Palladium Consulting Engineers Ltd

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Tel. 08452 990 990 Fax. 0709 284 3117

29 NICHOLAS WAY, NORTHWOOD

BASEMENT IMPACT ASSESSMENT

DATE: MAR 22

CLIENT: DUSEK DESIGN ASSOCIATES

JOB NO:222320

1.Background

The proposed development comprises a new dwelling over 4 floors, including a basement , ground floor ,first floor and second floor with associated surface car parking.

The site currently consists an existing property known as "No.29 Nicholas Way Northwood", the site has a cross fall of approximately .2m and a fall from the front boundary to the rear garden of 1m, the site comprises various mature trees including oak, cypress, yew and fruit trees. (Planning scheme see appendix c)

2. Ground Model

A desk top study of the site revealed that the site has been occupied by the existing residential property for the entirety of its developed history.
Referring to geological records and site investigation encountered at No.31 Nicholas Way, Northwood the site geological conditions can be summarised as follows:-

- Shallow top soil / made ground
- Overlying
- London Clay formation
- Overlying
- Form Brown Sandy Silty Clay

During the fieldwork no ground water was encountered to a depth of 25m in depth. (see Appendix A for borehole record)

3. Flood Risk Assessment

Referring to Enviroment Agency Database the site lies in floor zone 1, an area with a low probability of flooding. (see appendix B for records)

The floor risk detailed assessment for 1:100+ year storm event, indicates the site is outside any area for flooding.

Learn more about this area's flood risk

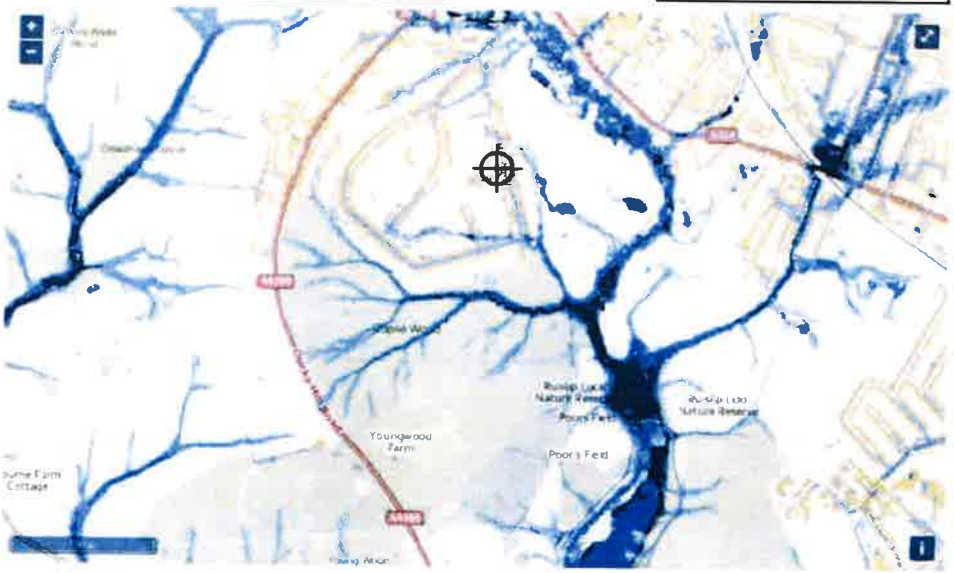
Select the type of flood risk information you're interested in. The map will then update

Flood risk

Low risk: depth

Location

HA62XB



4. Proposed Basement Construction

In view of the depth of the basement construction and the associated depth of basement excavations, precautions will be required in order to safe guard the neighbouring properties as outlined below:-

- No.27 Nicholas Northwood is a existing building of 1970-80 construction
- No.31 Nicholas Northwood is a new build currently under construction
-

In order to construct the proposed new build basement a bored pile wall will be constructed around the proposed basement foot print to enable the basement excavation and works to progress in a safe environment, protecting the neighbouring properties from any potential settlement.

The proposed method of construction and relationship to the adjoining properties is illustrated in Appendix D of this report.

Due to the fact that no ground water was encountered during the adjacent site investigation works it is considered only localised pumping will be required to deal with ground water collected during times of rainfall.

We would point out that prior to commencement on site, that a series of ground water standpipes should be installed and monitored.

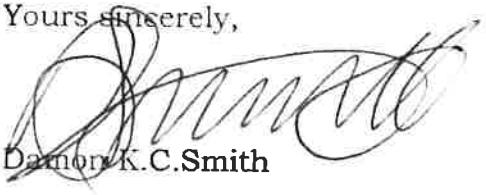
5.Ground Water Flooding and Drainage Risks.

Due to the fact that no ground water was encountered during the adjacent site investigation works , and the desk top study highlighted the site to be contained within a flood zone 1with no flooding risk during a 1:100+ year storm event. It is considered that the risk of the proposed development causing any flooding or drainage issues are negligible.

