

**FLOOD RISK ASSESSMENT
FOR
BRACKLE
EAST BRACKLESHAM DRIVE
WEST SUSSEX
PO20 8JW**



1.0 Introduction

1.01 - The Flood risk assessment is provided as a requirement and as part of Planning Application reference 24/00536/DOM Proposed Alterations and Extensions including detached single Garage.

1.02 - The assessment is to be read in conjunction with Appendix A - Flood Risk Assessment Data provided by The Environment Agency and specific to the application site.

1.03 - The existing building is a domestic dwelling with a current gross internal floor area of 107m². There is an outbuilding with a gross internal floor area of 8m².

1.04 - The Total gross internal floor area of buildings on the application site is therefore 115m².

(Please refer to drawing 001 at Appendix B for plans of the existing dwelling.)

2.0 Development Proposal

2.01 - The proposal is to demolish the existing garage and outbuilding with proposed partial demolition of the existing dwelling.

2.02 - The proposed gross internal floor area for the application site is 203m² (Including Proposed Garage).

2.03 - The change in the amount of new build development equates to an additional gross internal floor area of 88m² and is significantly less than 250m². On this basis, the proposal is classed as a "Minor Development".

2.04 - Surface water is proposed to be dispersed via soakaway as a sustainable drainage solution.

2.05 - Foul water drainage will be discharged via the existing main foul water sewer.

2.06 - Proposed floor levels for the extensions will be as the existing dwelling to afford level access throughout.

(Please refer to drawing 002 at Appendix C for plans of the proposed extensions to the existing dwelling including proposed garage.)

3.0 Flood Zone 2

3.01 - The application site is within flood zone 2.

3.02 - Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding.

4.0 Assessment of Risks

4.01 - The risk of flooding from the sea to the application site in any year is between 0.1 and 0.5%. The risk of flooding to the application site is therefore assessed as minimal.

4.02 - The risk of undefended flooding from the sea to the application site in any year is between 0.1 and 0.5% probability.

4.03 - The risk of undefended fluvial (River) flooding to the application site in any year between a 0.1% and 1% probability.

4.04 - The risk of flooding to the application site both from the sea and fluvial is therefore assessed as extremely minimal and highly improbable.

4.05 - The proposed increase in gross internal floor area of 88m² to the application site will be negligible in terms of increased flood risk due to increase in creation / discharge of surface water and highly improbable.

4.06 – It is improbable that contamination of land will be caused by the continued use as a domestic dwelling and proposed extension of the dwelling.

4.07 - The proposed development site will continue to be used as a domestic dwelling and as such will not have the potential to pollute ground or surface water receptors.

5.00 Summary

5.01 - The risk of flooding to the application site is negligible and highly improbable.

5.02 – The increased gross internal floor area and additional volumes of surface water discharge are negligible and will not represent increased flood risks to the surrounding area / properties.

APPENDIX A
ENVIRONMENT AGENCY FLOOD RISK ASSESSMENT DATA

Flood risk assessment data



Location of site: Brackle, East Bracklesham Drive, Chichester, PO20 8JW

Document created on: 5 April 2024

This information was previously known as a product 4.

Customer reference number: SSD354193

Map showing the location that flood risk assessment data has been requested for.



How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

We recommend that you work with a flood risk consultant to get your flood risk assessment.

Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- historic flooding
- flood defences and attributes
- information to help you assess if there is a reduced flood risk from rivers and the sea because of defences
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Surface water and other sources of flooding

Use the [long term flood risk service](#) to find out about the risk of flooding from:

- surface water
- ordinary watercourses
- reservoirs

For information on flooding from other sources such as surface water please contact the Lead Local Flood Authority, West Sussex County Council.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Chichester District Council SFRA Coastal Modelling
Scenario(s): Defended tidal, Undefended tidal
Date: 2022

This model contains the most relevant data for your area of interest.

Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occurring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 2.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change

The flood zones are not currently being updated. The last update was in November 2023. Some of the flood zones may have changed, however all source data is included in the models below.

Flood Map for Planning (Rivers and Sea). Centred PO20 8JW. Created 05/04/2024.







1: 10,000

0 Metres 250



Flood Map for Planning (Rivers & Sea)

-  Defences
-  Flood Storage Areas
-  Flood Zone 3
-  Flood Zone 2

Flood Map Areas (assuming no defences)

Flood Zone 3 shows the area that could be affected by flooding:

- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

Historic flooding

This map is an indicative outline of areas that have previously flooded. Remember that:

- our records are incomplete, so the information here is based on the best available data
- it is possible not all properties within this area will have flooded
- other flooding may have occurred that we do not have records for
- flooding can come from a range of different sources - we can only supply flood risk data relating to flooding from rivers or the sea

You can also contact your Lead Local Flood Authority or Internal Drainage Board to see if they have other relevant local flood information. Please note that some areas do not have an Internal Drainage Board.

[Download recorded flood outlines in GIS format](#)






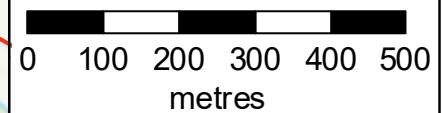
Historic flood map

Location (easting/northing)
481030/96131

Scale
1:10,000

Created
5 Apr 2024

-  Selected area
-  Main river
- Date of flood event
-  January, 1996



Historic flood event data

Start date	End date	Source of flood	Cause of flood	Affects location
9 January 1996	9 January 1996	drainage	unknown	No

Flood defences and attributes

The flood defences map shows the location of the flood defences present.

The flood defences data table shows the type of defences, their condition and the standard of protection. It shows the height above sea level of the top of the flood defence (crest level). The height is in mAOD which is the metres above the mean sea level at Newlyn, Cornwall.

It's important to remember that flood defence data may not be updated on a regular basis. The information here is based on the best available data.

