Flood Risk Statement

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Project	**91 Grinstead Lane, Lancing**
Project Number	**23491**
By	Steve Doughty
Date	25 March 2021

1 Introduction

1.1 This Flood Risk Statement has been undertaken on behalf of Jackie Betteridge in support of a Planning Application for the construction of a self contained annexe at 91 Grinstead Lane, Lancing BN15 9DT.

1.2 Plans showing the proposed annexe are attached at the rear of this report.

2 Site Description

2.1 The site is approximately 940m^2 in area and currently comprises the residential dwelling of 91 Grinstead Lane together with garage and garden.

2.2 Existing ground levels are highest at the west of the site at approximately 4.5m AOD. The site falls towards its eastern boundary to a level of approximately 4.05m AOD.

2.3 The finished floor level of the existing dwelling is 4.84m AOD.

2.4 A copy of the site survey is attached at the rear of this report.

3 Flood Zone, Flood Defences and Flood History

3.1 Tidal Flood Zone

3.1.1 The Environment Agency's online mapping indicates that the site is located in Tidal Flood Zones 1, 2 and 3.

3.1.2 The tidal flood level data supplied by the Environment Agency is based on the data model from 2012. The predicted climate change models were updated in December 2019.

3.1.3 Reference has been made to the Environment Agency's latest predicted sea level rise data at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances in order to establish the present day and future year tidal flood levels using the updated climate change predictions.

ace
QMS ISO 9001 : 2008 REGISTERED
Cert No. 14127180

3.1.4 These are presented by the Environment Agency as a higher central allowance (70th percentile exceeded by 30% of the projections in the range) and an upper end allowance (95th percentile exceeded by 5% of the projections in the range).

3.1.5 The undefended 1:200 year tidal flood level supplied by the Environment Agency based on the data model from 2012 is 4.26m AOD.

3.1.6 The predicted undefended levels based on the updated climate change predictions are as follows:

- 2012 1:200 year flood level 4.26m AOD

  Currently predicted increase:
  2000 to 2035 5.7mm to 6.9mm per annum
  2036 to 2065 8.7mm to 11.3mm per annum
  2066 to 2095 13.1mm to 18.2mm per annum
  2096 to 2125 13.1mm to 18.2mm per annum

- 2021 1:200 year flood level 4.31m to 4.32m AOD
- 2125 1:200 year flood level 5.39m to 5.78m AOD

3.1.7 Copies of the flood maps are attached at the rear of this report.

3.2 Flood Defences

3.2.1 There are flood defences on the banks of the River Adur in the form of an embankment with an estimated standard of protection of 1 in 200 years.

3.3 Flood History

3.3.1 The Environment Agency have confirmed that they hold no record of any historic incidents of flooding in the site.

4 Flooding Potential

4.1 The existing flood defences on the banks of the River Adur have a crest level of 5m AOD.

4.2 Based on the updated climate change predictions for sea level rise these defences should provide protection until at least the year 2080 and potentially up to 2095 in their current form.

