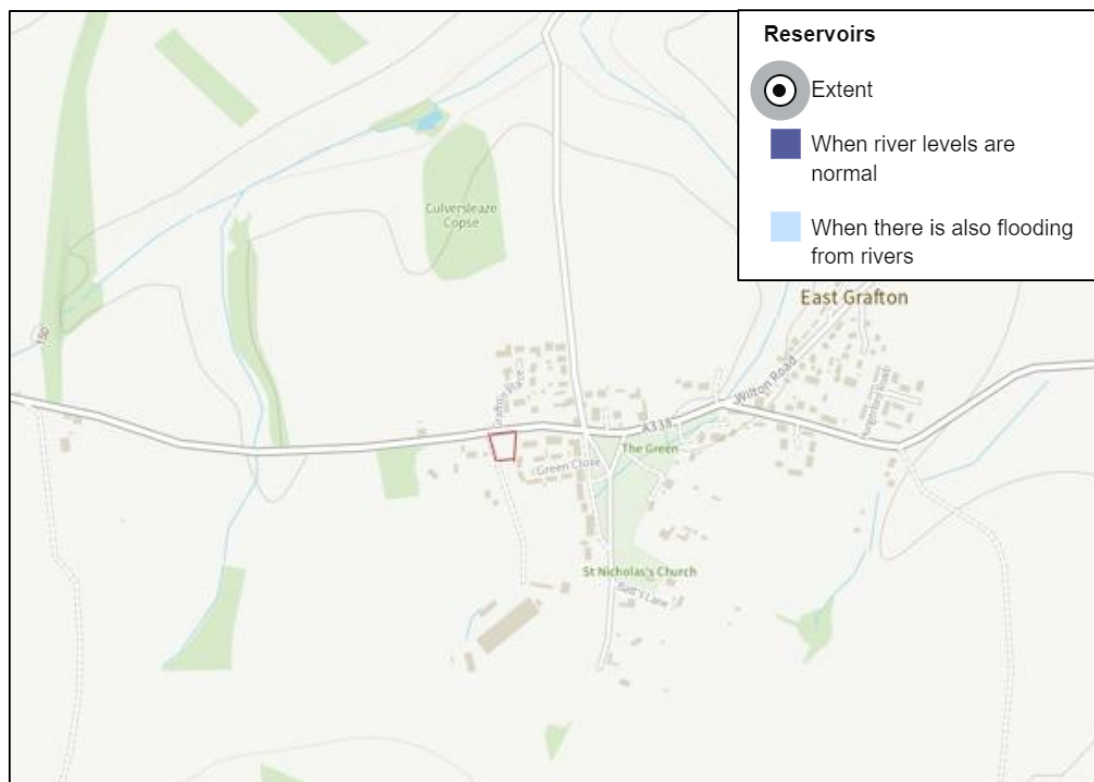


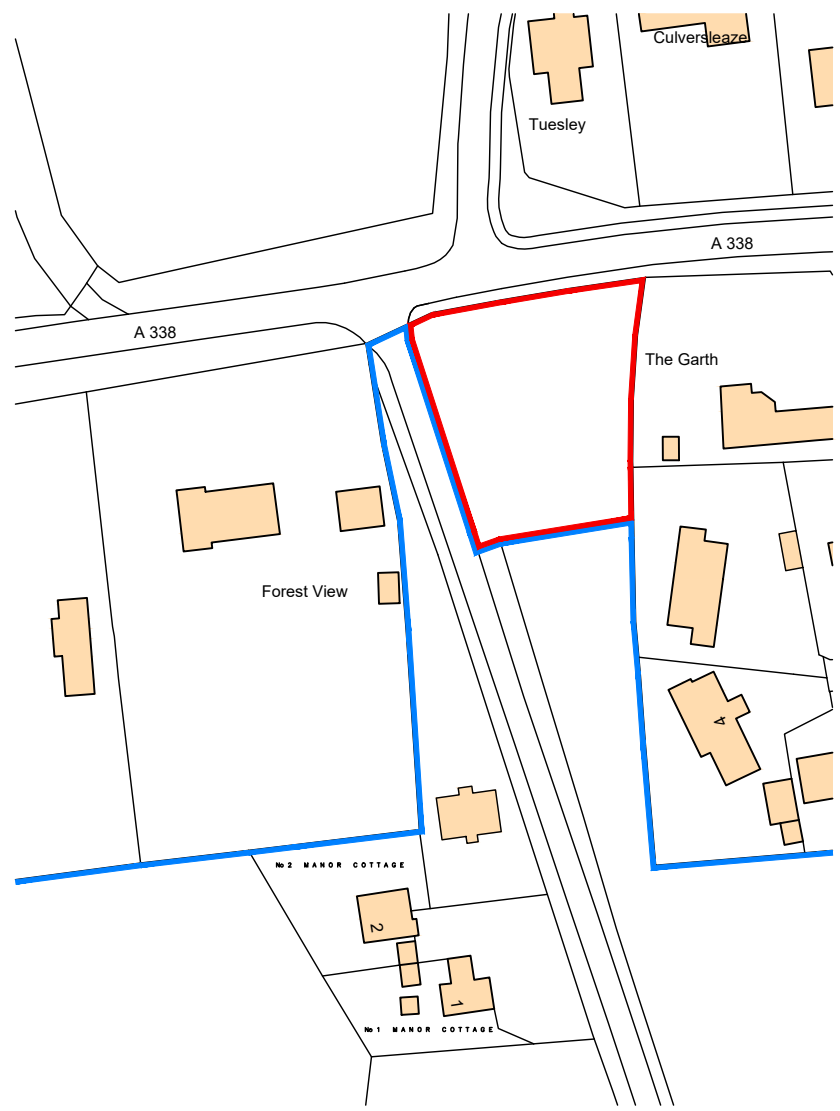
Figure 5 : Flood Risk from Reservoirs (Site indicated in red)