Use this information:

- to help you assess if there is a reduced flood risk for this location because of defences
- with any information in the modelled data section to find out the impact of defences on flood risk






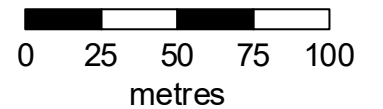
Flood defences

Location (easting/northing)
481030/96131

Scale
1:2,500

Created
5 Apr 2024

-  Selected area
-  Main river
-  Flood defence



Flood defences data

Label	Asset ID	Asset Type	Standard of protection (years)	Current condition	Downstream actual crest level (mAOD)	Upstream actual crest level (mAOD)	Effective crest level (mAOD)
1	178235	Beach	25				
2	178234	Beach	25				
3	178233	Beach	25				

Any blank cells show where a particular value has not been recorded for an asset.

Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- modelled node point map(s) showing the points used to get the data to model the scenarios and table(s) providing details of the flood risk for different return periods
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

Climate change

The climate change data included in the models may not include the [latest flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios





The following scenarios are included:

- Defended modelled tidal: risk of flooding from the sea where there are flood defences
- No defences exist modelled tidal: risk of flooding from the sea where there are no flood defences

Modelled Flood Outlines (Defended Tidal). Centred PO20 8JW. Created 05/04/2024.

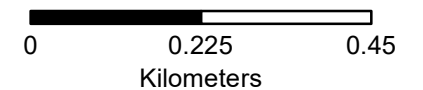


Legend

-  Site Boundary
-  0.5% AEP (Defended Tidal)
-  0.5% AEP (2121) (Defended Tidal)
-  0.1% AEP (Defended Tidal)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000







Ordnance Survey

Modelled Flood Outlines (Un defended Tidal). Centred PO20 8JW. Created 05/04/2024.

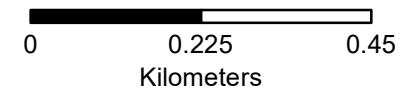


Legend

-  Site Boundary
-  0.5% AEP (Un defended Tidal)
-  0.5% AEP (2121) (Un defended Tidal)
-  0.1% AEP (Un defended Tidal)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.



Scale: 1:10,000



Ordnance Survey

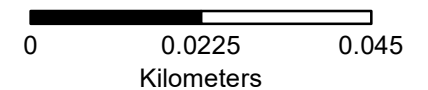


Legend

-  Site Nodes
-  Site Boundary

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:1,000



Ordnance Survey

Product 4 Flood Risk Data Requested by: Steve Tubb

Site: Brackle, East Bracklesham Drive, Bracklesham Bay, Chichester, PO20 8JW

Table 1: Water Levels: Tidal Undefended

Node Ref	NGR		Modelled Flood Levels in Metres AOD		
	Eastings	Northings	Undefended Annual Exceedance Probability		
			0.5%	0.5% (2121)	0.1%
1	481014	96109	-	4.79	-
2	481024	96124	-	4.79	-
3	481035	96138	-	4.79	-
4	481046	96152	-	4.79	-

Table 2: Water Levels: Tidal Defended

Node Ref	NGR		Modelled Flood Levels in Metres AOD		
	Eastings	Northings	Defended Annual Exceedance Probability		
			0.5%	0.5% (2121)	0.1%
1	481014	96109	-	4.93	-
2	481024	96124	-	4.90	4.60
3	481035	96138	-	4.88	-
4	481046	96152	-	4.89	-

Table 3: Water Depths: Tidal Undefended

Node Ref	NGR		Modelled Flood Depths in Metres		
	Eastings	Northings	Undefended Annual Exceedance Probability		
			0.5%	0.5% (2121)	0.1%
1	481014	96109	-	0.10	-
2	481024	96124	-	0.23	-
3	481035	96138	-	0.20	-
4	481046	96152	-	0.02	-

Table 4: Water Depths: Tidal Defended

Node Ref	NGR		Modelled Flood Depths in Metres		
	Eastings	Northings	Defended Annual Exceedance Probability		
			0.5%	0.5% (2121)	0.1%
1	481014	96109	-	0.22	-
2	481024	96124	-	0.34	0.04
3	481035	96138	-	0.29	-
4	481046	96152	-	0.12	-

All levels taken from: Chichester District Council SFRA Coastal Modelling (2022), completed by JBA Consulting.

Produced on: 05/04/2024

**** The flood risk data provided is based on existing EA hydraulic models with an allowance for climate change. Please note the climate change allowances provided are not up to date. These were updated on 27 July 2021. You should refer to ['Flood risk assessments: climate change allowances'](#) for the most up to date allowances. You will need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.**

There is no additional information or health warnings for these levels/depths or the model from which they have been produced.