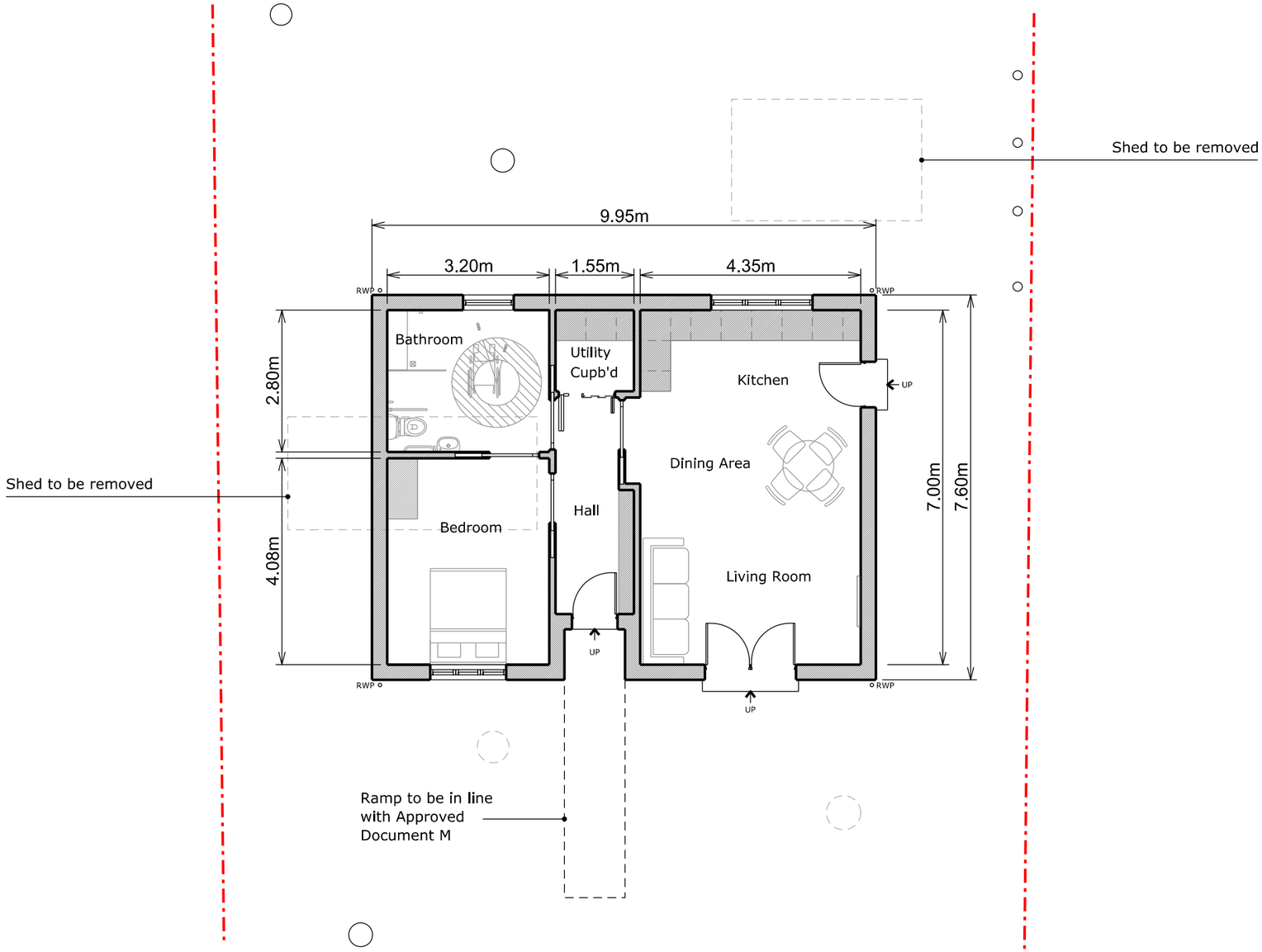
4.3 It is worth noting that the finished floor level of the existing dwelling is at 4.84m AOD. Given the location of the site at the outer edge of the potential flood zone wave action will not be evident in the event of a defence breach.

4.4 In its present form 91 Grinstead Lane will be unaffected during a breach until at least 2070 and potentially up to 2081.

5 Safe Development

5.1 Finished Floor Levels

5.1.1 In order to further safeguard the new annex beyond 2081 it is proposed that the finished floor level is set at 5.4m AOD which is achievable within this site and proportional to the risk at the outer edge of the potential flood zone.



Ground Floor Plan

0 1.0 2.0 5.0 10.0 metres

RESI

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All dimensions to be cross-checked on site prior to completing a Building Regulations package, structural engineering, the party wall process and construction.

