

Flood Risk Assessment in support of  
Planning Application at

**5 Keepers Hey,  
Thornton-Cleveleys,  
FY5 2HL**



**March 2024**

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## **APPENDICES**

- A Gov.uk Long term flood risk information.**
- B Environment Agency Product 4 Data.**
- C Existing and Proposed Layouts (Planning drawings).**
  - 24017\_LOC – Location Plan.
  - 24017\_100 – Existing Plans.
  - 24017\_110 – Proposed Plans.

## **Section 1. Introduction**

1.1 This Flood Risk Assessment has been undertaken in accordance with the criteria set within the National Planning Policy Framework (NPPF), and in accordance with Government Guidance; new Planning Practice Guidance & Flood Risk Assessment: standing advice.

1.2 The application is for the Change of Use of a residential property (Class C3) to a Childrens Care Home (Class C2). The home is to provide residential care for a single young person (no older than 18 years of age), the care would be provided by up to two non-resident carers working in shifts.

## **Section 2. Existing Situation**

2.1 The site is located at 5 Keepers Hey, Thornton-Cleveleys, FY5 2HL.

2.2 The existing use, domestic dwelling is classified as 'more vulnerable' use, Annex 3: Flood Risk Vulnerability Classification NPPF.

2.3 The site falls within Flood Zone 3 (high probability of flooding; Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding).

2.4 The plot is situated in a mainly residential area and can be accessed from the adopted highway; Keepers Hey.

## **Section 3. Proposed Development**

3.1 The application is as detailed on drawing No.:

- 24017\_LOC – Location Plan.
- 24017\_100 – Existing Plans.
- 24017 – Proposed Plans.

The drawing shows the general layout of the site, and the existing and proposed internal use.

3.2 The proposed use as a Children's Care Home is classified as 'more vulnerable' use, Annex 3: Flood Risk Vulnerability Classification NPPF.

3.3 The existing and proposed uses are considered to have the same NPPF Vulnerability Classification.

3.4 The existing site surrounding the building is mainly permeable ground cover.

3.5 The proposed alterations will not alter the structure of the existing property and the existing ground floor level would be unaltered, the existing level is 5.38mAOD.

## **Section 4. Assessment of Flood Risk**

### **4.1 Rivers and the Sea**

4.1.1 The main risk of flooding is from Rivers and sea, the risk is considered to be low. The chance of flooding from rivers and sea is considered to be between 0.1% and 1% each year.

### **4.2 Flooding from Land (Surface Water)**

4.2.1 The risk of flooding from surface water is considered to be very low. The chance of flooding from surface water is below 0.1% each year.

### **4.3 Flooding from Groundwater**

4.3.1 Flooding from groundwater is unlikely in the area of this site, see Appendix B.

### **4.4 Flooding from Reservoirs**

4.4.1 Flooding from reservoirs is unlikely in the area of this site, see Appendix B.

## **4.5 Climate Change**

4.5.1 The overall impact of climate change and the potential increase in the risk of flooding of the property can only be mitigated, which the measures in Section 5 would do as far as feasibly possible.

## **Section 5. Mitigation of Flood Risk**

5.1 The existing ground floor is of a solid concrete slab construction and the property has been built with flood-resistant materials. The existing ground floor level of 5.38mAOD would be unaltered as part of this proposal.

5.2 With reference to the Environment Agency Product 4 Data, see Appendix B, the existing ground floor level is above the following scenarios and therefore flood water would not enter the property.

- 0.5% AEP Tidal Defended + Climate Change (370mm SLR)
- 0.5% AEP Tidal Defended + Climate Change (670mm SLR)

Note, no data was provided for a Defended 5% AEP, 2% AEP, 1.33% AEP, 1% AEP, 0.5% AEP or a 0.1% AEP. However, regarding the same data (AEP) + Climate Change, it is not expected that the missing data would show a level of flooding above the existing internal floor level.

Data was provided for an undefended 0.5% AEP and 0.1% AEP. The data showed that an undefended 0.5% AEP would have a height of 5.30mAOD and an undefended 0.1% AEP would rise to 5.68mAOD.

5.3 Any new electrical services, wiring, switches and outlets should be positioned at a minimum height of 400mm above the internal finished floor level. Where applicable ovens and other electrical appliances will be positioned on raised floor levels or individual plinths.

## **Section 6. Emergency Plan**

6.1 The care provider and staff will be encouraged to sign up for the Environment Agency's flood warning information system via the EA website (<https://www.fws.environment-agency.gov.uk/app/olr/register>).

6.2 It is also recommended that a Flood kit is made and readily accessible in the event of a prolonged flood event. The Flood Kit should include items such as:

1. Important documents
2. Torch/head lamp and batteries
3. A fully charged power bank, to be used to charge a mobile phone
4. First-aid kit
5. List of important telephone numbers (utilities, insurance company, Environment Agency, family members)
6. Bottled water
7. Non-perishable food provisions
8. Rubber Gloves and wellington boots
9. Candles/lantern, matches and a lighter.
10. Wind-up radio

6.3 The care provider has a Disaster and Recovery Plan in place, this is required by the regulating body (Ofsted). In the event that the care provider is made aware of the risk of severe flooding and the potential of the property being affected, they will take appropriate action; the staff and residents will be moved to another suitable home.

6.4 In the event floodwaters enter the property and the staff and residents (Children) find themselves trapped inside, they should seek refuge at the first-floor level of the building and contact emergency services for assistance.

## **Section 7. Conclusion**

7.1 This report serves to review and assess the sources of potential flooding to the site, the impact of the proposed development on the flooding mechanisms of the site and the impact on existing development downstream of the site.

7.2 The site falls within Flood Zone 3 (high probability of flooding; Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding).

7.3 The existing and proposed uses are considered to have the same NPPF Vulnerability Classification.

7.4 The proposal will not alter the size of the existing property or intensify the existing use, therefore, it is considered that the assessment undertaken and the mitigation measures recommended in Section 5 provide sufficient flood protection to the development for its lifetime (considering its size and type).

**Appendix A - Gov.uk Long-term flood risk information.**



[< Back](#)[Search for another address](#)

## 5, KEEPERS HEY, THORNTON-CLEVELEYS, FY5 2HL

### Rivers and sea risk

#### Low risk

Low risk means that this area has a chance of flooding of between 0.1% and 1% each year.

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### Surface water risk

#### Very low risk

Very low risk means that this area has a chance of flooding of less than 0.1% each year.

Lead local flood authorities (LLFA) manage the risk from surface water flooding and may hold more detailed information. Your LLFA is **Lancashire**.