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

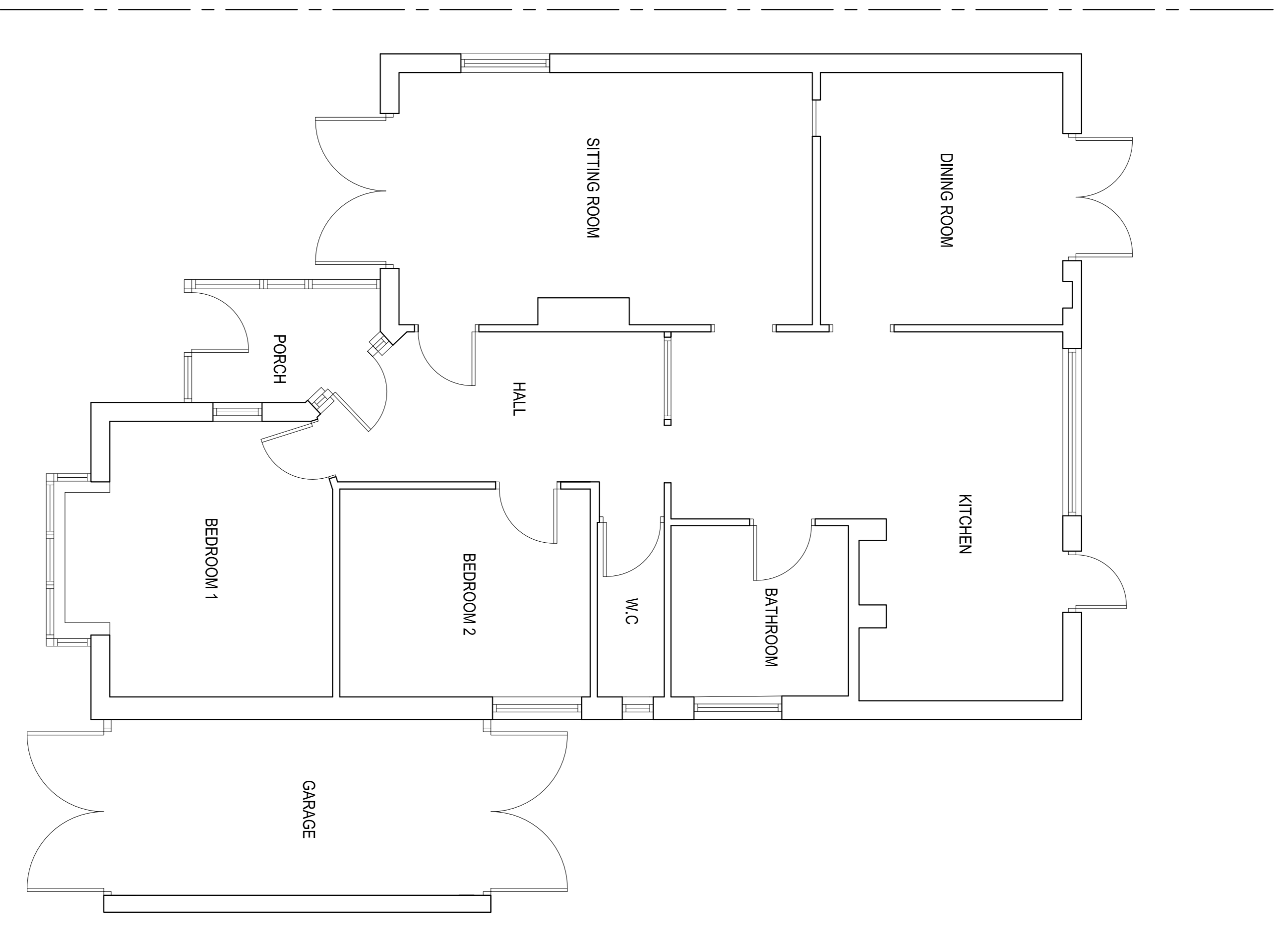
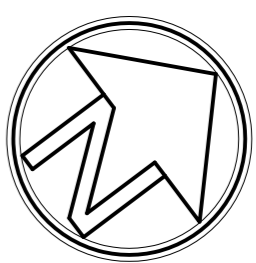
[Find out more about flood risk activity permits](#)

Help and advice

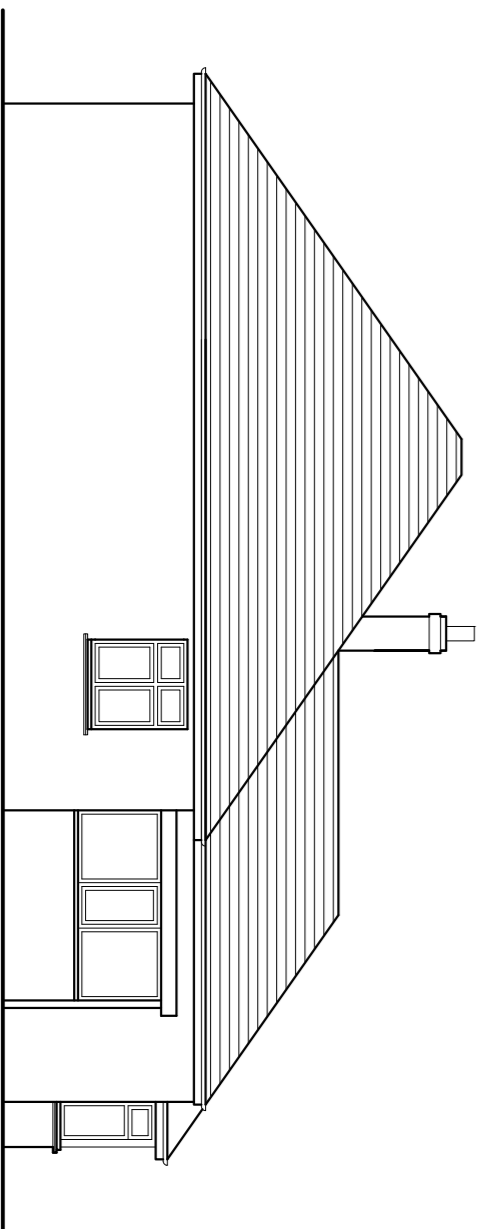
Contact the Solent and South Downs Environment Agency team at ssdenquiries@environment-agency.gov.uk for:

- [more information about getting a product 5, 6, 7 or 8](#)
- general help and advice about the site you're requesting data for