Print to scale (as actual size)

NOTES

Revision

Rev	Notes	Date
-	Preliminary Issue	24/01/2020
A	Amendments	29/02/2020

KEY

- Proposed walls
- Existing walls
- Existing removed
- Proposed rooflight
- Boundary lines
- Proposed beam
- Proposed drainage
- 1.8m head height
- 1.5m head height

JOB TITLE
Proposed garden annex, floor plan redesign and all associated works at 91 Grinstead Lane

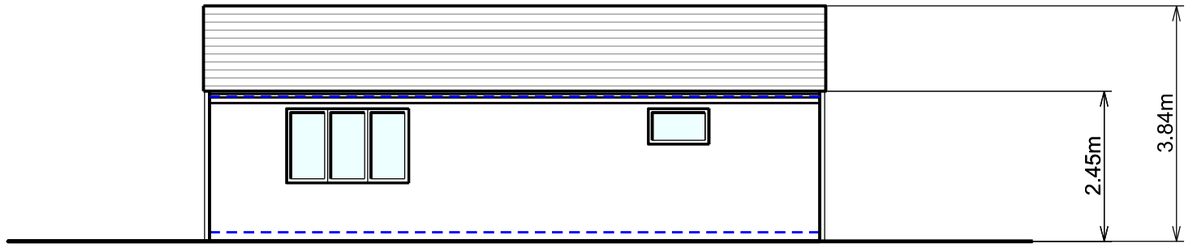
STATUS
Preliminary

DRAWING TITLE
Proposed Ground Floor Plan

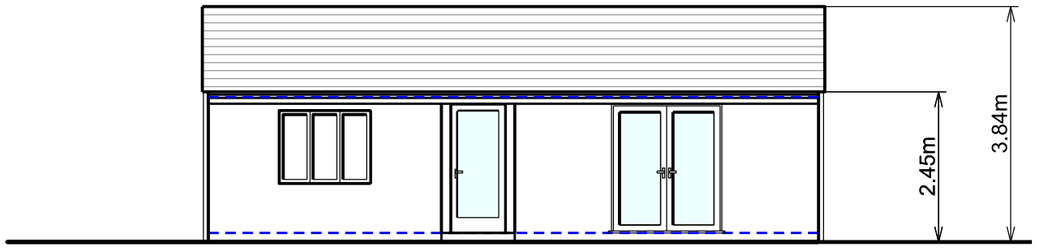
CLIENT
Jackie Betteridge

SCALE	DRAWN
1:100 at A3	KE
DATE	**CHECKED**
Jan 2020	YK / PC

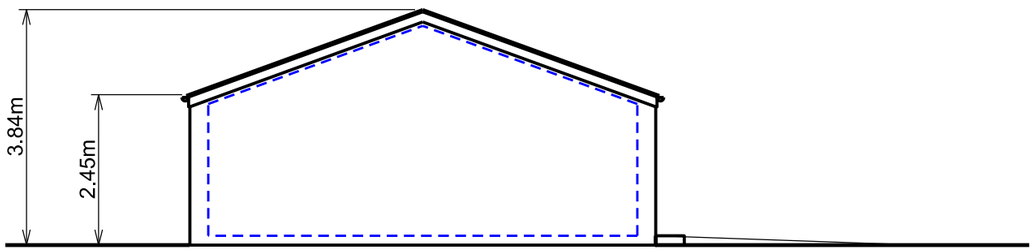
DRAWING NO. 21200 - 101 A



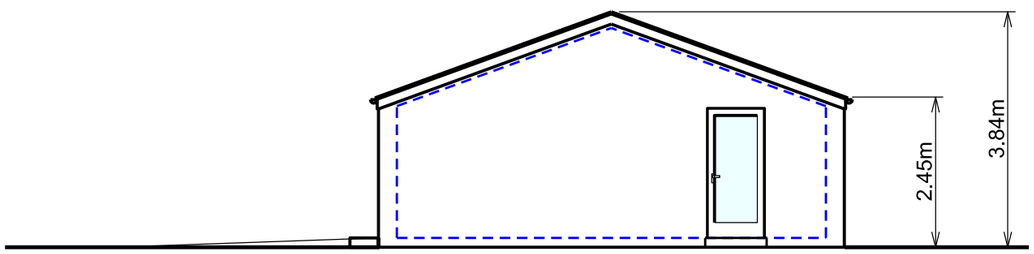
Rear Elevation



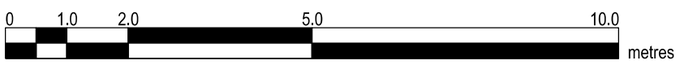
Front Elevation



Left Side Elevation



Right Side Elevation



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All dimensions to be cross-checked on site prior to completing a Building Regulations package, structural engineering, the party wall process and construction.

Print to scale (as actual size)

NOTES

Proposed Materials:

Brickwork / Walls - Cream render to match existing main house

Pitched Roof - Slate tiles to match existing main house

Windows - White uPVC windows to match existing main house

Doors - White uPVC doors to match existing main house

RWP / Gutters / Fascia - Black and white uPVC downpipes, guttering and white painted timber fascias to match existing main house

Revision

Rev	Notes	Date
-	Preliminary Issue	29/02/2020

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- 1.5m head height

JOB TITLE
Proposed garden annex, floor plan redesign and all associated works at 91 Grinstead Lane