We would point out that prior to commencement on site, that a series of ground water standpipes should be installed and monitored.

We trust the above is of assistance and should you require anything further please contact the writer.

Yours sincerely,



Damon K.C.Smith

APPENDIX A : SI DATA

Palladium Consulting Engineers

Telephone : Stevenage (01438) 861961

BOREHOLE LOG

Borehole BH1

Sheet 1 of 2

Method	Date	Site
Light Cable Percussion.	02/12/20	31 Nicholas Way, Northwood.

Dia mm	Coord	Ground Level m O.D.	Client
150			

Soil Samples/Tests Type/Test	Depth m.	Casing (Water) Depths m	Field Records	Depth m.	Description of Strata (thickness in m.) [reduced level in m.]
				0.05	FLEXIBLE PAVEMENT (0.05)
				0.15	ROADSTONE FILL (drillers description) (0.10)
D1	0.30				MADE GROUND comprising brown sandy clay/very clayey sand with brick, concrete, asphalt and quartzite/chert fragments from fine to coarse gravel size (0.60)
				0.75	
D2	0.90				Firm mottled bluish grey and brownish yellow CLAY with rare recently active and decayed roots (LONDON CLAY FORMATION) (1.65)
D3	1.20				
S1 (9)	1.35 - 1.65	1.20			
D4	2.50			2.40	
U1 (50)	3.00 - 3.45	1.60			Stiff closely fissured yellowish brown CLAY with occasional bluish grey and orangish brown mottling, selenite crystals and rare decayed roots (LONDON CLAY FORMATION) (1.60)
D5	3.50				
D6	4.00			4.00	
D7	4.50				Firm fissured yellowish brown CLAY with occasional light brown fine sand/silt pockets and selenite crystals (LONDON CLAY FORMATION) (2.00)
S2 (15)	4.65 - 4.95	1.60			
D8	5.50		STRIKE at 5.50m slight seepage		
D9	6.00			6.00	
S3 (18)	6.15 - 6.45	1.60			Firm brown sandy silty CLAY (LAMBETH GROUP) (1.50)
D10	7.00				
U2 (70)	7.50 - 7.95	1.60		7.50	
				7.70	Stiff dark yellowish brown CLAY with rare fossil fragments and yellowish brown silt pockets (LAMBETH GROUP) (0.20)
D11	8.00				Very stiff closely fissured mottled light yellowish brown and light grey CLAY with calcareous pockets (LAMBETH GROUP) (5.00)
D12	8.50				
D13	9.00				
S4 (50*)	9.15 - 9.40	1.60			
D14	10.00				

Remarks

Hand dug pit to 1.20m to check for services
Chiselling from 10.10m to 10.25m for 15 minutes
Borehole was dry on completion and after casing was removed

Logged by	Scale	End Casing Depth	Job No.
JCG	1:50	m. 1.60	537697

Sample/Test key:

U()	U100 Sample (blows)	S ()	Standard (N value)
D	Disturbed sample	C ()	Cone (N value)
B	Bulk sample	*	Blows and penetration when 300mm not achieved
W	Water sample		
-	Progress & Day		
▼	Groundwater level		

Penetration Tests

Page

Palladium Consulting Engineers

Telephone : Stevenage (01438) 861961

BOREHOLE LOG

Borehole BH1

Method	Date	Site
Light Cable Percussion.	02/12/20	31 Nicholas Way, Northwood.

Dia mm	Coord	Ground Level m O.D.	Client
150			

Soil Samples/Tests Type/Test	Depth m.	Casing [Water] Depths m	Field Records	Legend	Depth m.	Description of Strata (thickness in m.) [reduced level in m.]
D15	10.50					Very stiff closely fissured mottled light yellowish brown and light grey CLAY with calcareous pockets (LAMBETH GROUP) (Continued from previous page)
S5 (50*)	10.65 - 10.40	1.60				10.10m - siltstone band to 10.25m
D16	11.50					
D17	12.00					
S6 (50*)	12.15 - 12.40	1.60				
					12.70	
D18	13.00					Very stiff closely fissured mottled light grey and yellowish brown becoming brown CLAY with occasional calcareous pockets (LAMBETH GROUP) (4.25)
U3 (90)	13.50 - 13.95	1.60				
D19	14.00					
D20	14.50					
S7 (50*)	15.15 - 15.35	1.60				
D21	15.50					
D22	16.00					
D23	16.50					
S8 (50*)	16.65 - 16.85	1.60				
D24	17.00				16.95	
S9 (50*)	17.15 - 17.30	1.60				Very dense yellowish brown clayey very silty fine SAND (LAMBETH GROUP) (0.35)
					17.30	UNABLE TO PROGRESS BOREHOLE BEYOND 17.30m