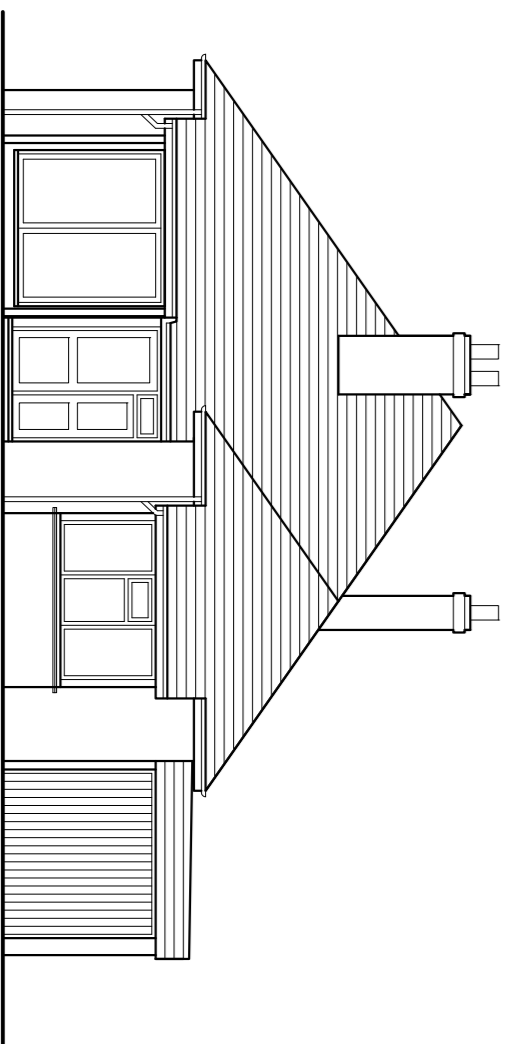
APPENDIX B
EXISTING DRAWING



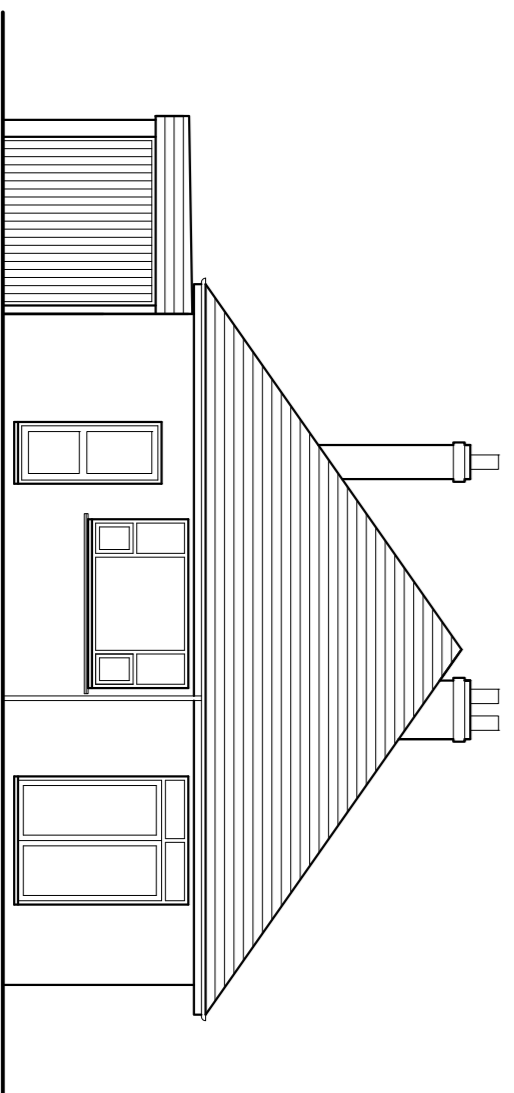
GROUND FLOOR PLAN EXISTING 1:50



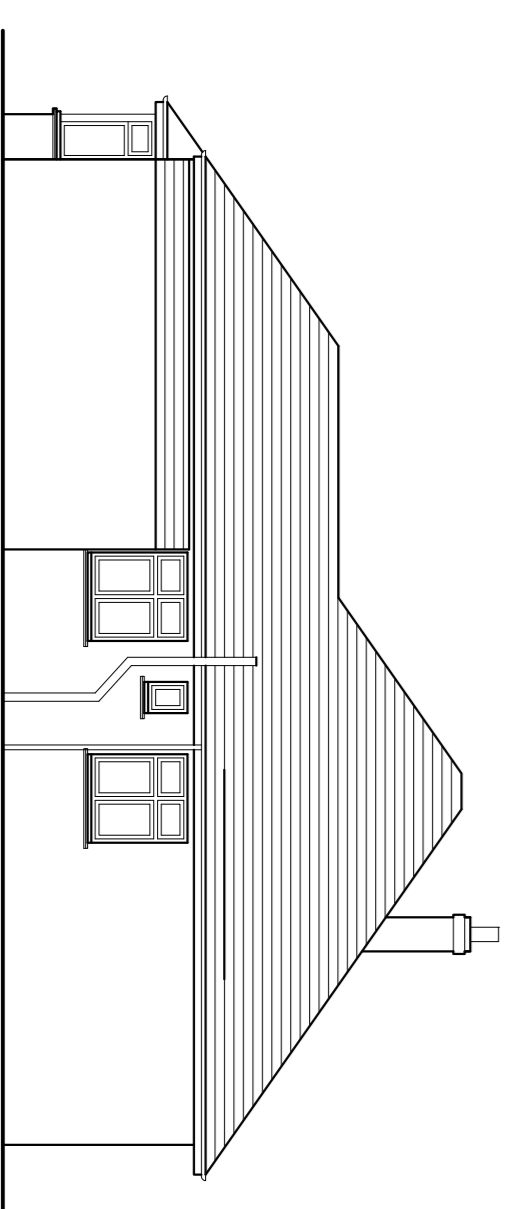
WEST ELEVATION EXISTING 1:100



SOUTH ELEVATION EXISTING 1:100



NORTH ELEVATION EXISTING 1:100



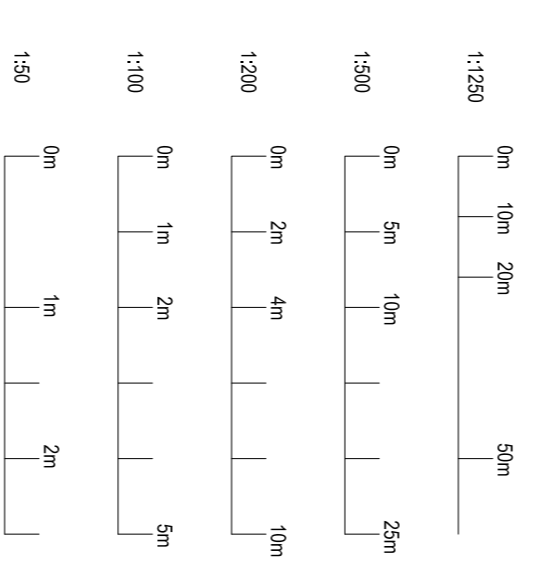
EAST ELEVATION EXISTING 1:100



LOCATION PLAN 1:1250

© Crown copyright 2019 Ordnance Survey 100054135

GENERAL
DO NOT SCALE FROM THIS DRAWING EXCEPT FOR PLANNING APPLICATION PURPOSES. ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT OF WORK. ALL DIMENSIONS RELATING TO SUB-CONTRACTORS OR SUPPLIERS WORK MUST BE CHECKED AND AGREED BETWEEN THE CONTRACTOR AND THE SUB-CONTRACTORS AND SUPPLIERS. ALL DIMENSIONS ARE IN MILLIMETRES. IF IN DOUBT ASK
ALL WORKS OR MATERIALS INDICATED ON THE DRAWING ARE TO BE TO THE LATEST BRITISH STANDARDS AND ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT CODES OF PRACTICE OR RECOGNISED TRADE ASSOCIATION RECOMMENDATIONS AND PUBLICATIONS.
THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS OF OTHER CONSULTANTS. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.



REV	DRAWN	DATE	DESCRIPTION

CLIENT
Mr Harry Waller

SITE ADDRESS
Brackie
East Bracklesham Drive
West Sussex
PO20 8JW

DRAWING TITLE
Proposed Extension and Alterations
Existing Ground Floor Plan
Existing Elevations, Location Plan