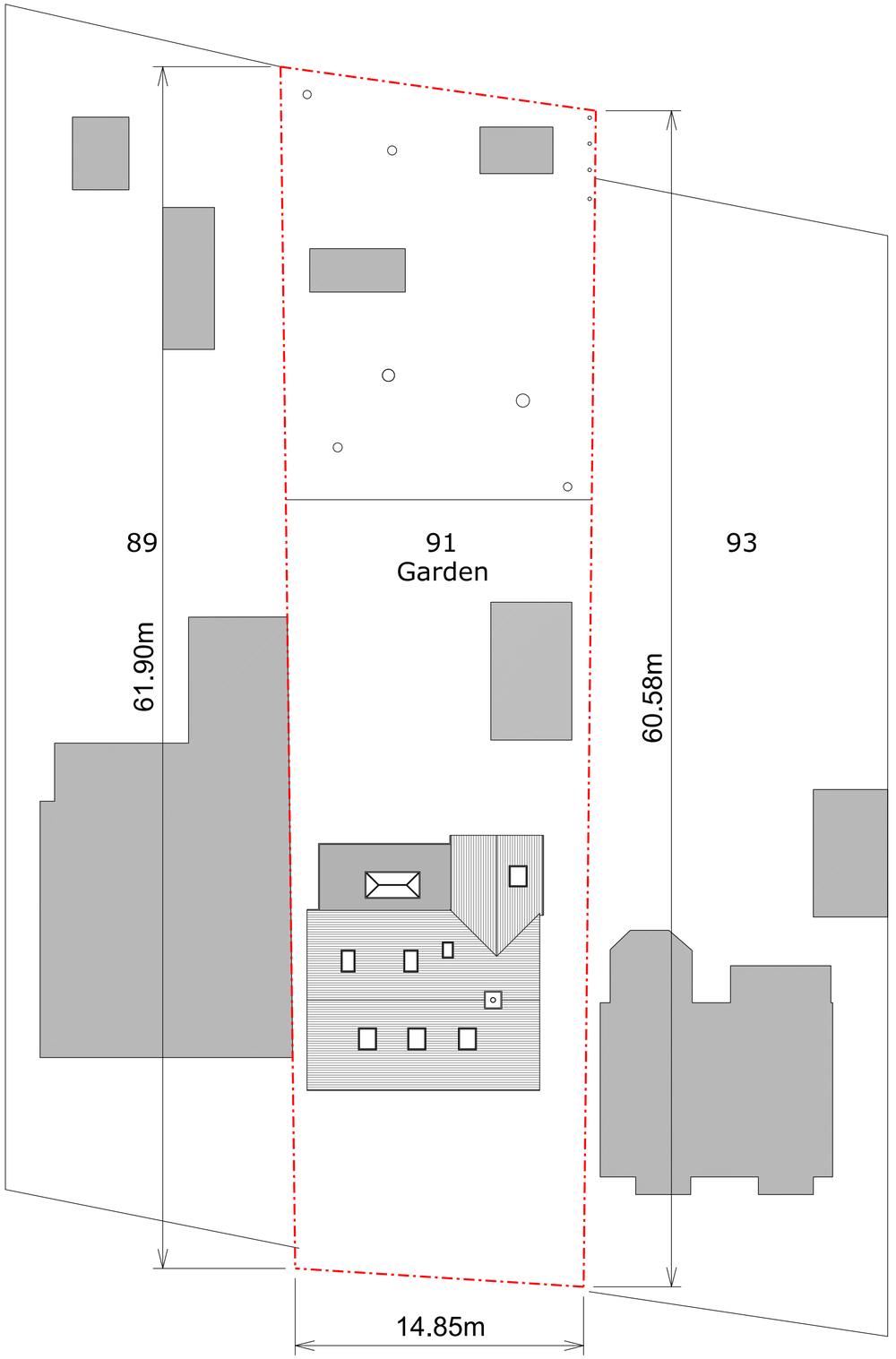
STATUS
Preliminary

DRAWING TITLE
Proposed Elevations

CLIENT
Jackie Betteridge

SCALE	DRAWN
1:100 at A3	YK
DATE	**CHECKED**
Feb 2020	PC

DRAWING NO. 21200 - 201



Existing Block Plan

N

0 1.0 2.0 4.0 10.0 20.0
metres

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JOB TITLE
Proposed garden annex, floor plan redesign and all associated works at 91 Grinstead Lane