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### Reservoir risk

Flooding from reservoirs is unlikely in this area

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### Groundwater risk

Flooding from groundwater is unlikely in this area

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## **Appendix B – Environment Agency Product 4 Data.**

# Flood risk assessment data

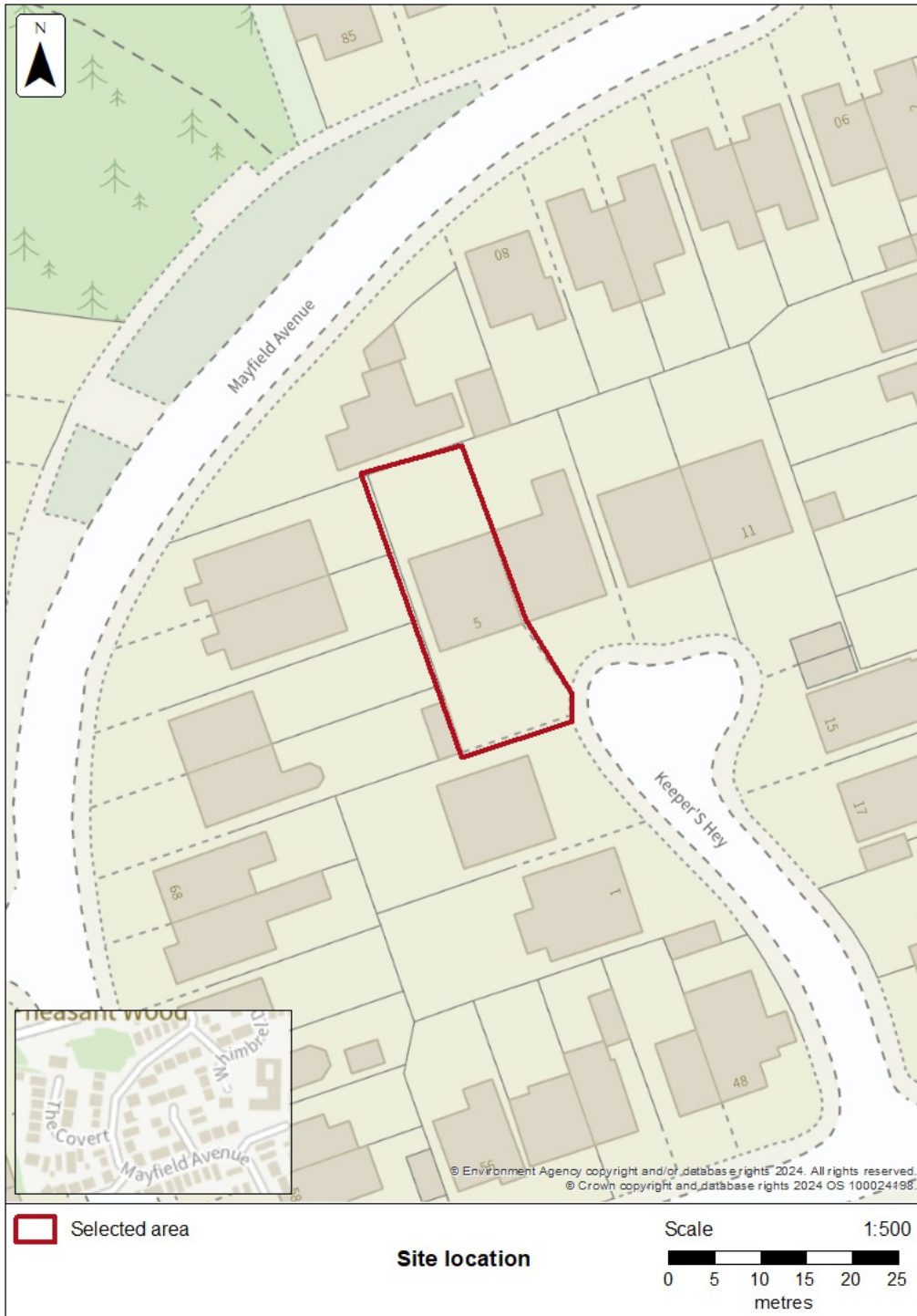
Location of site: 333043 / 443715 (shown as easting and northing coordinates)

Document created on: 22 February 2024

This information was previously known as a product 4.

Customer reference number: 8H7FT4BA6WGE

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
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- flood defences and attributes
- information to help you assess if there is a reduced flood risk from rivers and the sea because of defences
- modelled data
- climate change modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

## Information that's unavailable

This document **does not** contain:

- historic flooding

We do not have historic flooding data for this location.

Please note that:

- 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 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.

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

## About the models used

Model name: Wyre Estuary\_Tidal 2014

Scenario(s): Defended tidal, defences removed tidal, defended climate change tidal, defences removed climate change tidal

Date: 30 July 2014

These models contain 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 3.

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

This data is updated on a quarterly basis as better data becomes available.








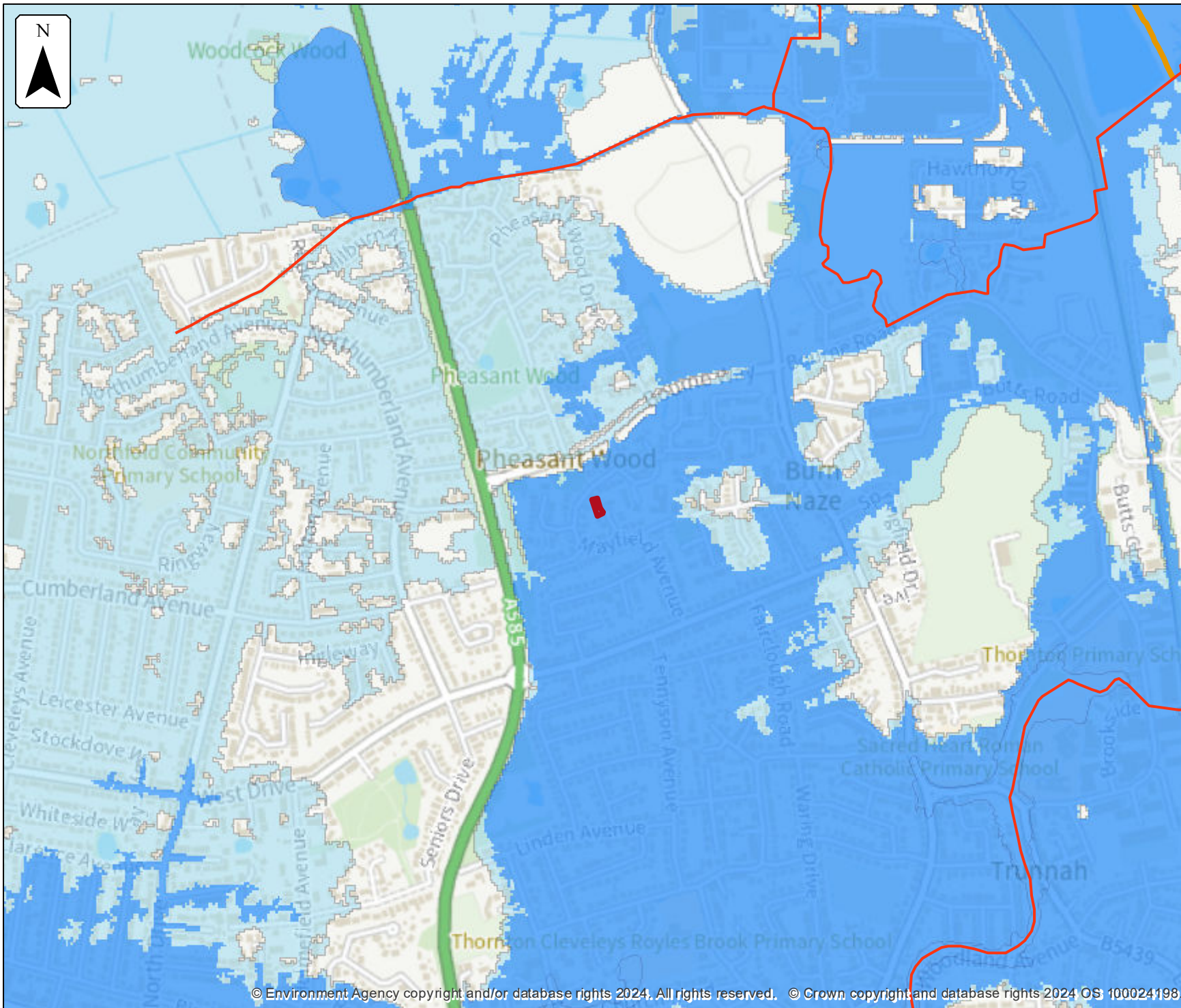
### Flood map for planning

Location (easting/northing)  
**333043/443715**

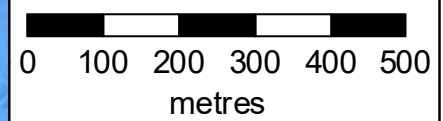
Scale  
**1:10,000**

Created  
**22 Feb 2024**

-  Selected area
-  Main river
-  Flood defence
-  Flood zone 3
-  Flood zone 2



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## **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