4.0 Conclusion

- 4.1 A Flood Risk Assessment has been produced in accordance with the National Planning Policy Framework (July 2021) and the Wiltshire Council Strategic Flood Risk Assessment (June 2009) in support of a planning application. The proposal includes the creation of a dwelling and detached garage at Land South of the A338, to the west of East Grafton.
- 4.2 The Site wholly lies within Flood Zone 1, with the Development classed as 'more vulnerable' in regards to flood risk.
- 4.3 The overall existing flood risk to the Site from other sources is considered to be low, with the only potential source of flood risk being in the form of groundwater flooding, as illustrated within the Wiltshire Council SRFA. However, excavation undertaken at the Site found no groundwater present to a maximum depth of 1.7m. Additionally the Site resides at a higher elevation than the surrounding area thus it is expected that any groundwater would be conveyed away from the Site with the public sewer system adjacent to the Site.
- 4.4 This FRA concludes that the development will be safe for its lifetime, taking account of the vulnerability of its users without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

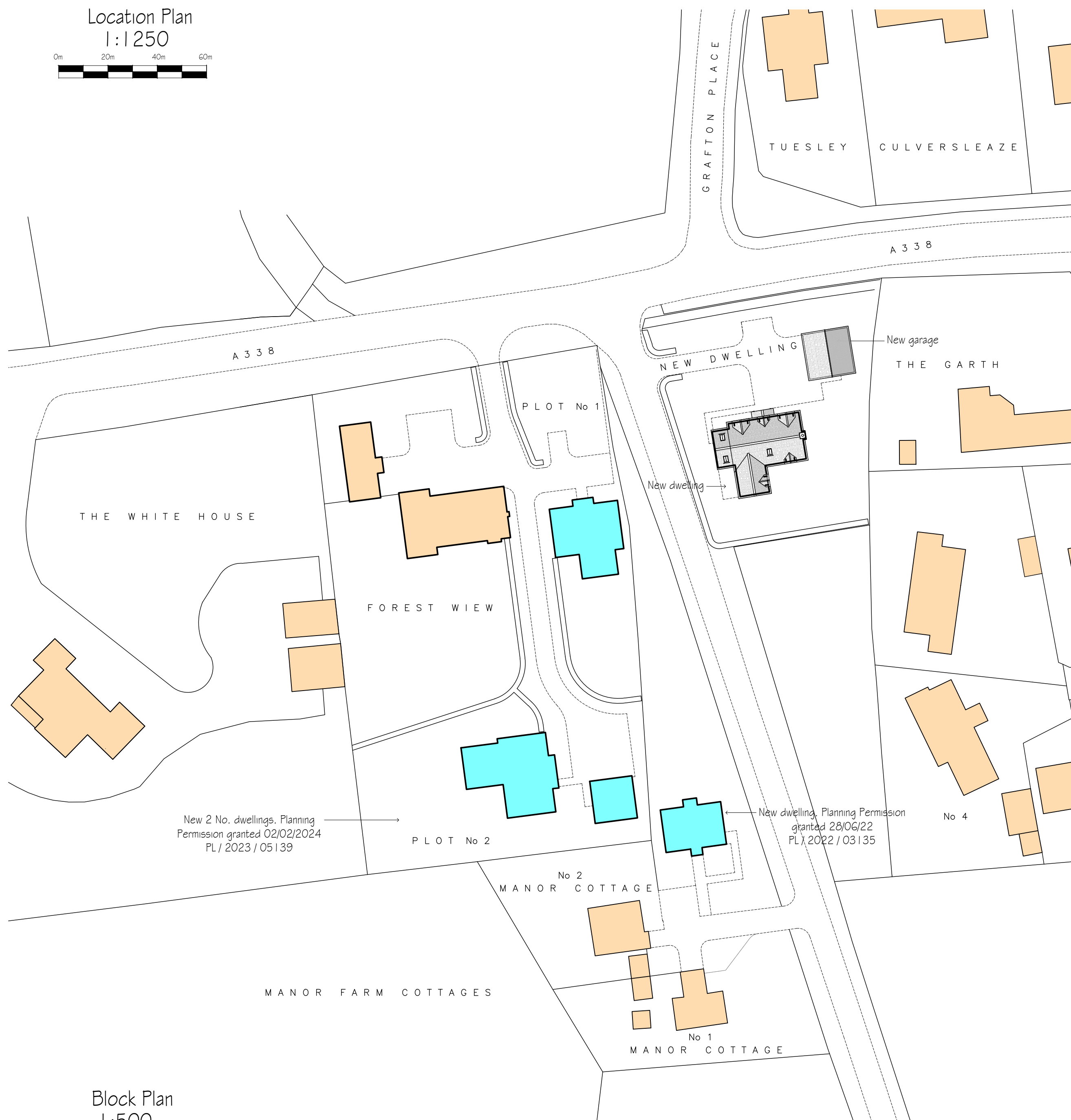
APPENDIX A

LOCATION PLAN

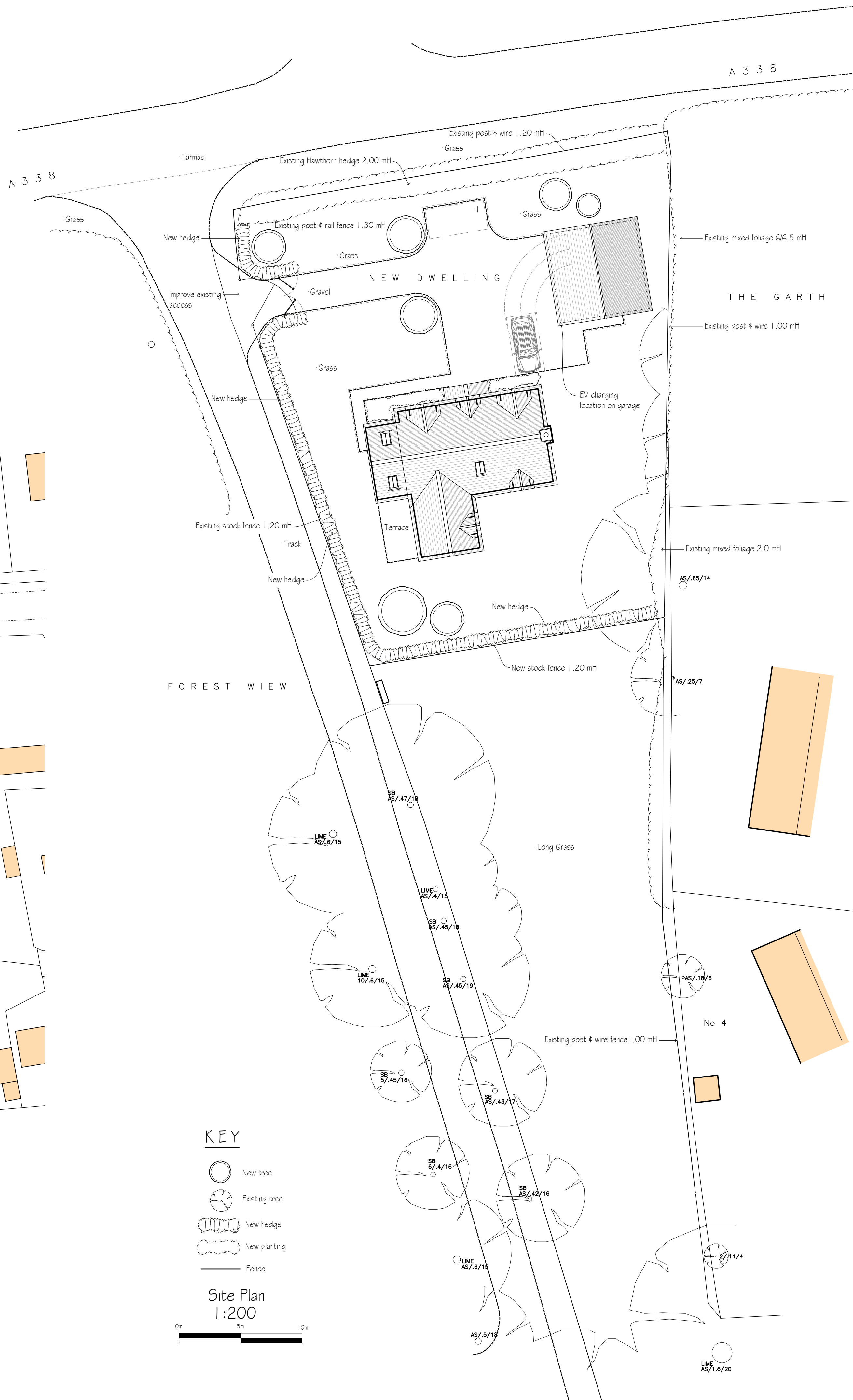


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Location Plan
1:1250



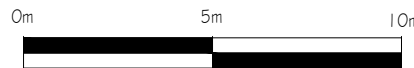
Block Plan
1:500



KEY

- New tree
- Existing tree
- New hedge
- New planting
- Fence

Site Plan
1:200



revisions	initial	date
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Contractors, Sub Contractors and Suppliers are to check all relevant dimensions and levels of site and buildings before commencing any shop drawings or building work.

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project
LAND IN EAST GRAFTON

drawing

Location, Block and Site Plan

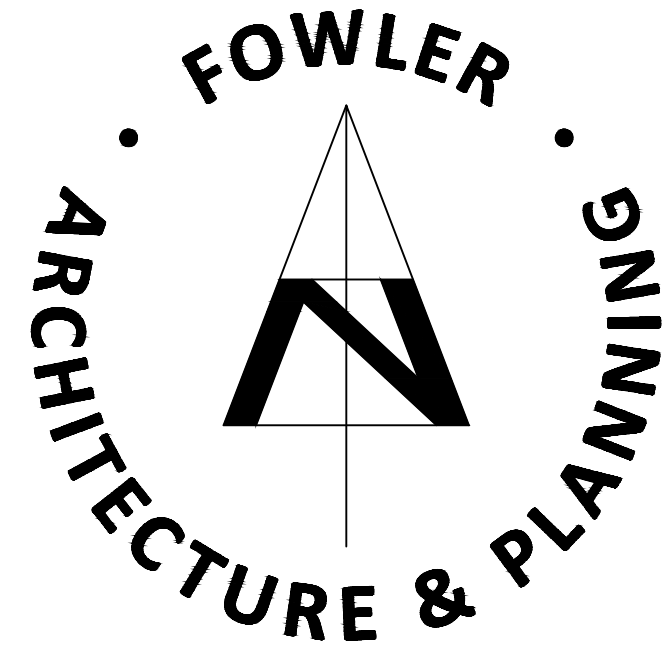
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APPENDIX B