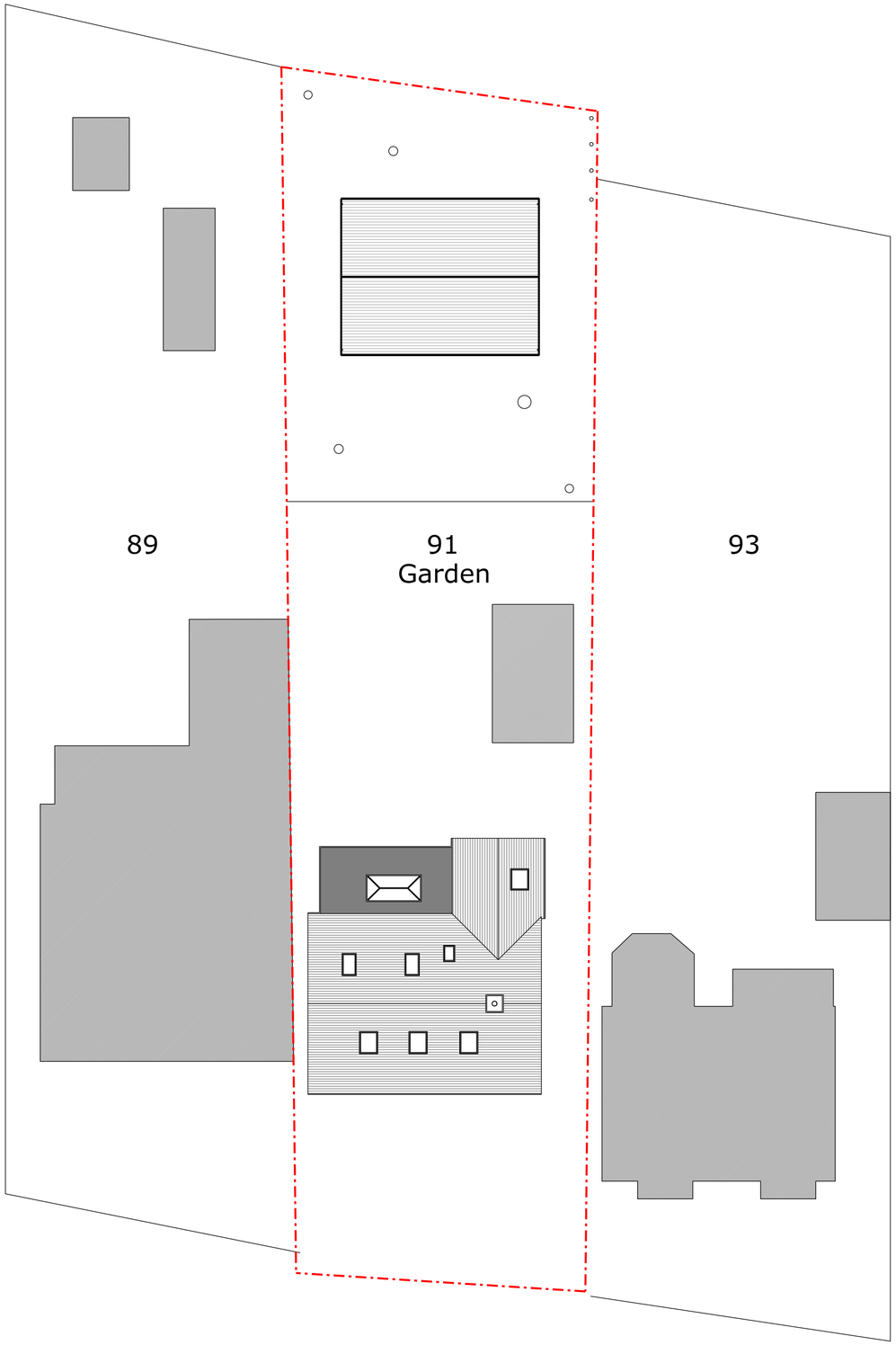
STATUS
Preliminary

DRAWING TITLE
Existing Block Plan

CLIENT
Jackie Betteridge

SCALE	**DRAWN**
1:200 at A2	KE
DATE	**CHECKED**
Feb 2020	PC

DRAWING NO. 21200 - 401



Proposed Block Plan

N

0 1.0 2.0 4.0 10.0 20.0
metres

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Print to scale (as actual size)

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- 1.5m head height

JOB TITLE
Proposed garden annex, floor plan redesign and all associated works at 91 Grinstead Lane

STATUS
Preliminary

DRAWING TITLE
Proposed Block Plan

CLIENT
Jackie Betteridge

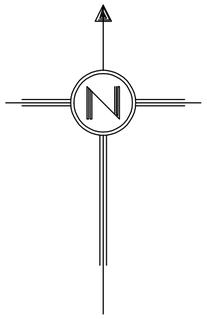
SCALE	**DRAWN**
1:200 at A2	KE
DATE	**CHECKED**
Feb 2020	PC

DRAWING NO. 21200 - 402




LOCATION PLAN
SCALE
1:1250

NORTH (INDICATIVE)



LAND AND MEASURED BUILDING SURVEYORS
M.J.ZARA ASSOCIATES
139 HIGH STREET – LEWES
EAST SUSSEX – BN7 1XS
TEL 01273 472492
E-MAIL mjzaraassociates@gmail.com