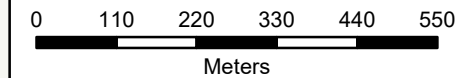
## Flood Defences

Location (easting/northing)  
**333043 / 443715**

Scale  
**1:10,381**

Created  
**22 Feb 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	105371	Embankment	200	3 - Fair	6.95	7.06	6.95

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 fluvial: risk of flooding from rivers where there are flood defences
- Defences removed modelled fluvial: risk of flooding from rivers where flood defences have been removed
- Defended modelled tidal: risk of flooding from the sea where there are flood defences
- Defences removed modelled tidal: risk of flooding from the sea where flood defences have been removed
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled fluvial: risk of flooding from rivers where flood defences have been removed, including estimated impact of climate change
- Defended climate change modelled tidal: risk of flooding from the sea where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled tidal: risk of flooding from the sea where flood defences have been removed, including estimated impact of climate change









### Defended modelled tidal extent

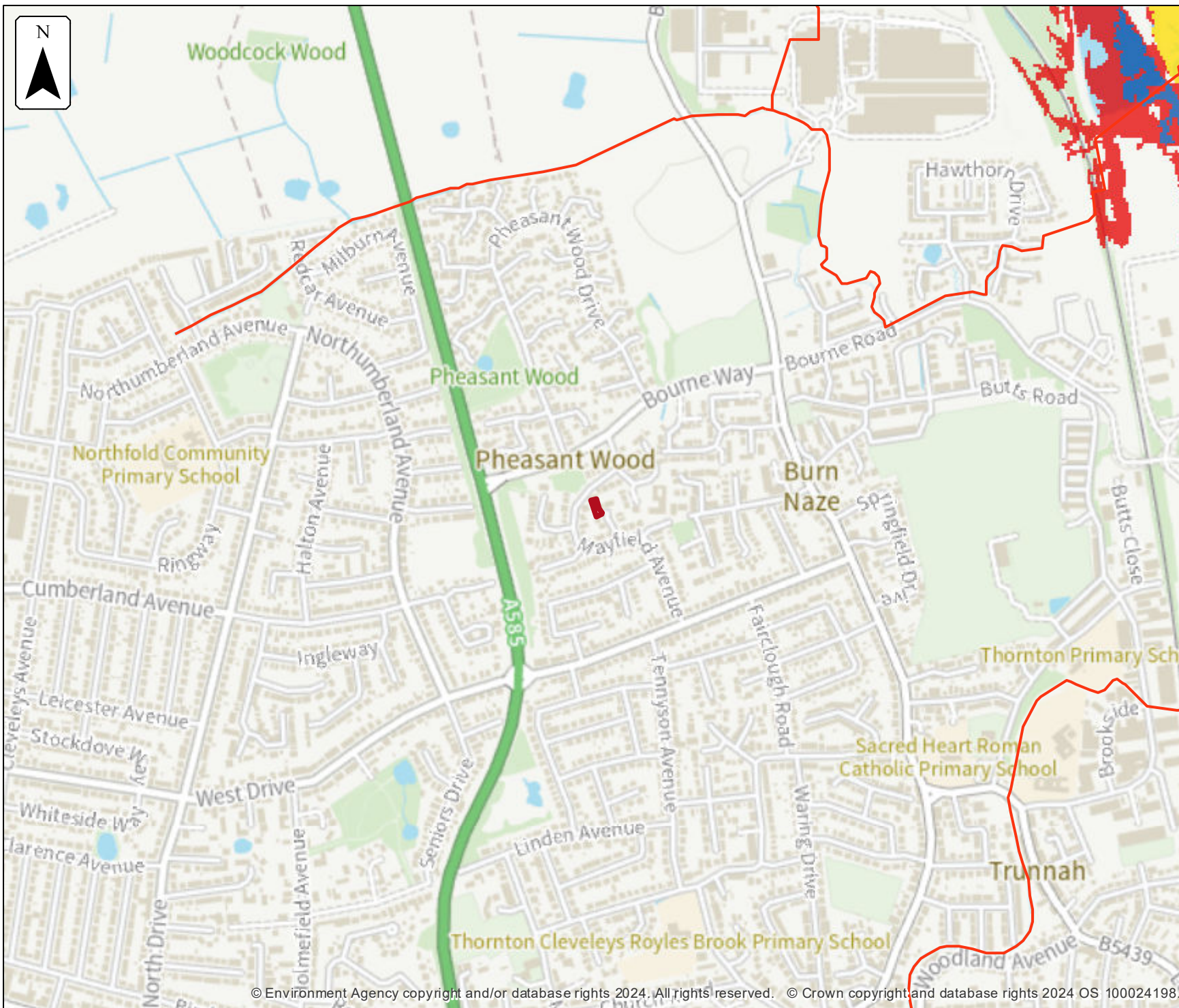
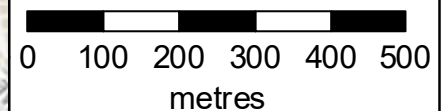
Location (easting/northing)  
**333043/443715**

Scale Created  
**1:10,000 22 Feb 2024**

Model name  
**Wyre Estuary Tidal 2014**

-  Selected area
-  Main river
- Modelled flood extent**
-  1.33% AEP
-  1% AEP
-  0.5% AEP
-  0.1% AEP