Remarks

Hand dug pit to 1.20m to check for services
Chiselling from 10.10m to 10.25m for 15 minutes
Borehole was dry on completion and after casing was removed

Logged by	Scale	End Casing Depth	Job No.
JCG	1:50	m. 1.60	S37697

Sample/Test key:

UT	U100 Sample (blows)	S ()	Standard (N value)
D	Disturbed sample	C ()	Cone (N value)
B	Bulk sample	*	Blows and penetration when 300mm not achieved
W	Water sample		
	Progress & Day		
	Groundwater level		

Penetration Tests

APPENDIX B : FLOOD RISK DESK TOP STUDY

Palladium Consulting Engineers
A.C.Smith. C.Eng. M.I.StructE. F.G.S. C.Geol. & D.K.C.Smith. B.Eng. M.Sc. C.Eng. M.I.Struct.E.

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
31 NICHOLAS	**508245/190685**	**23 Mar 2022 8:52**

Your selected location is in flood zone 1, an area with a low probability of flooding.

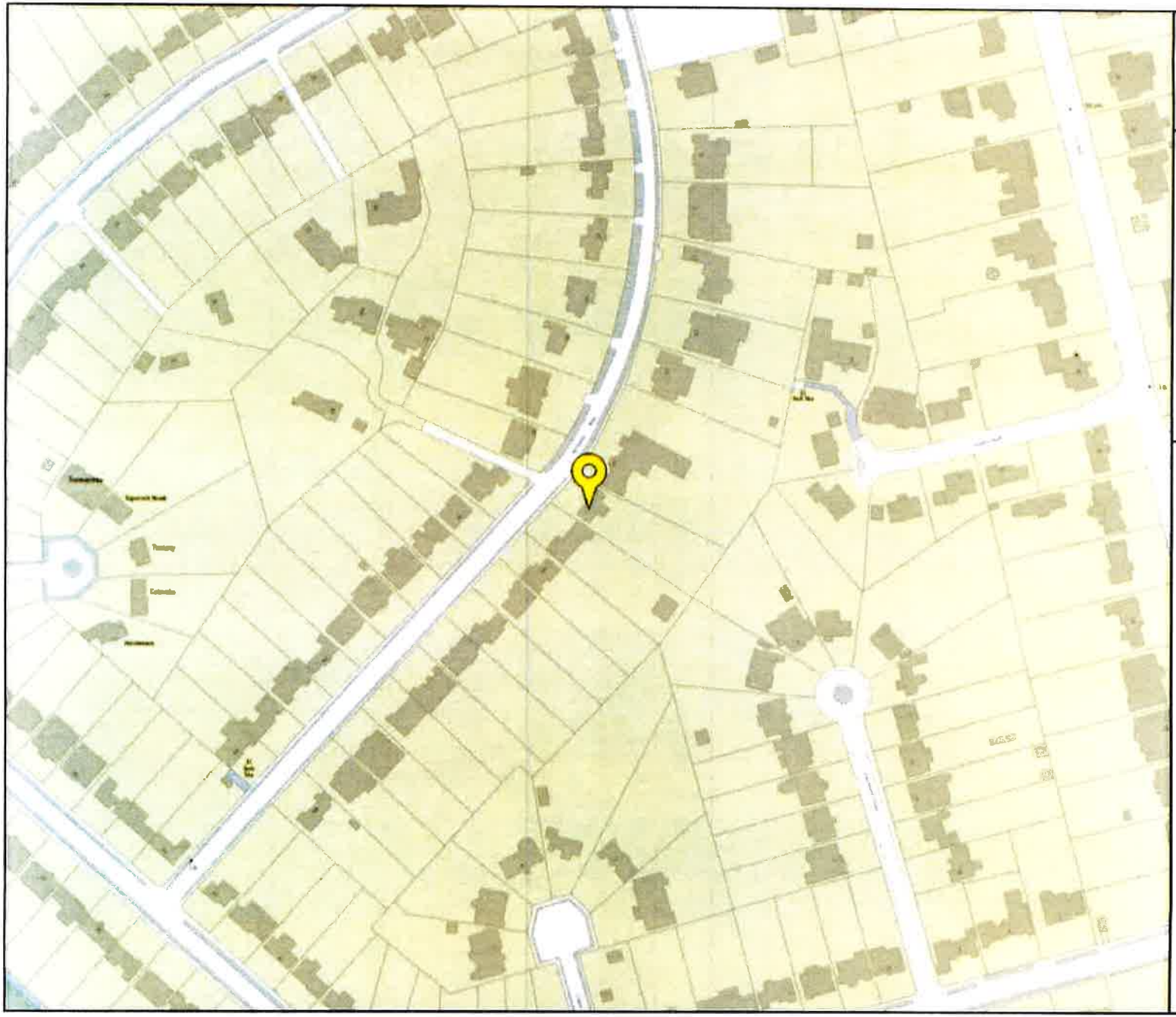
This means:

- you don't need to do a flood risk assessment if your development is smaller than 1 hectare and not affected by other sources of flooding
- you may need to do a flood risk assessment if your development is larger than 1 hectare or affected by other sources of flooding or in an area with critical drainage problems

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.