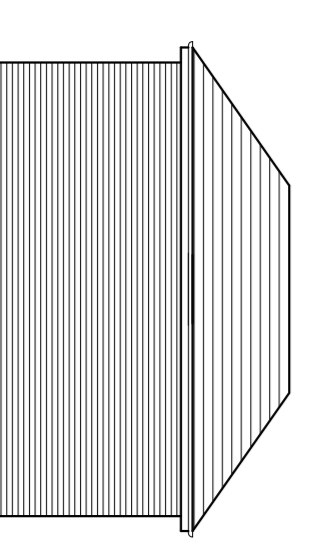
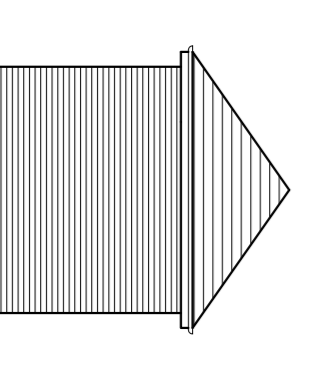
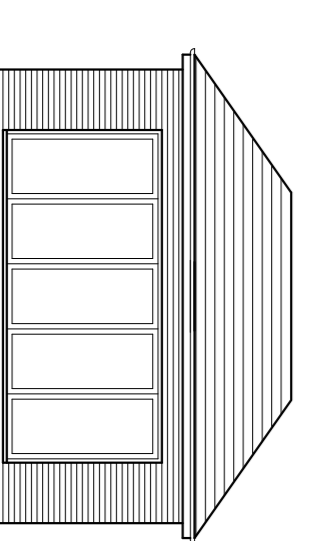
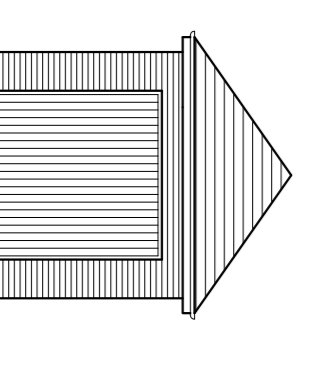