Flood extents may not be visible where they overlap other return periods





### Defended climate change modelled tidal extent

Location (easting/northing)  
**333043/443715**

Scale Created  
**1:10,000 22 Feb 2024**

Model name  
**Wyre Estuary Tidal  
2014**

Selected area

Main river

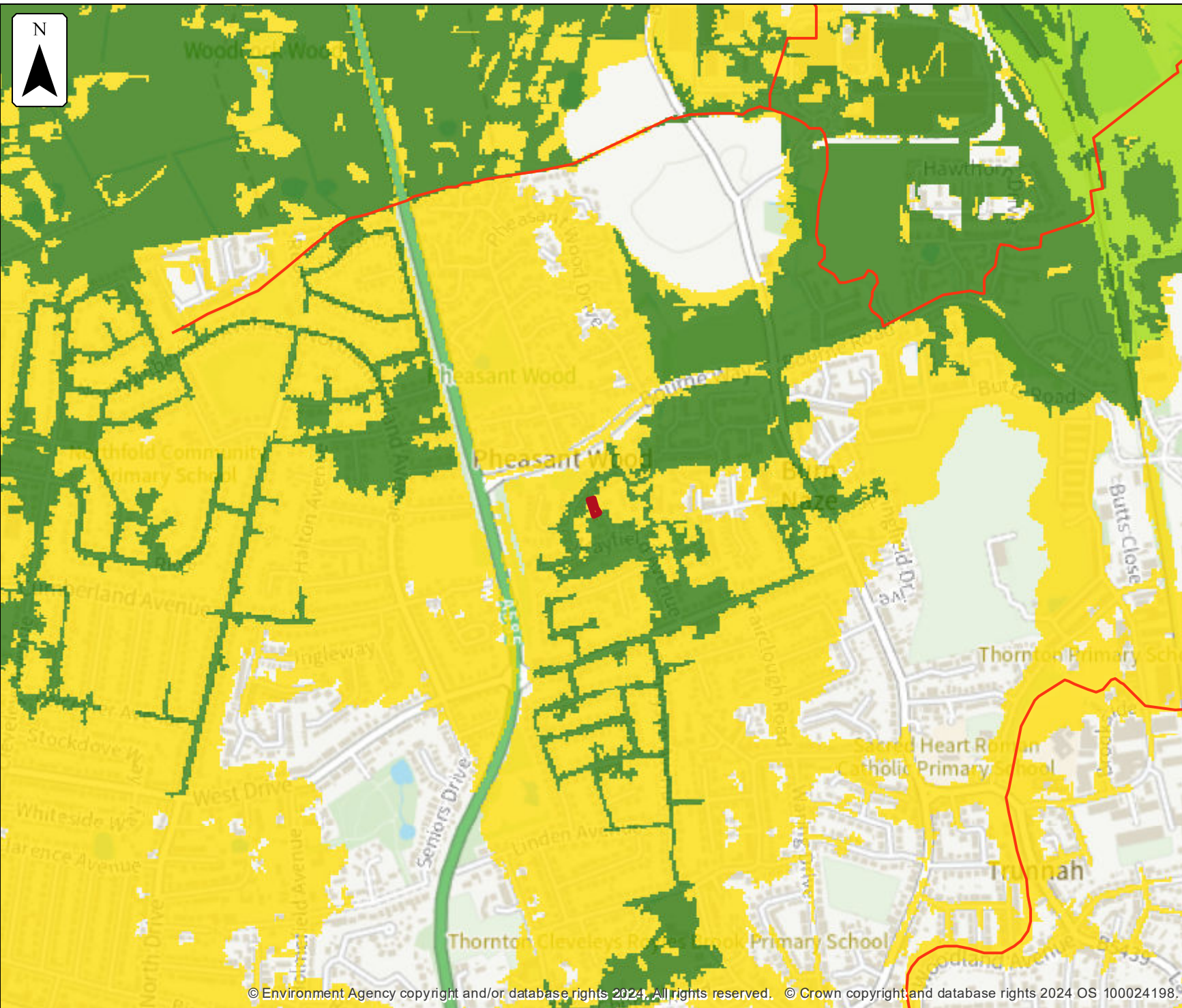
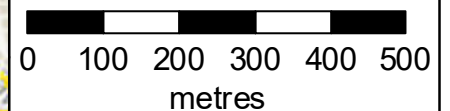
Modelled flood extent

0.5% AEP (+370mm)

0.5% AEP (+670mm)

0.5% AEP (+970mm)

Flood extents may not be visible where they overlap other return periods






### Defences removed modelled tidal extent

Location (easting/northing)  
**333043/443715**


Scale Created  
**1:10,000 22 Feb 2024**


Model name  
**Wyre Estuary Tidal 2014**


 Selected area


 Main river

Modelled flood extent

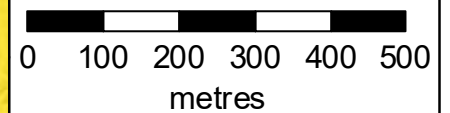
 1.33% AEP

 1% AEP

 0.5% AEP

 0.1% AEP

Flood extents may not be visible where they overlap other return periods










### Defences removed climate change modelled tidal extent

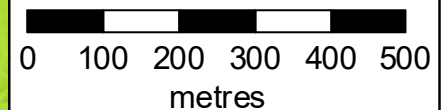
Location (easting/northing)  
**333043/443715**

Scale Created  
**1:10,000 22 Feb 2024**

Model name  
**Wyre Estuary Tidal  
2014**

-  Selected area
-  Main river
- Modelled flood extent
  -  0.5% AEP (+370mm)
  -  0.5% AEP (+670mm)
  -  0.5% AEP (+970mm)

Flood extents may not be visible where they overlap other return periods






### Defended modelled tidal extent and height

Location (easting/northing)  
**333043/443715**










Scale Created  
**1:500 22 Feb 2024**

Model name  
**Wyre Estuary Tidal 2014**

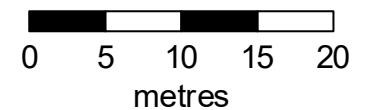
 Selected area

 Main river

Modelled 2D grid  
*Water level in mAOD*

-  0 - 31
-  31 - 31.5
-  31.5 - 32
-  32 - 32.5
-  32.5 - 33
-  33 - 33.5
-  33.5 - 34
-  34 - 34.5
-  34.5 - 35

This map shows the  
0.1% AEP height data





# Sample point data

## Defended

Label	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height
1	333039	443692					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	333046	443692					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
3	333053	443692					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	333032	443699					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	333039	443699					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
6	333046	443699					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	333053	443699					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	333060	443699					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	333032	443706					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	333039	443706					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	333046	443706					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
12	333053	443706					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	333060	443706					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	333032	443713					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	333039	443713					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	333046	443713					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height
17	333053	443713					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
18	333060	443713					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	333025	443720					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	333032	443720					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	333039	443720					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
22	333046	443720					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	333053	443720					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	333025	443727					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	333032	443727					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
26	333039	443727					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
27	333046	443727					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
28	333053	443727					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
29	333025	443734					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
30	333032	443734					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
31	333039	443734					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
32	333046	443734					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
33	333039	443741					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
34	333046	443741					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Data in this table comes from the Wyre Estuary Tidal 2014 model.

Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.



### Defended climate change modelled tidal extent and height

Location (easting/northing)  
**333043/443715**










Scale Created  
**1:500 22 Feb 2024**

Model name  
**Wyre Estuary Tidal  
2014**

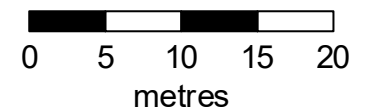
 Selected area

 Main river

Modelled 2D grid  
*Water level in mAOD*

-  0 - 5.0
-  5.0 - 5.125
-  5.125 - 5.25
-  5.25 - 5.375
-  5.375 - 5.5
-  5.5 - 5.625
-  5.625 - 5.75
-  5.75 - 5.875
-  5.875 - 6.0