Environment Agency

Flood map for planning

Your reference
31 NICHOLAS

Location (easting/northing)
508245/190685

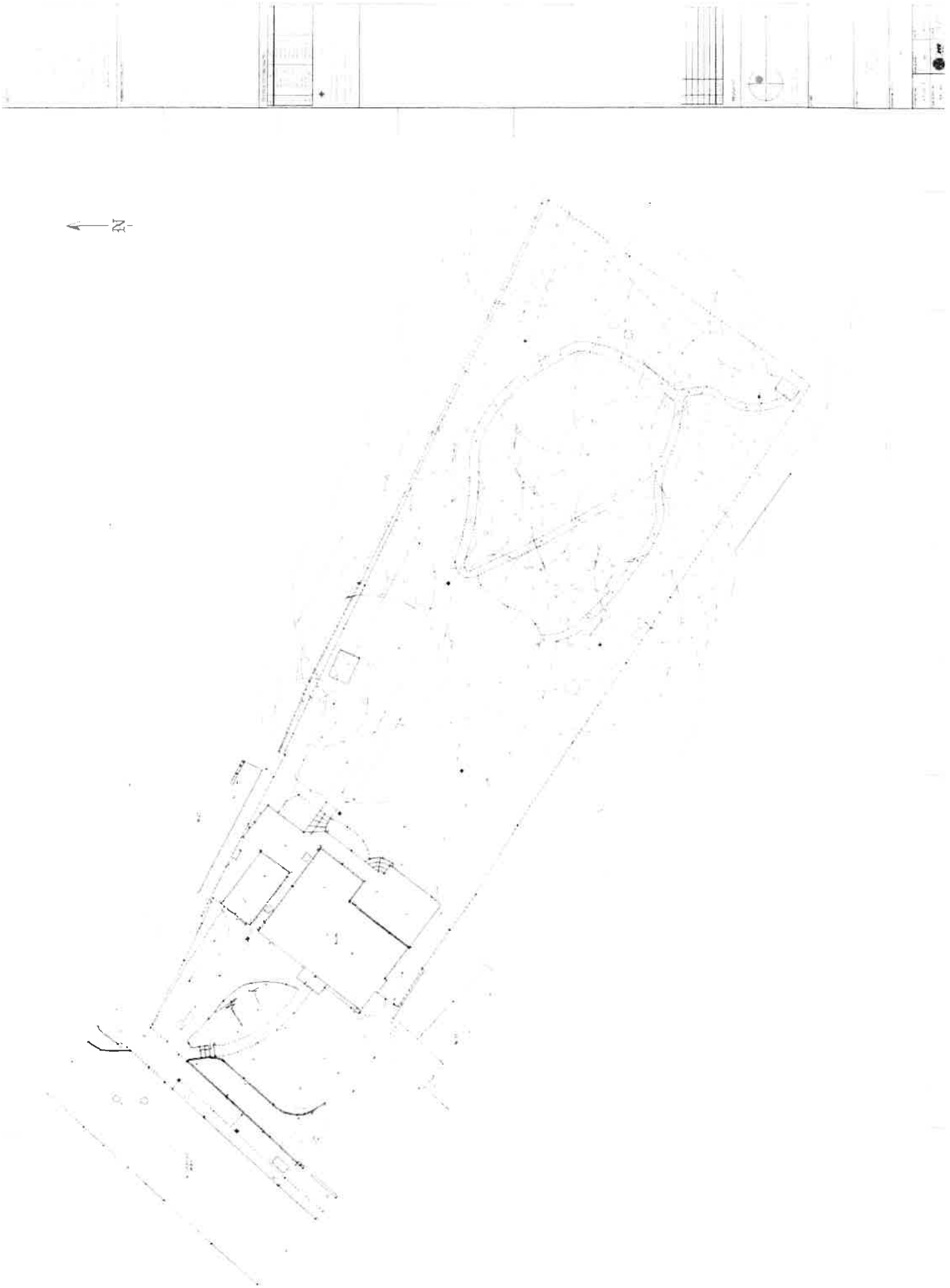
Scale
1:2500

Created
23 Mar 2022 8:52

- Selected point
- Flood zone 3
- Flood zone 3: areas benefitting from flood defences
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Flood storage area