DEVELOPMENT PROPOSALS



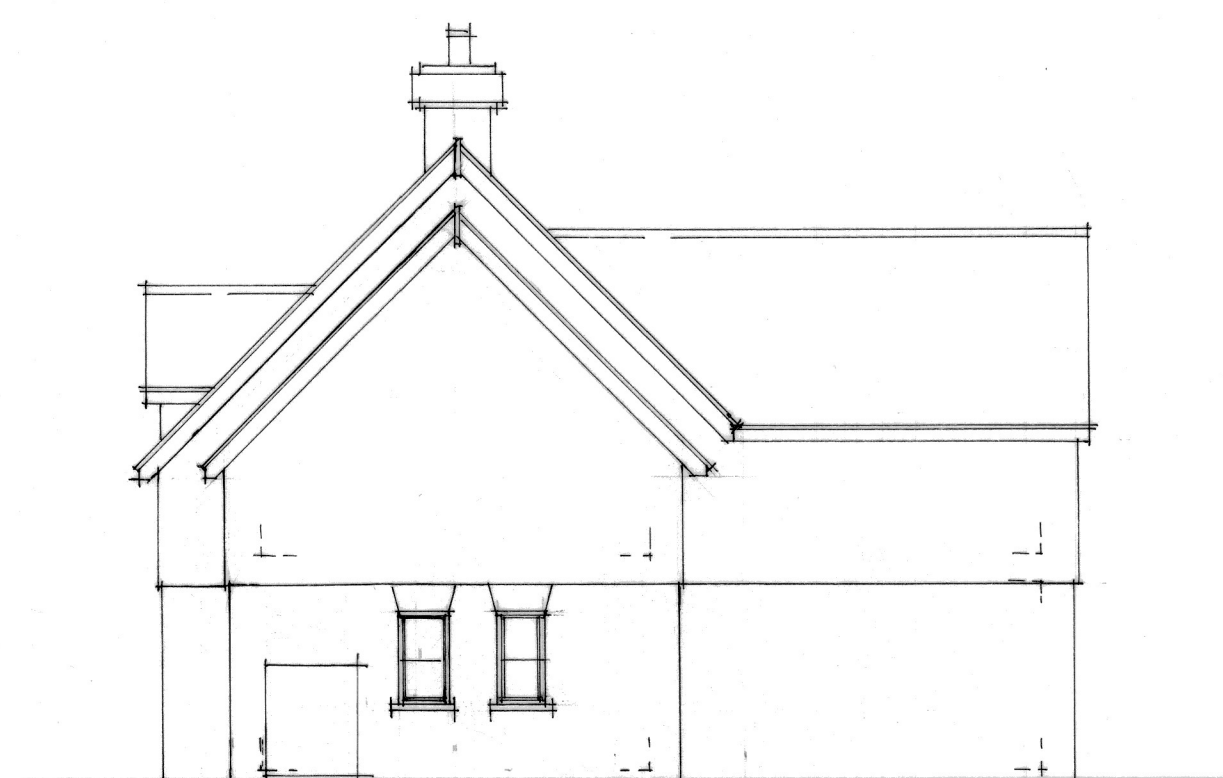
NORTH ELEVATION



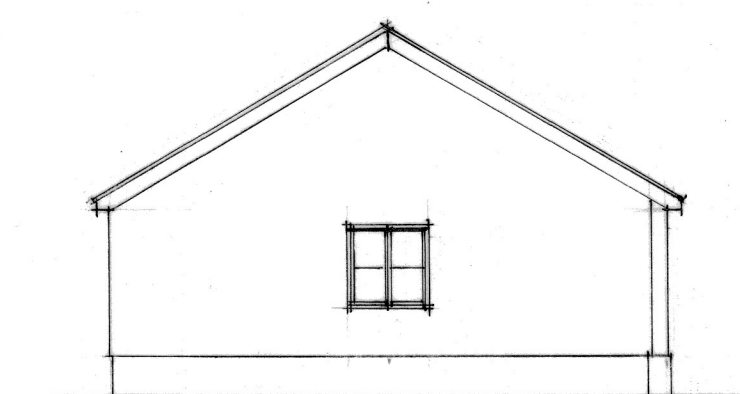
SOUTH ELEVATION



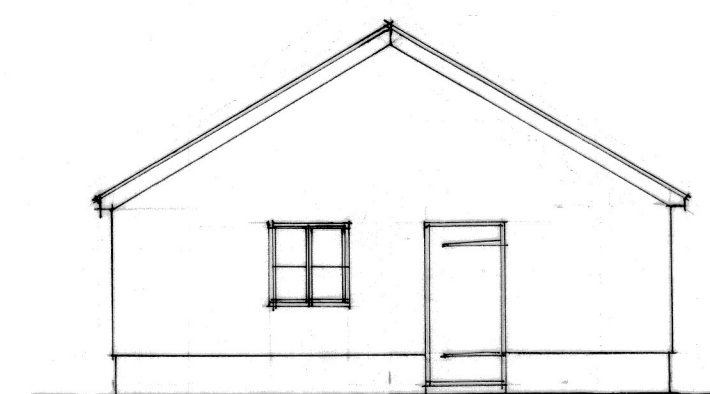