This map shows the  
0.5% AEP +970mm height data



## Sample point data

### Defended climate change

Label	Easting	Northing	0.5% AEP (+370mm)		0.5% AEP (+670mm)		0.5% AEP (+970mm)	
			Depth	Height	Depth	Height	Depth	Height
1	333039	443692	NoData	NoData	0.11	5.01	0.68	5.58
2	333046	443692	NoData	NoData	0.05	5.01	0.62	5.58
3	333053	443692	NoData	NoData	NoData	NoData	0.62	5.58
4	333032	443699	NoData	NoData	NoData	NoData	0.52	5.58
5	333039	443699	NoData	NoData	NoData	NoData	0.51	5.58
6	333046	443699	NoData	NoData	0.03	5.01	0.57	5.58
7	333053	443699	NoData	NoData	0.02	5.01	0.59	5.58
8	333060	443699	NoData	NoData	0.09	5.01	0.65	5.58
9	333032	443706	NoData	NoData	NoData	NoData	0.54	5.58
10	333039	443706	NoData	NoData	NoData	NoData	0.42	5.58
11	333046	443706	NoData	NoData	NoData	NoData	0.49	5.58
12	333053	443706	NoData	NoData	0.01	5.01	0.57	5.58
13	333060	443706	NoData	NoData	0.12	5.01	0.69	5.58
14	333032	443713	NoData	NoData	NoData	NoData	0.54	5.58
15	333039	443713	NoData	NoData	NoData	NoData	0.42	5.58
16	333046	443713	NoData	NoData	NoData	NoData	0.47	5.58

Label	Easting	Northing	0.5% AEP (+370mm)		0.5% AEP (+670mm)		0.5% AEP (+970mm)	
			Depth	Height	Depth	Height	Depth	Height
17	333053	443713	NoData	NoData	NoData	NoData	0.45	5.58
18	333060	443713	NoData	NoData	NoData	NoData	0.50	5.58
19	333025	443720	NoData	NoData	0.06	5.05	0.59	5.59
20	333032	443720	NoData	NoData	NoData	NoData	0.52	5.59
21	333039	443720	NoData	NoData	NoData	NoData	0.46	5.59
22	333046	443720	NoData	NoData	NoData	NoData	0.46	5.59
23	333053	443720	NoData	NoData	NoData	NoData	0.44	5.58
24	333025	443727	NoData	NoData	0.02	5.06	0.55	5.59
25	333032	443727	NoData	NoData	0.00	5.07	0.51	5.59
26	333039	443727	NoData	NoData	NoData	NoData	0.48	5.59
27	333046	443727	NoData	NoData	NoData	NoData	0.45	5.59
28	333053	443727	NoData	NoData	NoData	NoData	0.38	5.59
29	333025	443734	NoData	NoData	NoData	NoData	0.50	5.59
30	333032	443734	NoData	NoData	0.05	5.09	0.55	5.59
31	333039	443734	NoData	NoData	0.02	5.09	0.52	5.59
32	333046	443734	NoData	NoData	NoData	NoData	0.44	5.60
33	333039	443741	NoData	NoData	0.02	5.10	0.52	5.60
34	333046	443741	NoData	NoData	NoData	NoData	0.48	5.60

Data in this table comes from the Wyre Estuary Tidal 2014 model.

Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.




### Defences removed modelled tidal extent and height

Location (easting/northing)  
**333043/443715**









Scale Created  
**1:500 22 Feb 2024**

Model name  
**Wyre Estuary Tidal  
2014**

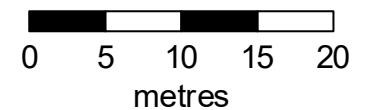
 Selected area

 Main river

Modelled 2D grid  
*Water level in mAOD*

-  0 - 5.0
-  5.0 - 5.125
-  5.125 - 5.25
-  5.25 - 5.375
-  5.375 - 5.5
-  5.5 - 5.625
-  5.625 - 5.75
-  5.875 - 6.0

This map shows the  
0.1% AEP height data





## Sample point data

### Defences removed

Label	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height
1	333039	443692					0.08	4.97	0.15	5.05	0.41	5.30	0.79	5.68
2	333046	443692					0.02	4.97	0.09	5.05	0.35	5.30	0.73	5.68
3	333053	443692					NoData	NoData	0.09	5.05	0.35	5.30	0.73	5.68
4	333032	443699					NoData	NoData	NoData	NoData	0.25	5.30	0.63	5.68
5	333039	443699					NoData	NoData	NoData	NoData	0.23	5.30	0.61	5.68
6	333046	443699					0.01	4.97	0.05	5.05	0.29	5.30	0.68	5.68
7	333053	443699					0.00	4.97	0.06	5.05	0.31	5.30	0.69	5.68
8	333060	443699					0.05	4.98	0.13	5.05	0.38	5.30	0.76	5.68
9	333032	443706					NoData	NoData	NoData	NoData	0.26	5.31	0.64	5.68
10	333039	443706					NoData	NoData	NoData	NoData	0.15	5.30	0.53	5.68
11	333046	443706					NoData	NoData	NoData	NoData	0.21	5.30	0.59	5.68
12	333053	443706					0.01	4.97	0.04	5.05	0.29	5.30	0.67	5.68
13	333060	443706					0.09	4.98	0.16	5.05	0.42	5.30	0.80	5.68
14	333032	443713					NoData	NoData	NoData	NoData	0.27	5.31	0.64	5.68
15	333039	443713					NoData	NoData	NoData	NoData	0.14	5.31	0.52	5.68
16	333046	443713					NoData	NoData	NoData	NoData	0.19	5.30	0.57	5.68

Label	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height
17	333053	443713					NoData	NoData	NoData	NoData	0.17	5.30	0.56	5.68
18	333060	443713					NoData	NoData	NoData	NoData	0.22	5.30	0.60	5.68
19	333025	443720					NoData	NoData	0.05	5.04	0.32	5.31	0.69	5.69
20	333032	443720					NoData	NoData	NoData	NoData	0.24	5.31	0.62	5.69
21	333039	443720					NoData	NoData	NoData	NoData	0.19	5.31	0.56	5.69
22	333046	443720					NoData	NoData	NoData	NoData	0.18	5.31	0.56	5.69
23	333053	443720					NoData	NoData	NoData	NoData	0.16	5.31	0.54	5.69
24	333025	443727					NoData	NoData	NoData	NoData	0.27	5.31	0.64	5.69
25	333032	443727					NoData	NoData	NoData	NoData	0.24	5.31	0.61	5.69
26	333039	443727					NoData	NoData	NoData	NoData	0.20	5.31	0.58	5.69
27	333046	443727					NoData	NoData	NoData	NoData	0.17	5.31	0.55	5.69
28	333053	443727					NoData	NoData	NoData	NoData	0.09	5.31	0.47	5.69
29	333025	443734					NoData	NoData	NoData	NoData	0.22	5.31	0.60	5.69
30	333032	443734					NoData	NoData	NoData	NoData	0.27	5.31	0.65	5.69
31	333039	443734					NoData	NoData	NoData	NoData	0.24	5.31	0.62	5.69
32	333046	443734					NoData	NoData	NoData	NoData	0.16	5.31	0.54	5.69
33	333039	443741					NoData	NoData	NoData	NoData	0.24	5.32	0.61	5.69
34	333046	443741					NoData	NoData	NoData	NoData	0.20	5.32	0.57	5.69

Data in this table comes from the Wyre Estuary Tidal 2014 model.

Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.