0 20 40 60m

APPENDIX C: PROPOSED PLANNING SCHEME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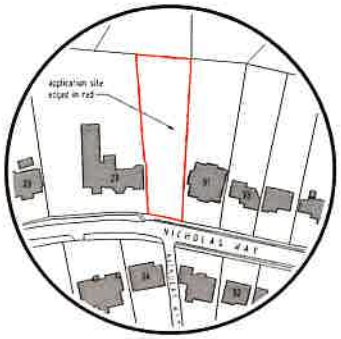
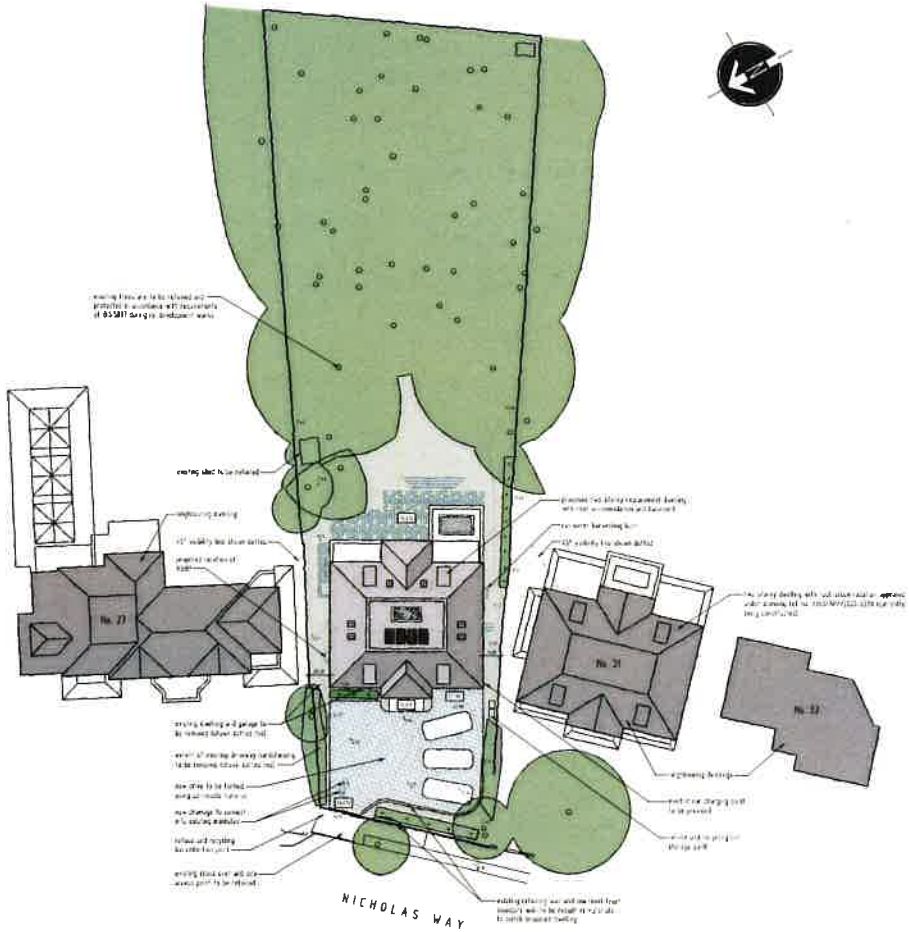


LOCATION PLAN
SCALE 1:1250

0 25 50 75 100 125

PROPOSED STREET SCENE ALONG NICHOLAS WAY
SCALE 1:250

0m 5 10 15 20 25m



PROPOSED SITE LAYOUT PLAN
SCALE 1:250

0 5 10 15 20 25

LEGEND

- existing structure to be removed
- proposed two storey structure
- proposed single storey structure
- proposed permeable drive
- proposed permeable paths and patios
- existing levels
- proposed levels
- existing trees to be retained
- existing hedgerow planting / shrubs
- proposed hedge
- mixed shrub beds
- existing trees to be removed

for tree and ground protection details please refer to the GHA Arboricultural Report and Tree Protection Plan

Site Area: 0.17 ha

rev.	date	description
scale	1:250 A1	date 17 / 10 / 2022
drawing no.	1393 / P / 1	drawn TF

drawing: PROPOSED SITE LAYOUT & LOCATION PLAN

project: 29 NICHOLAS WAY NORTHWOOD, HA6 2TR

client: MR AND MRS PATEL

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print history: Wednesday 19 October 2022 11:22:49