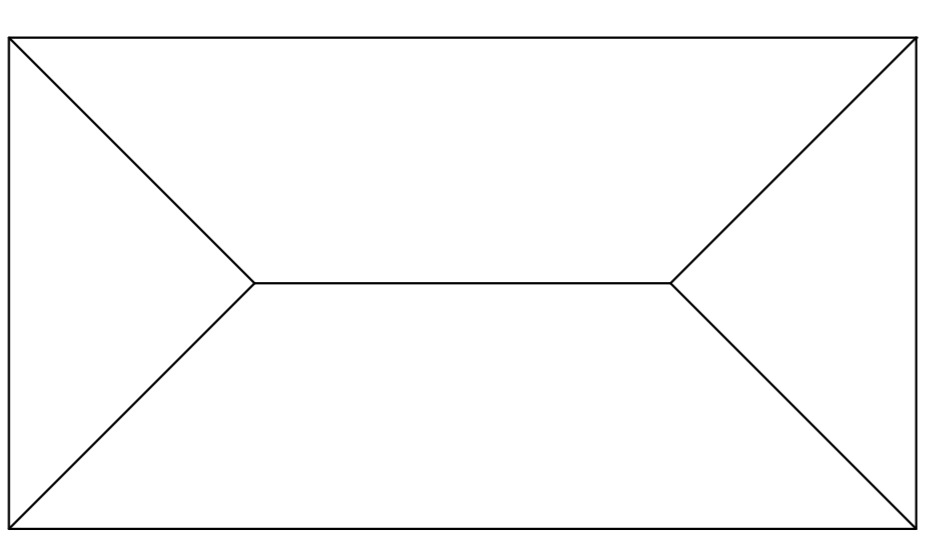
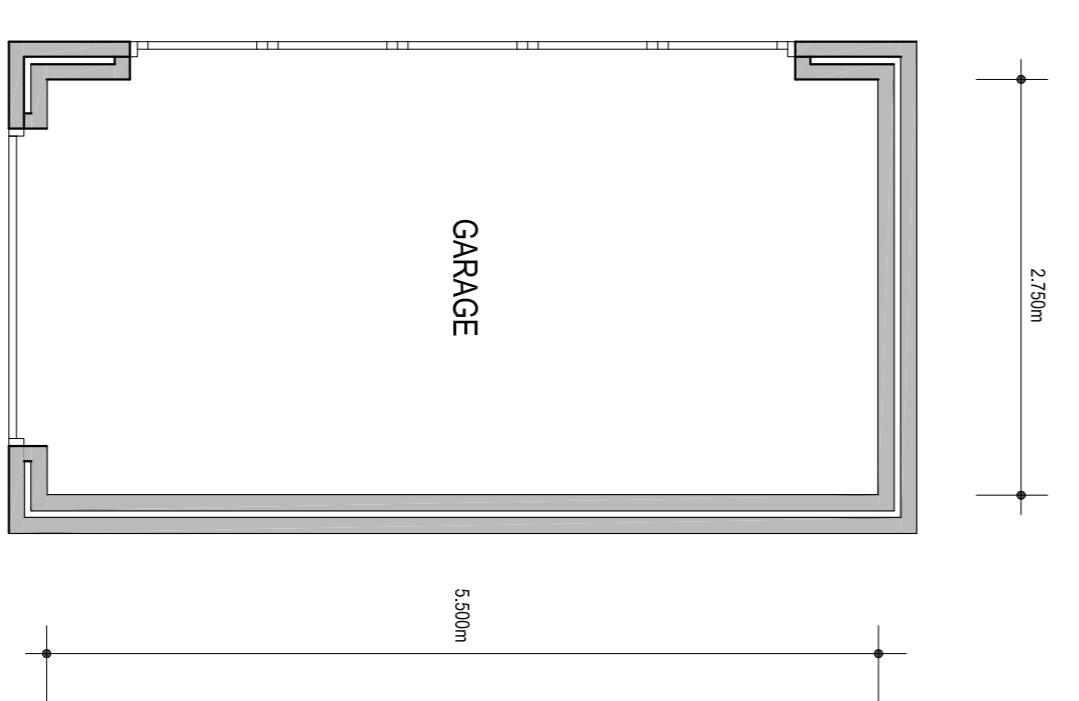
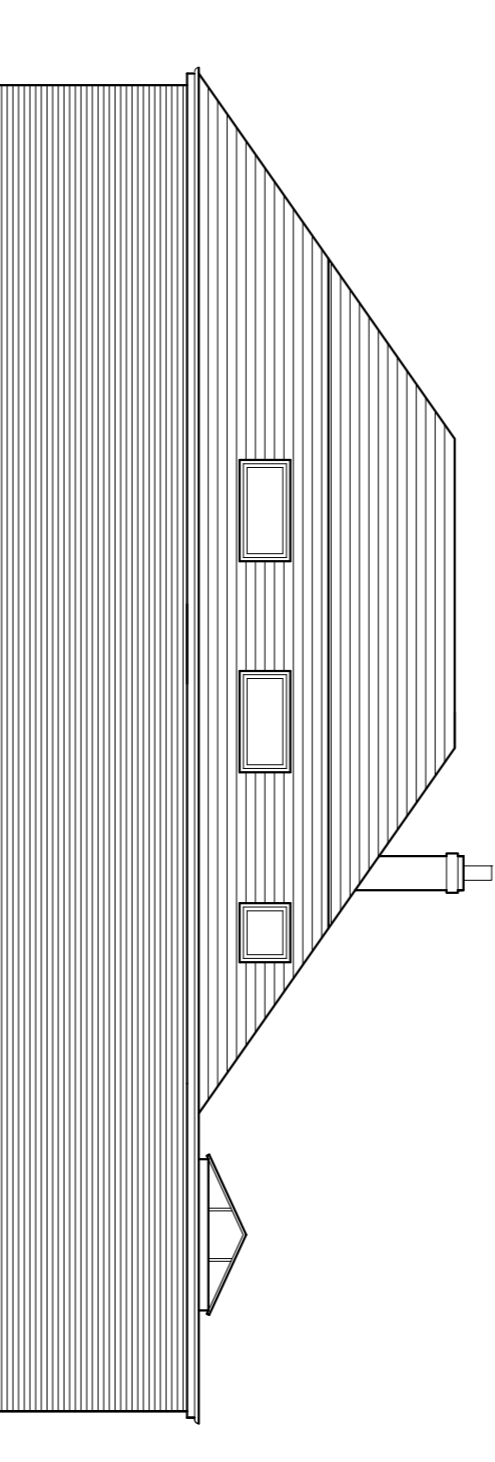
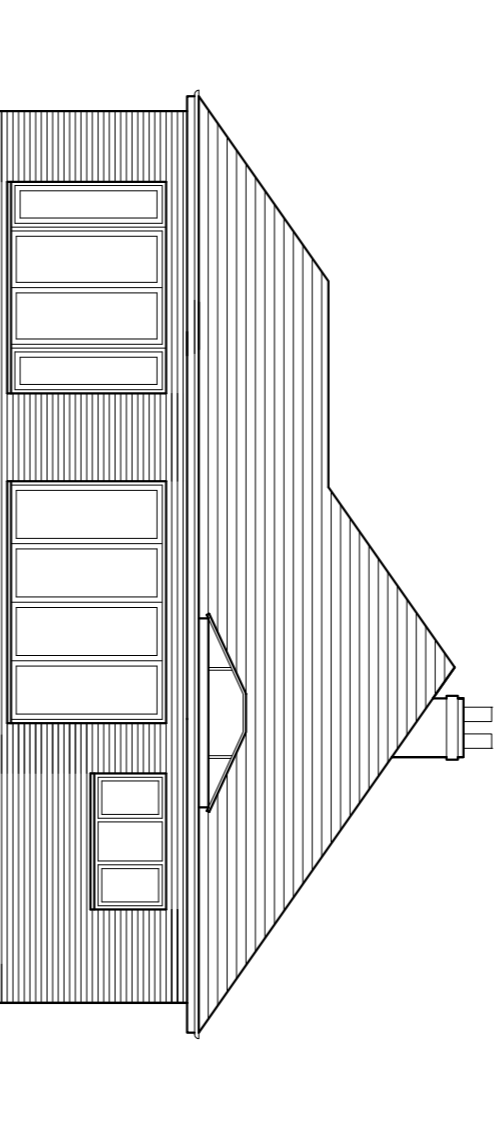
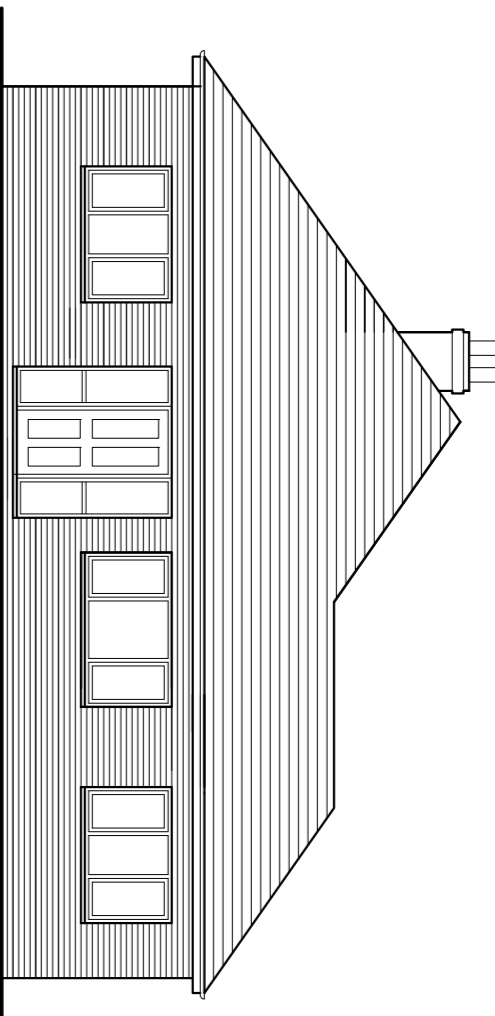