EAST ELEVATION



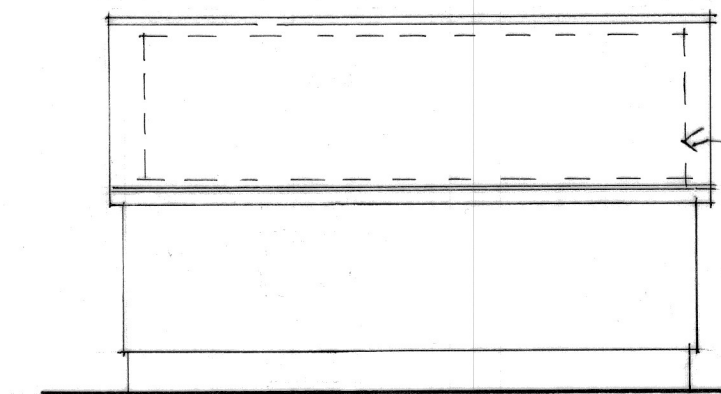
WEST ELEVATION



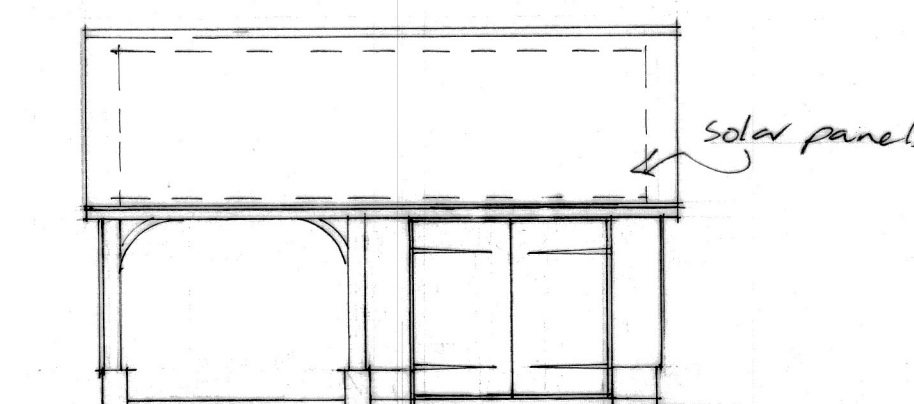
NORTH ELE.



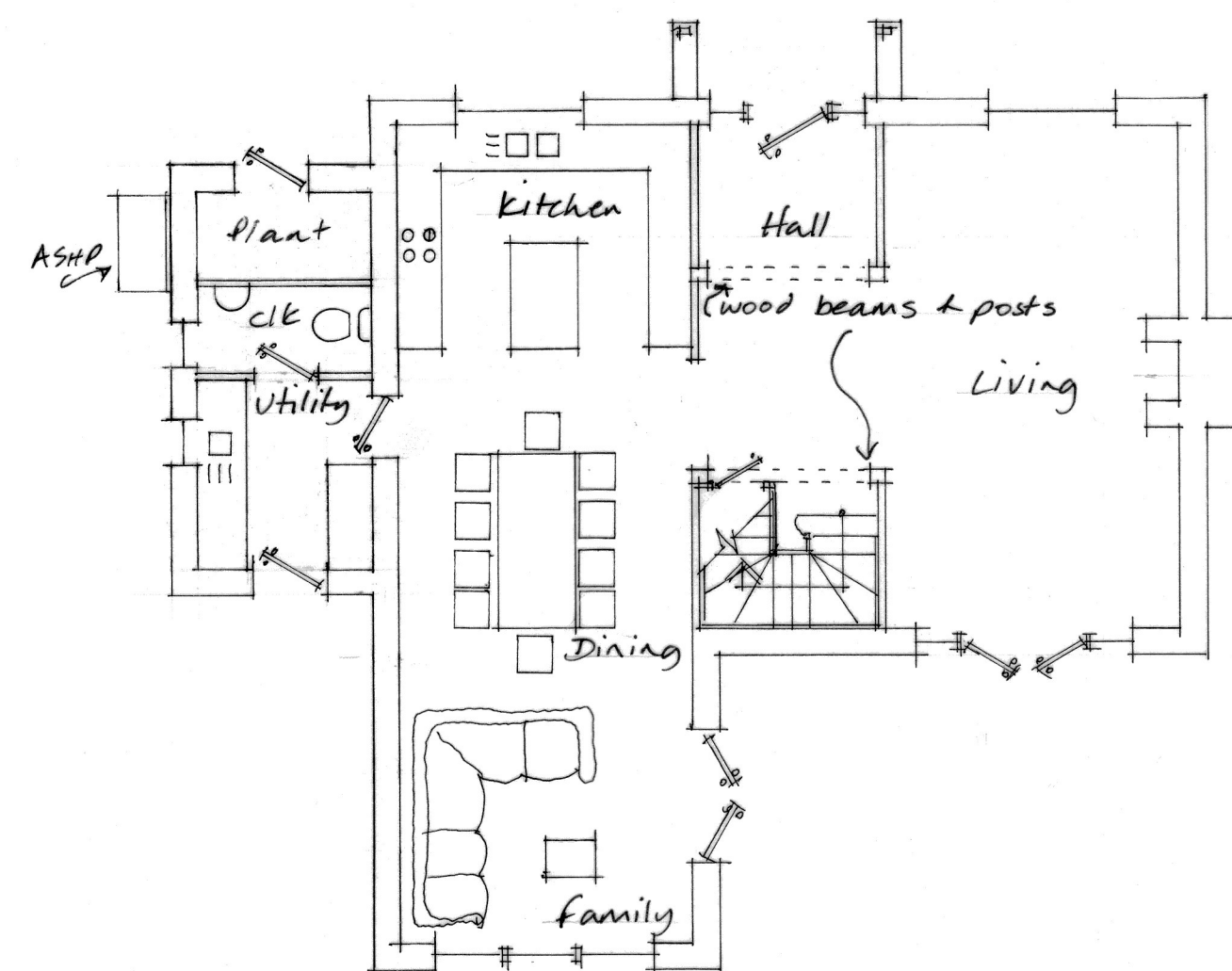
SOUTH ELE.