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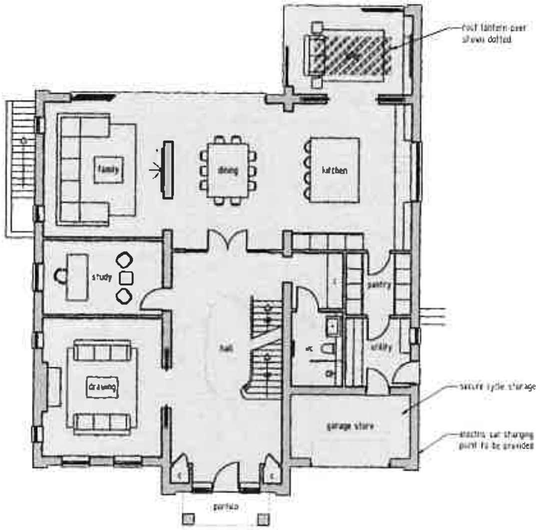
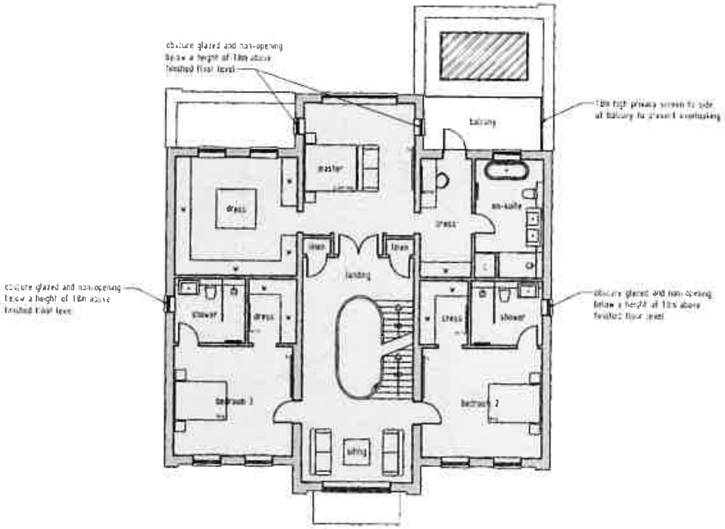
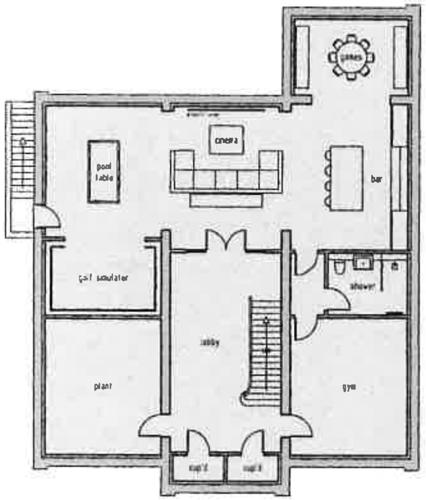


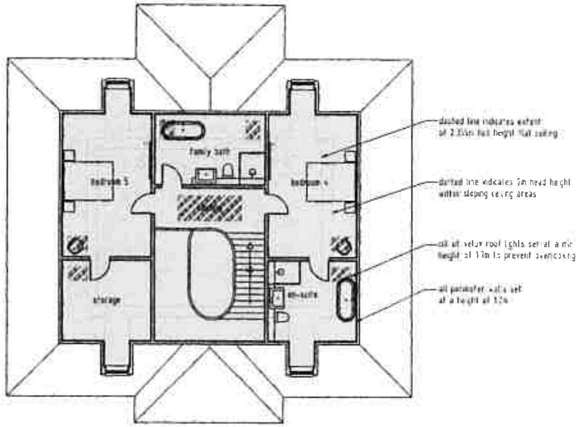
PROPOSED GROUND FLOOR PLAN
SCALE 1:100



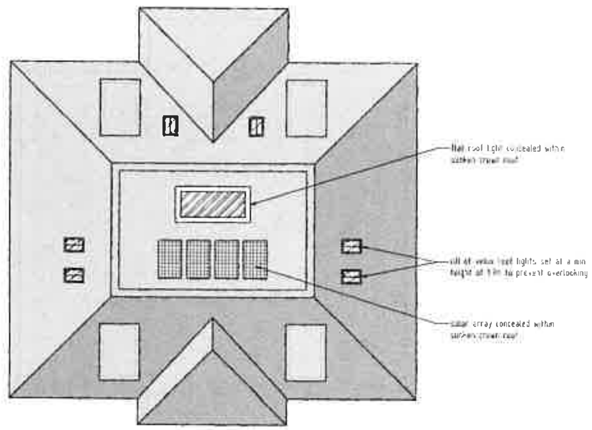
PROPOSED FIRST FLOOR PLAN
SCALE 1:100



PROPOSED BASEMENT PLAN
SCALE 1:100



PROPOSED ROOF AREA PLAN
SCALE 1:100



PROPOSED ROOF PLAN
SCALE 1:100

SCALE BAR (m)
0 2 4 6 8 10

rev	date	description
scale 1:100 @ A1	date	
drawing no.	1393 / P / 2	
drawing	PROPOSED FLOOR PLANS	
project	29 NICHOLAS WAY NORTHWOOD, HA6 2TR	
client	MR AND MRS PATEL	