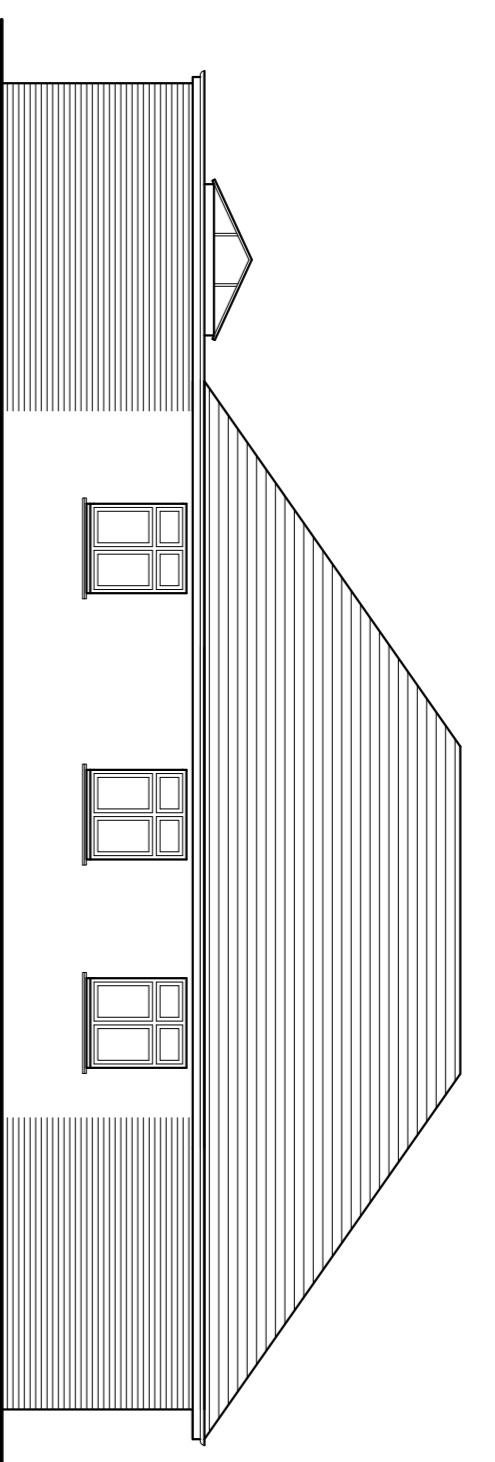
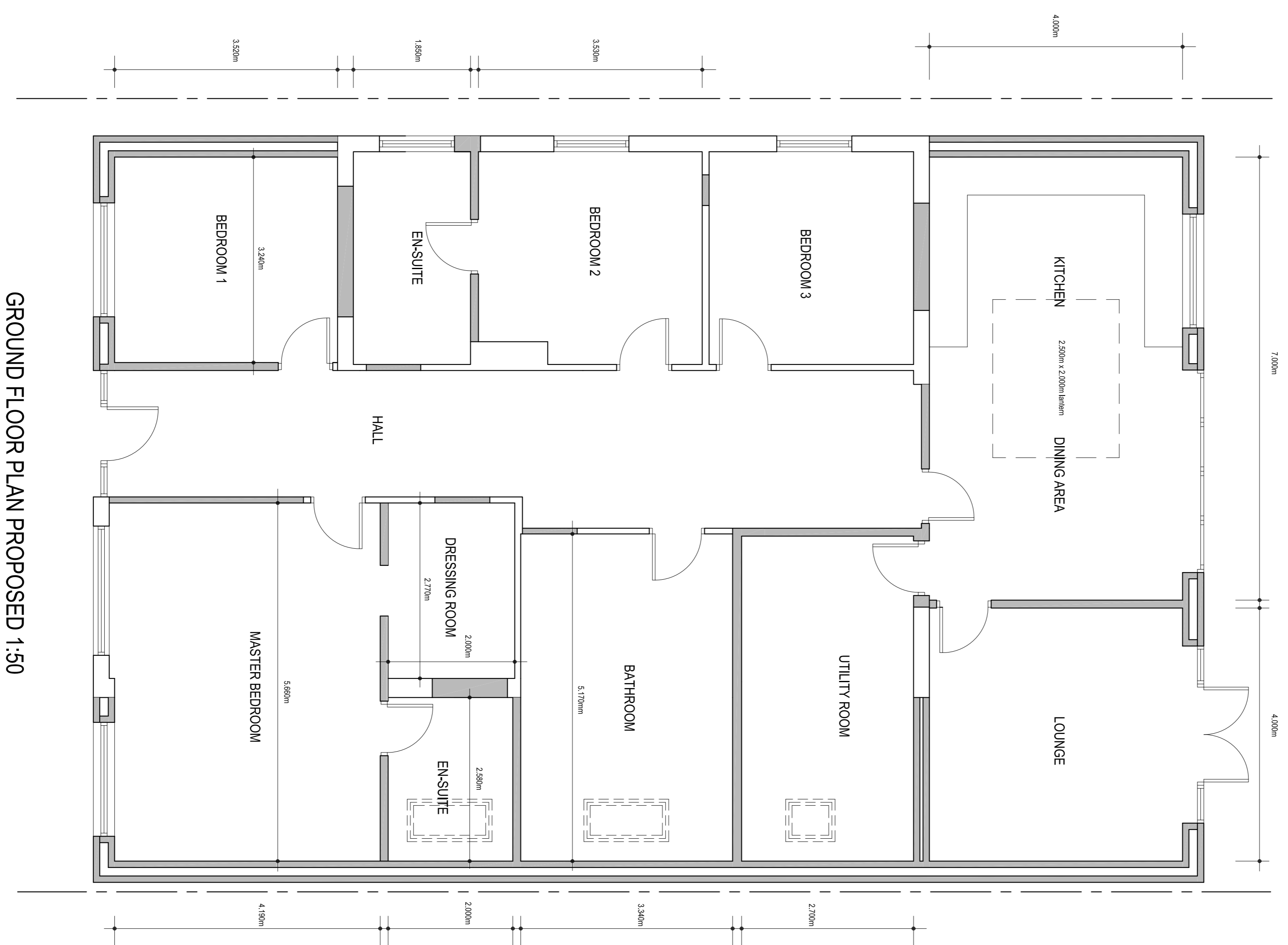
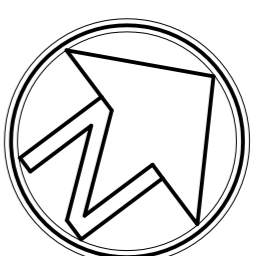
SCALE
1:50, 1:1250 and 1:100 @ A1