### Defences removed climate change modelled tidal extent and height

Location (easting/northing)  
**333043/443715**










Scale Created  
**1:500 22 Feb 2024**

Model name  
**Wyre Estuary Tidal  
2014**

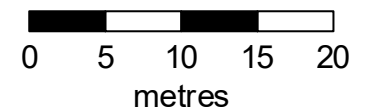
 Selected area

 Main river

Modelled 2D grid  
*Water level in mAOD*

-  0 - 6.0
-  6.0 - 6.125
-  6.125 - 6.25
-  6.25 - 6.375
-  6.375 - 6.5
-  6.5 - 6.625
-  6.625 - 6.75
-  6.75 - 6.875
-  6.875 - 7.0

This map shows the  
0.5% AEP +970mm height data



## Sample point data

### Defences removed climate change

Label	Easting	Northing	0.5% AEP (+370mm)		0.5% AEP (+670mm)		0.5% AEP (+970mm)	
			Depth	Height	Depth	Height	Depth	Height
1	333039	443692	0.89	5.78	1.19	6.09	1.42	6.31
2	333046	443692	0.83	5.78	1.13	6.09	1.36	6.31
3	333053	443692	0.83	5.78	1.13	6.09	1.36	6.32
4	333032	443699	0.73	5.78	1.03	6.09	1.26	6.31
5	333039	443699	0.71	5.78	1.02	6.09	1.24	6.31
6	333046	443699	0.78	5.78	1.08	6.09	1.31	6.32
7	333053	443699	0.79	5.78	1.10	6.09	1.33	6.32
8	333060	443699	0.86	5.78	1.17	6.09	1.39	6.32
9	333032	443706	0.74	5.78	1.04	6.09	1.27	6.31
10	333039	443706	0.63	5.78	0.93	6.09	1.16	6.31
11	333046	443706	0.69	5.78	1.00	6.09	1.23	6.32
12	333053	443706	0.77	5.78	1.08	6.09	1.31	6.32
13	333060	443706	0.90	5.78	1.20	6.09	1.43	6.32
14	333032	443713	0.74	5.79	1.05	6.09	1.27	6.32
15	333039	443713	0.62	5.79	0.92	6.09	1.15	6.32
16	333046	443713	0.67	5.78	0.98	6.09	1.20	6.32

Label	Easting	Northing	0.5% AEP (+370mm)		0.5% AEP (+670mm)		0.5% AEP (+970mm)	
			Depth	Height	Depth	Height	Depth	Height
17	333053	443713	0.66	5.78	0.96	6.09	1.19	6.32
18	333060	443713	0.70	5.78	1.01	6.09	1.24	6.32
19	333025	443720	0.79	5.79	1.10	6.09	1.32	6.32
20	333032	443720	0.72	5.79	1.03	6.09	1.25	6.32
21	333039	443720	0.66	5.79	0.97	6.09	1.19	6.32
22	333046	443720	0.66	5.79	0.97	6.09	1.19	6.32
23	333053	443720	0.64	5.79	0.95	6.09	1.17	6.32
24	333025	443727	0.74	5.79	1.05	6.09	1.27	6.32
25	333032	443727	0.71	5.79	1.02	6.09	1.24	6.32
26	333039	443727	0.68	5.79	0.98	6.09	1.21	6.32
27	333046	443727	0.65	5.79	0.95	6.09	1.18	6.32
28	333053	443727	0.57	5.79	0.88	6.10	1.10	6.32
29	333025	443734	0.70	5.79	1.01	6.09	1.23	6.32
30	333032	443734	0.75	5.79	1.05	6.09	1.28	6.32
31	333039	443734	0.72	5.79	1.02	6.09	1.25	6.32
32	333046	443734	0.64	5.79	0.94	6.10	1.17	6.32
33	333039	443741	0.71	5.79	1.02	6.10	1.24	6.32
34	333046	443741	0.67	5.79	0.98	6.10	1.20	6.32

Data in this table comes from the Wyre Estuary Tidal 2014 model.

Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

## 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 Cumbria and Lancashire Environment Agency team at [inforequests.cmblnc@environment-agency.gov.uk](mailto:inforequests.cmblnc@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 C – Existing and Proposed Layouts (Planning drawings).**



**SITE AREA:**  
**357m<sup>2</sup>**  
**0.0357ha**



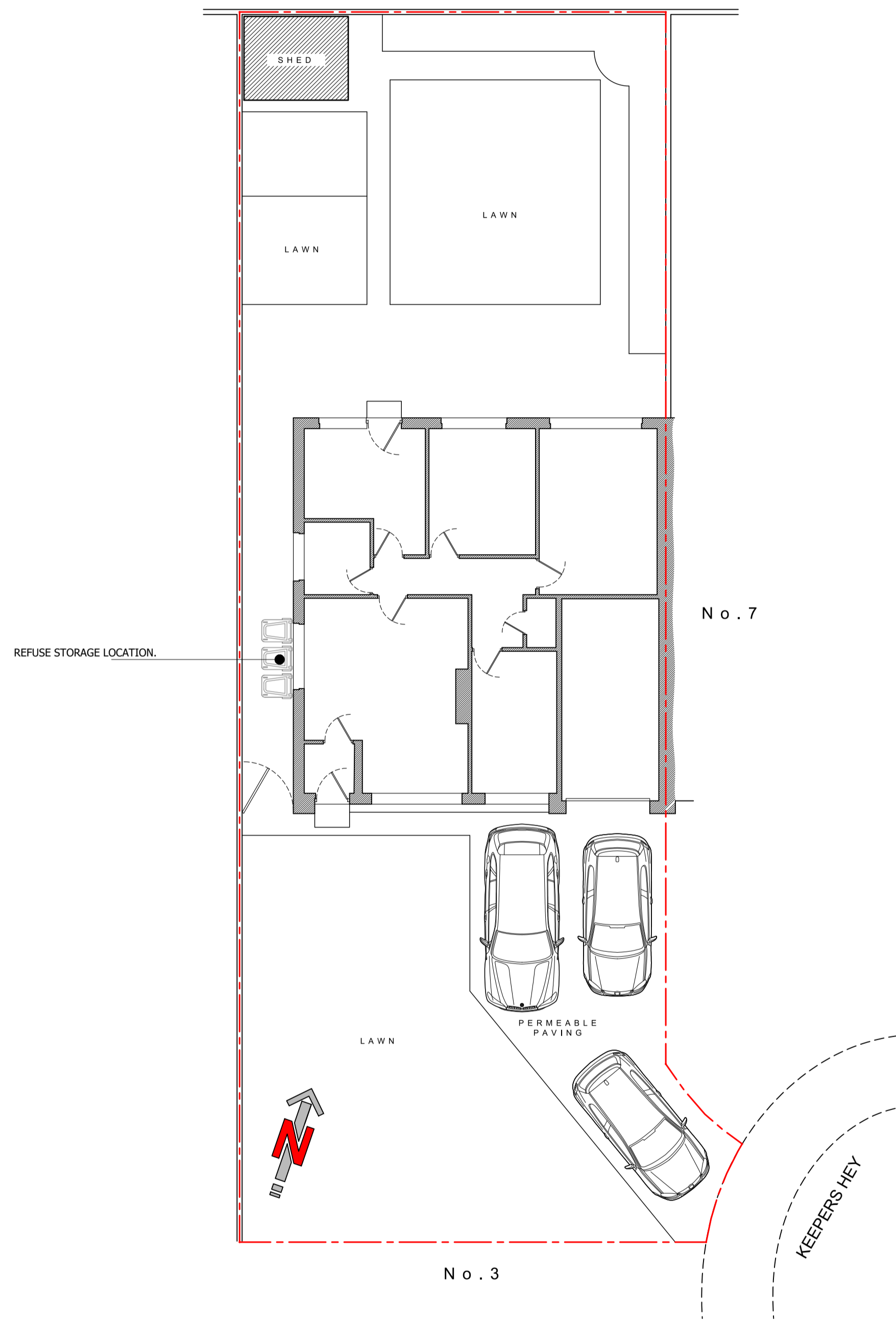
PROJECT  
 5 KEEPERS HEY,  
 THORNTON-CLEVELEYS,  
 FY5 2HL