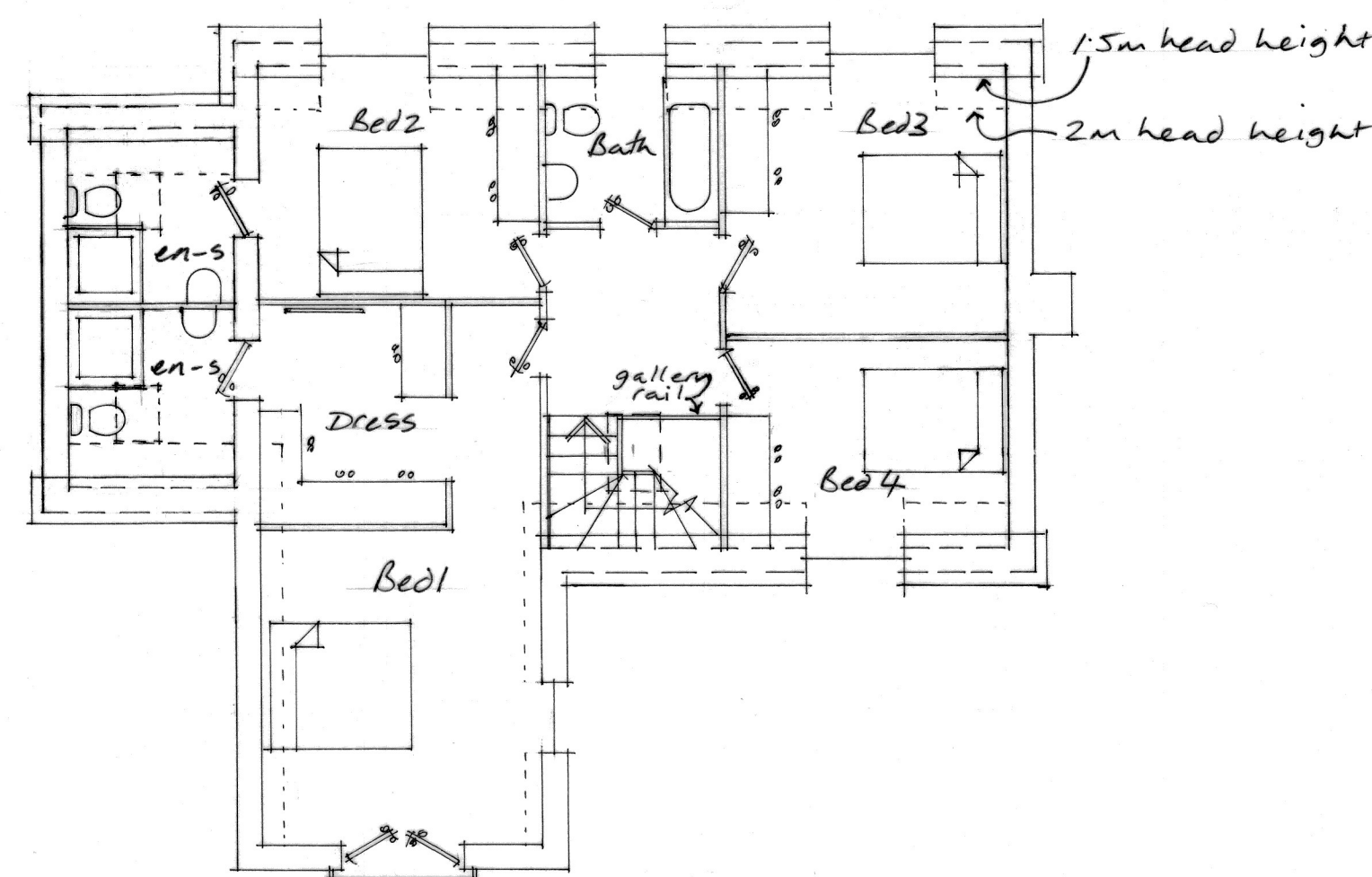
EAST ELE.