DATE
January 2024

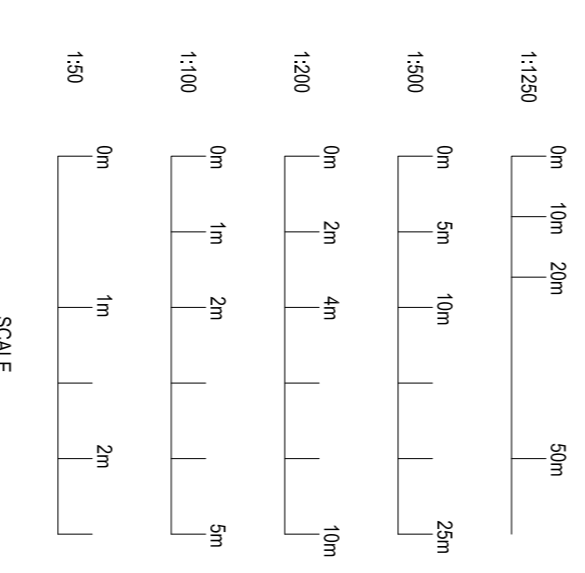
REFERENCE
Brackie

DRAWING No.	REV
001	

APPENDIX C
PROPOSED DRAWING



GENERAL
DO NOT SCALE FROM THIS DRAWING EXCEPT FOR PLANNING APPLICATION PURPOSES. ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT OF WORK. ALL DIMENSIONS RELATING TO SUB-CONTRACTORS OR SUPPLIERS WORK MUST BE CHECKED AND AGREED BETWEEN THE CONTRACTOR AND THE SUB-CONTRACTORS AND SUPPLIERS. ALL DIMENSIONS ARE IN MILLIMETRES. IF IN DOUBT ASK ALL WORKS OR MATERIALS INDICATED ON THE DRAWING ARE TO BE TO THE LATEST BRITISH STANDARDS AND ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT CODES OF PRACTICE OR RECOGNISED TRADE ASSOCIATION RECOMMENDATIONS AND PUBLICATIONS.
THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS OF OTHER CONSULTANTS. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.



REV	DATE	DESCRIPTION
B	14.02.24	Proposed Change added.
A	14.02.24	LAYOUT revised.
REV	DATE	DESCRIPTION

CLIENT
Mr Harry Waller

SITE ADDRESS
Brackle
East Bracklesham Drive
West Sussex
PO20 8JW

DRAWING TITLE
Proposed Extension and Alterations
Proposed Ground Floor Plan
Proposed Elevations

SCALE
1:50, and 1:100 @ A1

DATE
January 2024

REFERENCE
Brackle

DRAWING No. 002 **REV.** B