DRAWING

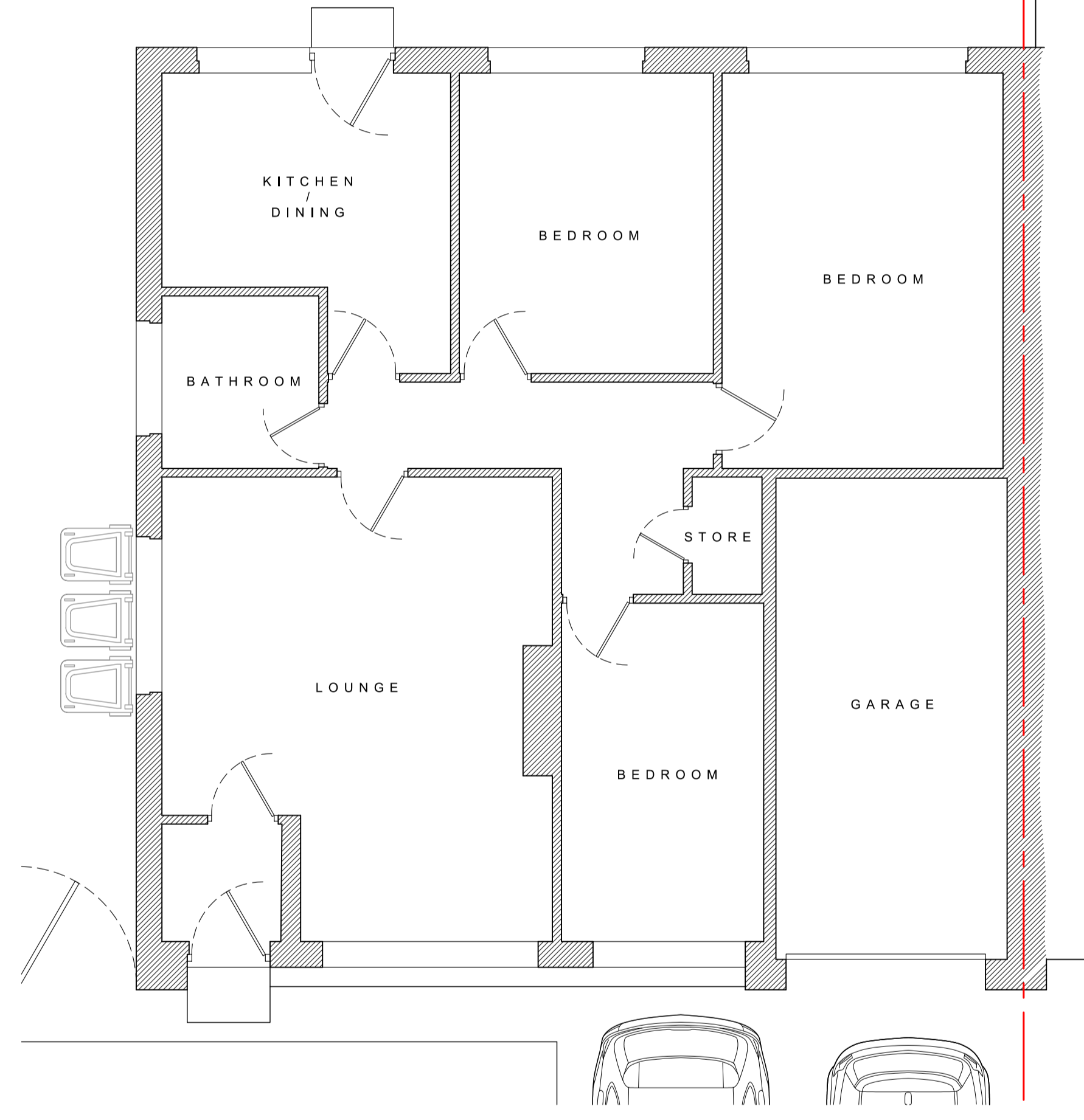
LOCATION PLAN

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DATE 06/03/2024	SCALE 1:1250	@A4

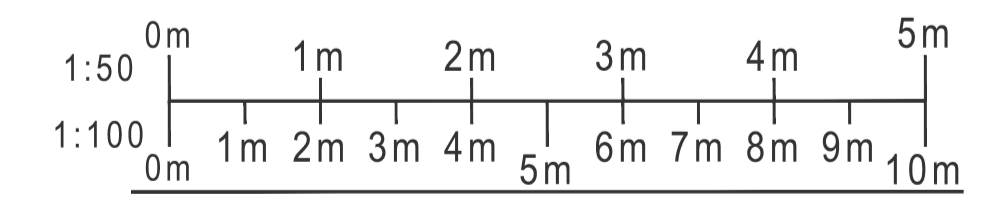
W abbotthull.co.uk T 01253 846420  
 E info@abbotthull.co.uk M 07725 005247