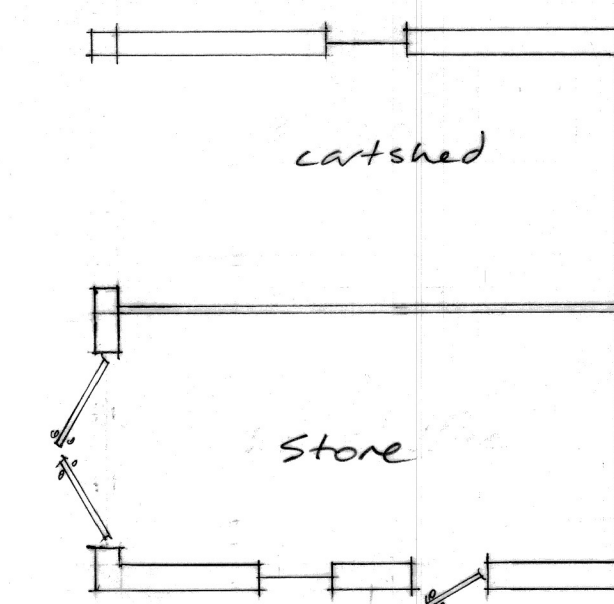
WEST ELE.



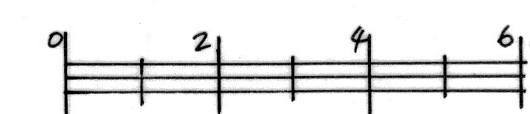
GROUND FLOOR PLAN



FIRST FLOOR PLAN



GARAGE PLAN



revisions int date

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project

LAND AT EAST GRAFTON

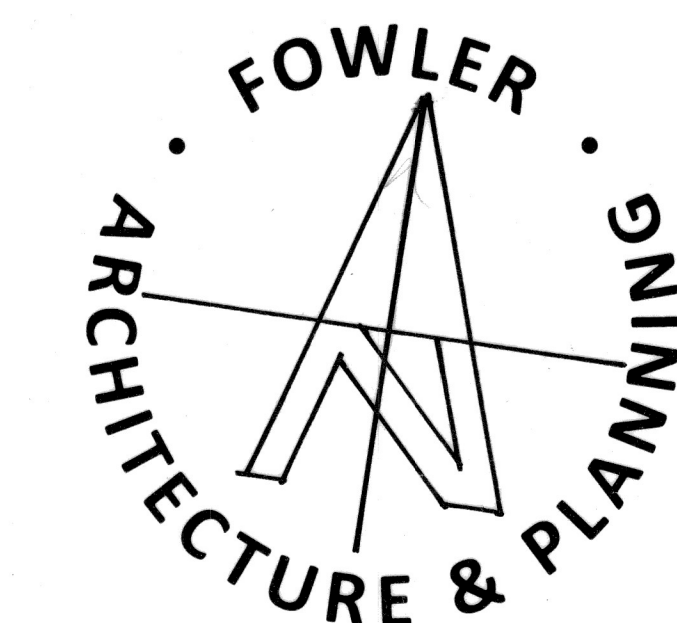
drawing

DESIGN SCHEME

scale date

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drawing no 25/113 ~ 02 8 rev



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APPENDIX C

INFILTRATION TEST RESULTS

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Subject: Land at East Grafton

Dear Richard

The two tests pits were dug over the weekend of 1-2 June and the results of the water soakaway are attached. I also attach photographs and a site plan showing the location of the two pits.

Just a few points to note which have been provided by our clients:

- Both pits had not a drop of water in when we dug them
- Pit 1 was approx. 1.5m deep and Pit 2 approx 1.7m deep
- Both Pits measured approx. 0.7m wide by 1.6m long
- Each test was done by adding approx. 1000L to the pit
- Measurements were taken from the top of hole (ground level) to the top of the water in the pits at the intervals on the recording sheet
- Pit 1 was closer to the road/entrance to the site and drained slower than Pit 2, this could have been due to long term compaction in this area caused by farm traffic over the years.

I trust this is enough information for you to complete your report – are we likely to receive it in about two weeks?

Should you need any more information, please do not hesitate to contact me.

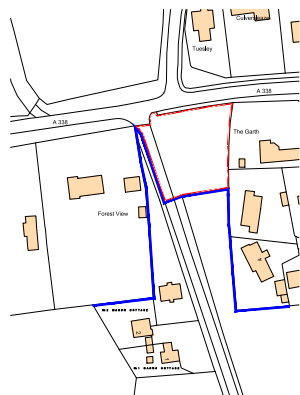
Kind regards

Mike

[REDACTED]
[REDACTED]