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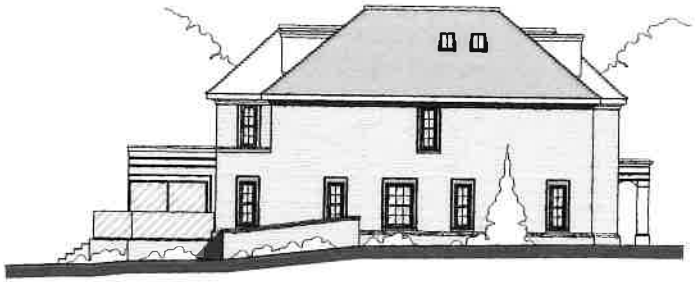
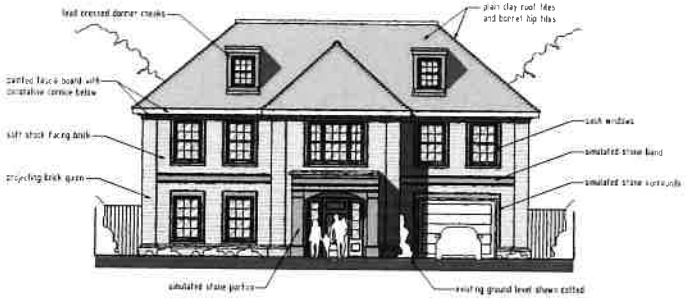
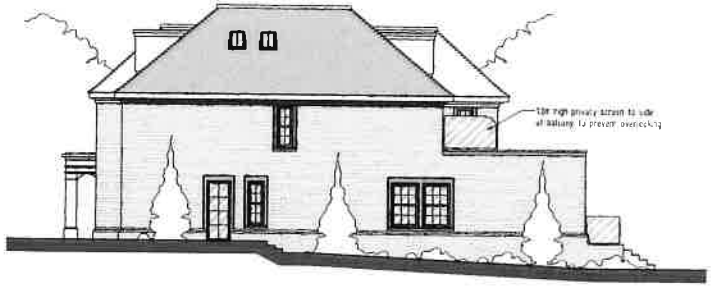
PROPOSED REAR ELEVATION
SCALE 1:100



PROPOSED SIDE ELEVATION
SCALE 1:100



PROPOSED FRONT ELEVATION
SCALE 1:100



PROPOSED SIDE ELEVATION
SCALE 1:100

SCALE BAR (m)