EXISTING SITE PLAN  
1:100



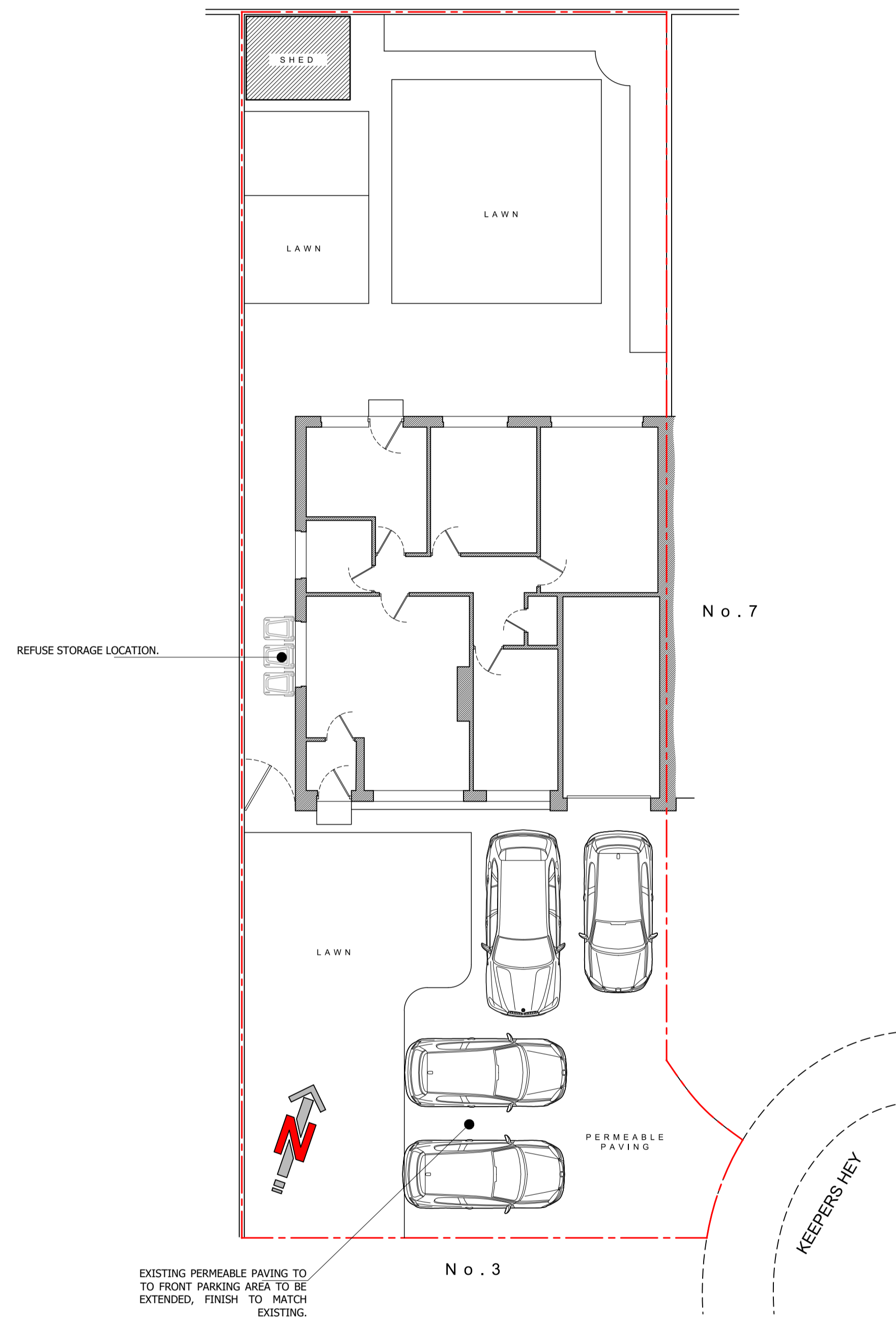
EXISTING GROUND-FLOOR PLAN  
1:50



PROJECT  
5 KEEPERS HEY,  
THORNTON-CLEVELEYS,  
FY5 2HL

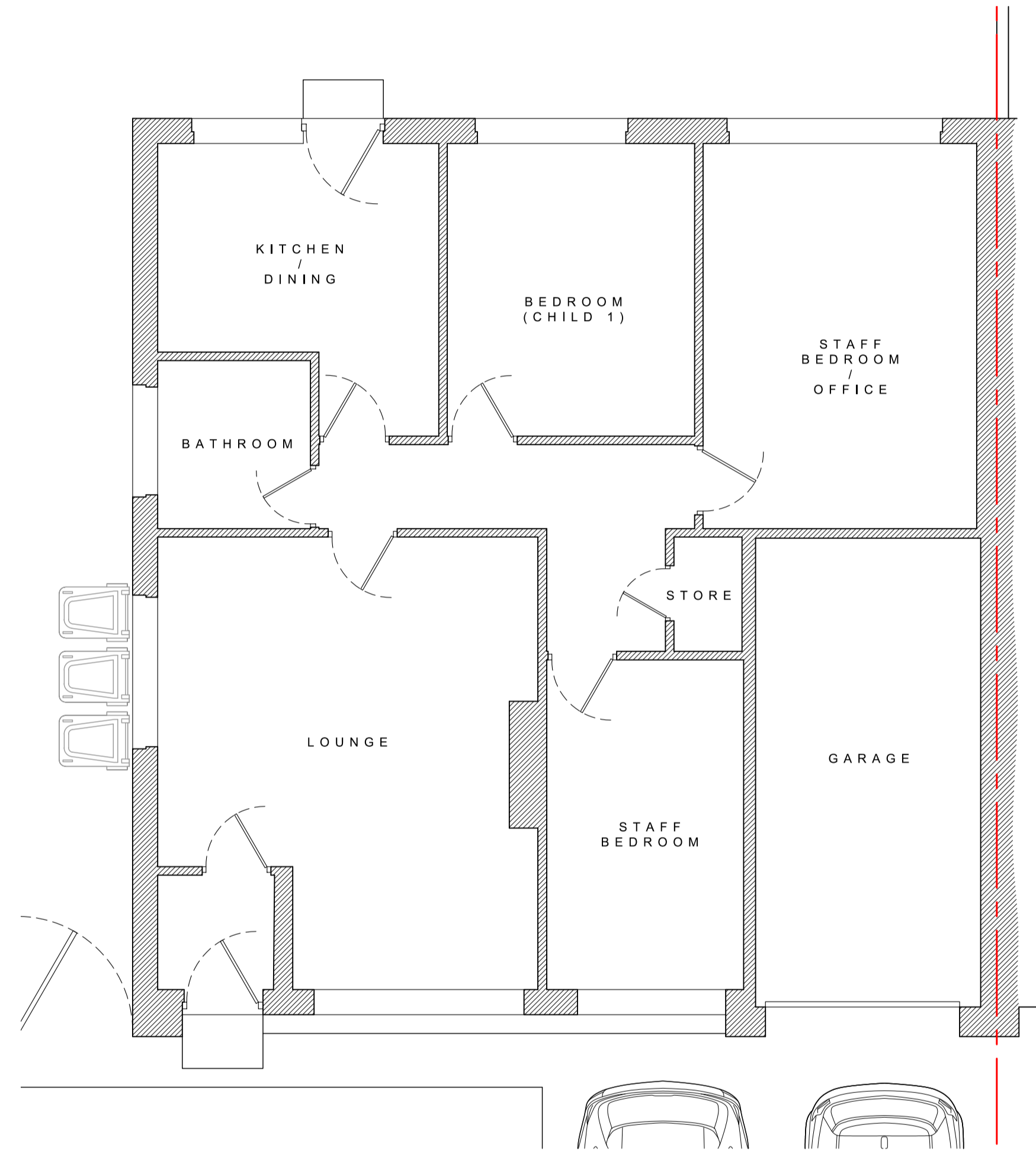
EXISTING PLANS

DRAWING NO.	REV.	DRAWN
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DATE	SCALE	
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E info@abbotthull.co.uk	M 07725 005247	

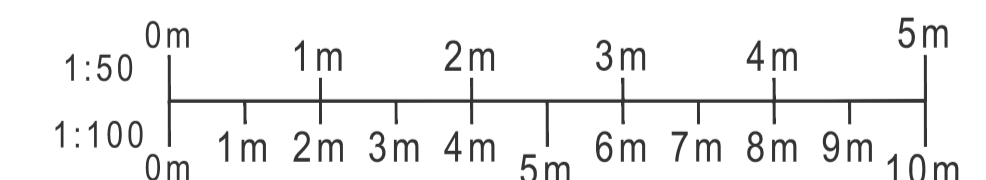


EXISTING PERMEABLE PAVING TO TO FRONT PARKING AREA TO BE EXTENDED, FINISH TO MATCH EXISTING.

PROPOSED SITE PLAN  
1:100



PROPOSED GROUND-FLOOR PLAN  
1:50



PROJECT  
5 KEEPERS HEY,  
THORNTON-CLEVELEYS,  
FY5 2HL

DRAWING

PROPOSED PLANS

DRAWING NO. 24017_110	REV. -	DRAWN J. A-H
DATE 06/03/2024	SCALE 1:50/100 @ A1	
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E info@abbotthull.co.uk	M 07725 005247	