FOWLER ARCHITECTURE AND PLANNING

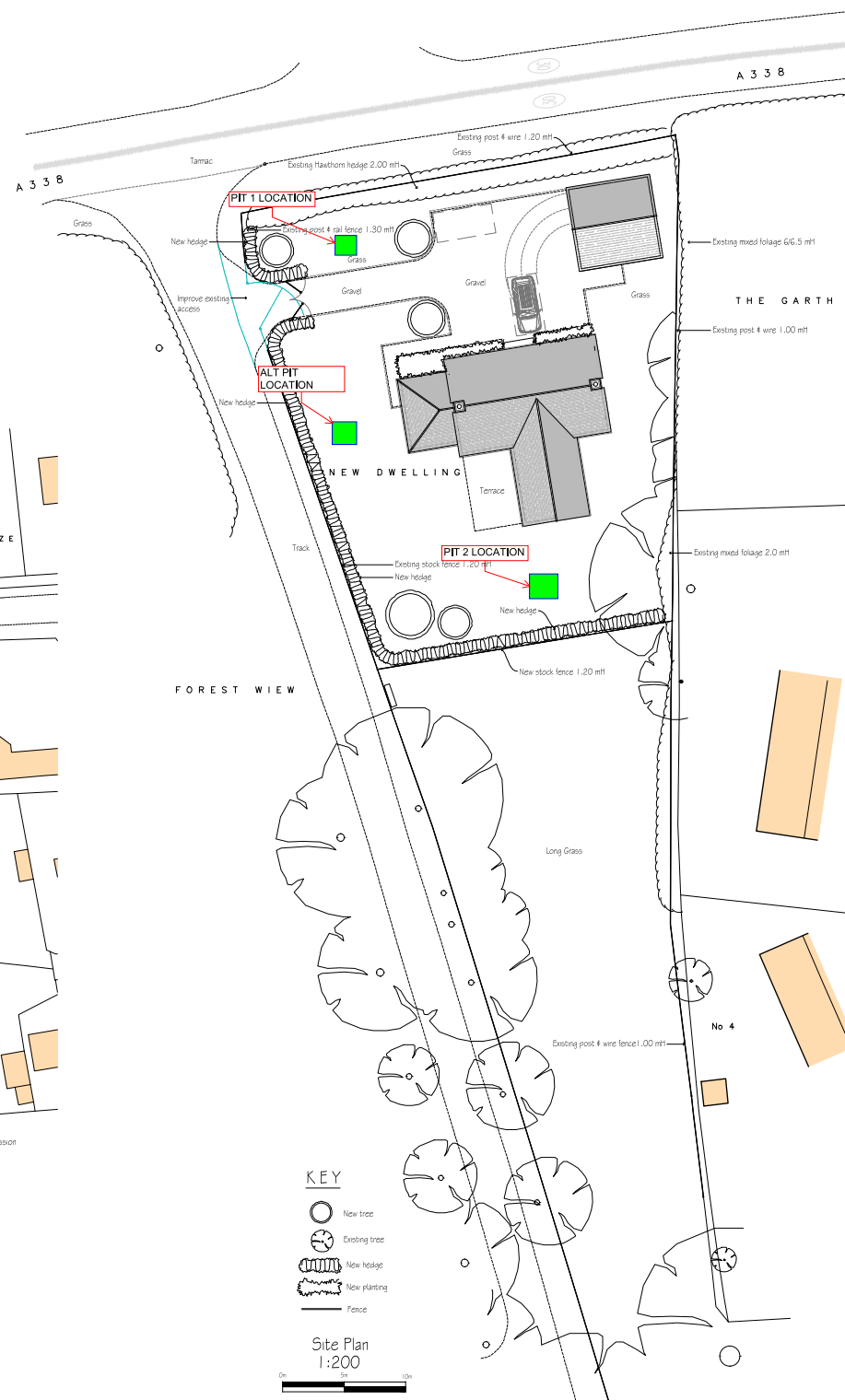
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Location Plan
1:1250



Block Plan
1:500



 New tree
 Existing tree
 New hedge
 New planting

B	Design scheme updated (MF 07/09/23)	-	12/09/23
A	Design scheme updated (MF 10/08/23)	-	15/08/23
revisions		initial	date

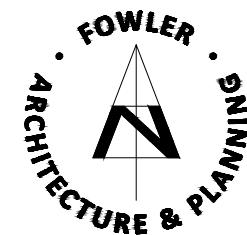
project
LAND IN EAST GRAFTON

drawing

Location, Block and Site Plan

scale 1:1250,1:500 @A1 drawn by - date July'23
1:200 @A1

230301-01



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PIT ① - ROAD

2/6/24

3/6/24

4/6/24

Test 1		Test 2		Test 3	
Time	Depth to water (m)	Time	Depth to water (m)	Time	Depth to water (m)
0 minutes	50 cm	0 minutes	35	0 minutes	43
1	52	1	40	1	46
2	59	2	42	2	50
3	63	3	43	3	52
4	64	4	46	4	58
5	71	5	48	5	63
7	73	7	50	7	68
10	75	10	52	10	71
15	78	15	55	15	74
20	79	20	61	20	78
30	80	30	66	30	81
45	82	45	70	45	83
1 hr. 60	90	60	73	60	87
1.5 hr. 90	96	90	76	90	94
2.0 hr. 120	102	120	96	120	99
2.5 hr. 150	110	150	104	150	107
3 hours		3 hours		3 hours	112
4	125	4		4	118
5	130	5	120	5	
6	Empty	6	130	6	127
8		8	Empty	8	Empty
10		10		10	
12		12		12	
24		24		24	

PIT ② BACK/EAST OF PLOT

2/6/24

3/6/24

4/6/24

Test 1		Test 2		Test 3	
Time	Depth to water (m)	Time	Depth to water (m)	Time	Depth to water (m)
0 minutes	100	0 minutes	81	0 minutes	90
1	105	1	93	1	97
2	112	2	97	2	103
3	118	3	103	3	109
4	125	4	108	4	112
5	132	5	114	5	114
7	134	7	120	7	119
10	135	10	125	10	123
15	141	15	135	15	131
20	150	20	146	20	141
30	168	30	160	30	157
45	170	45	163	45	161
60	Empty	60	167	60	163
90		90	169	90	166
120		120	Empty	120	Empty
150		150		150	
3 hours		3 hours		3 hours	
4		4		4	
5		5		5	
6		6		6	
8		8		8	
10		10		10	
12		12		12	
24		24		24	