0 2 4 6 8 10

rev	date	description
scale	1:100 @ A3	date
drawing no	1353 / P / 3	sheet

drawing: PROPOSED ELEVATIONS

project: 29 NICHOLAS WAY
NORTHWOOD, HA6 2TR

client: MR AND MRS PATEL

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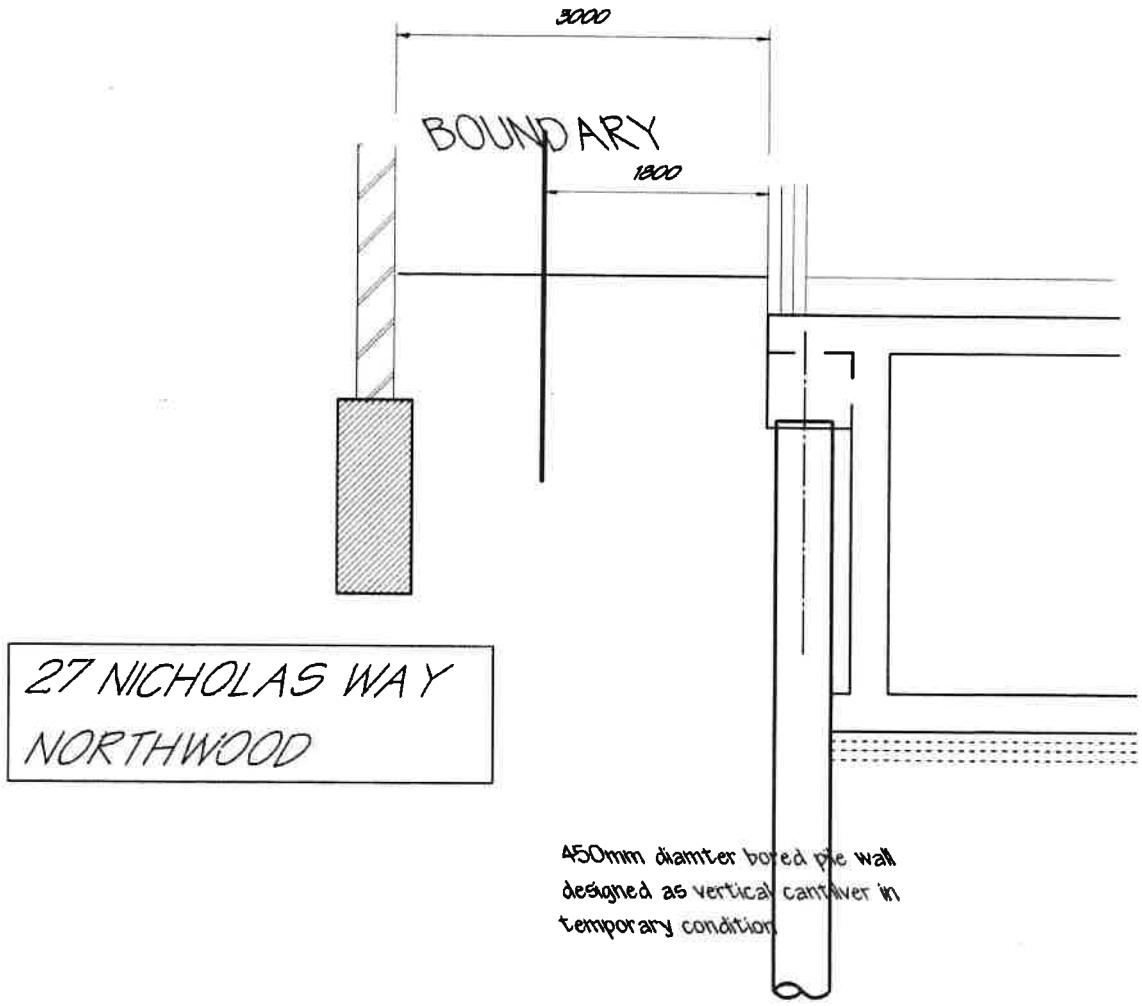
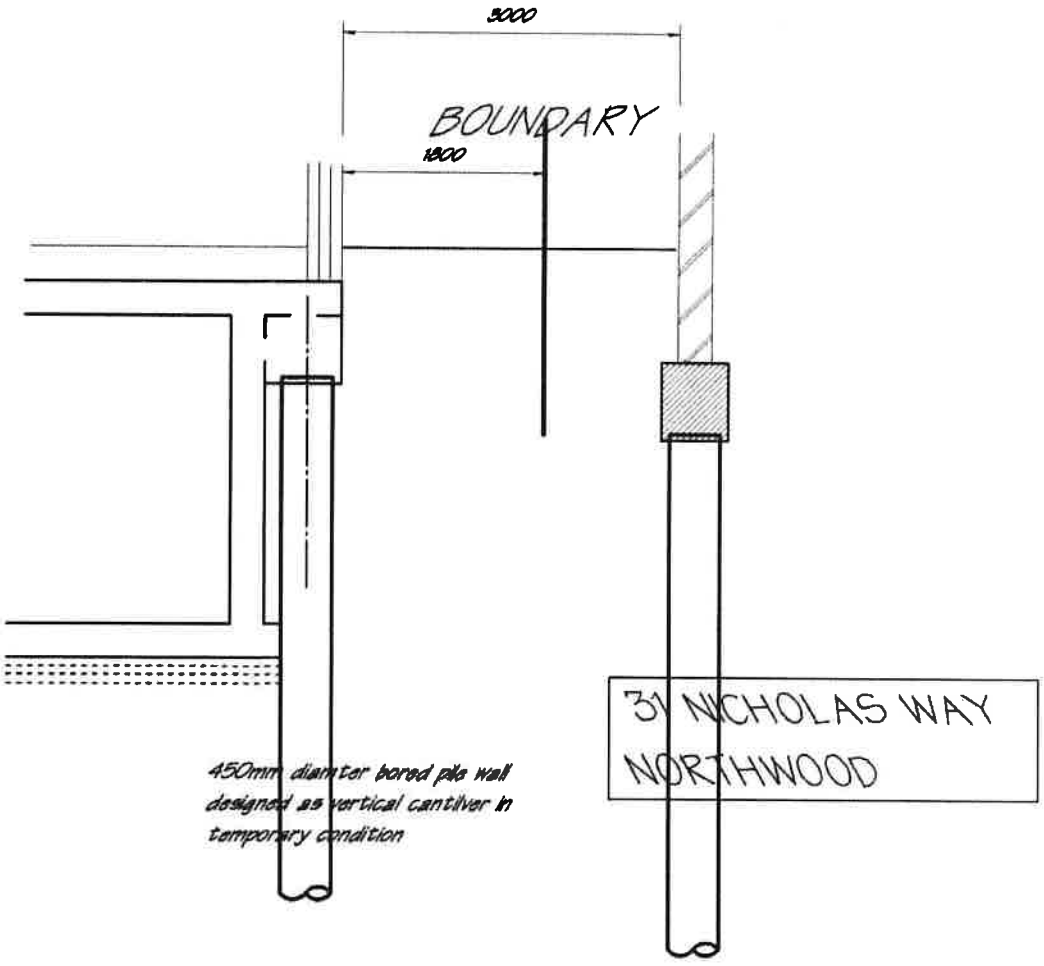
brief history: Wednesday, 19 October 2022

APPENDIX D : PROPOSED BASEMENT SECTIONS



BOUNDARY SECTION



BOUNDARY SECTION