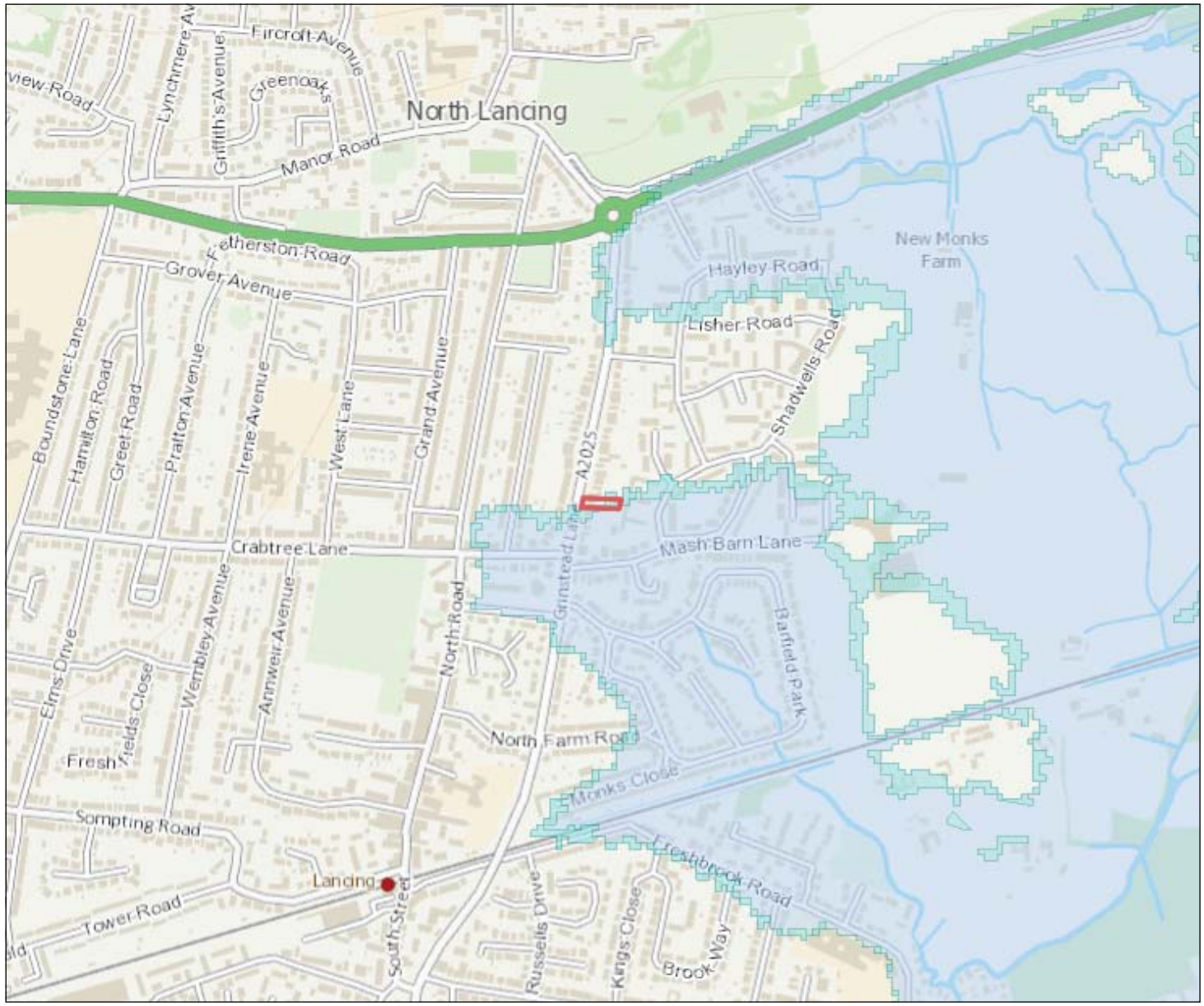
SITE
91 GRINSTEAD LANE
LANCING

CLIENT
JACKIE BETTERIDGE
91 GRINSTEAD LANE
LANCING, WEST SUSSEX
BN15 9DT.

NOTES
LEVELS BASED ON O.S DATUM VIA G.P.S
COLOURED LINEWORK IS M.J.ZARA DATA
GREY LINEWORK IS O.S DATA
ROAD LEVELS ARE CHANNEL LEVELS
JOB REF. 9158

SCALE	SHEET SIZE
1:200	A2 LANDSCAPE
DATE	SURVEYED BY
JANUARY 2021	T.C

Flood Map for Planning (Rivers and Sea). Centred BN15 9DT. Created 23/06/2020.



Environment Agency

1: 10,000

0 Metres 250

N W E S

Flood Map for Planning (Rivers & Sea)

- Defences
- Flood Storage Areas
- Areas benefiting from flood defences
- 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 occuring each year.

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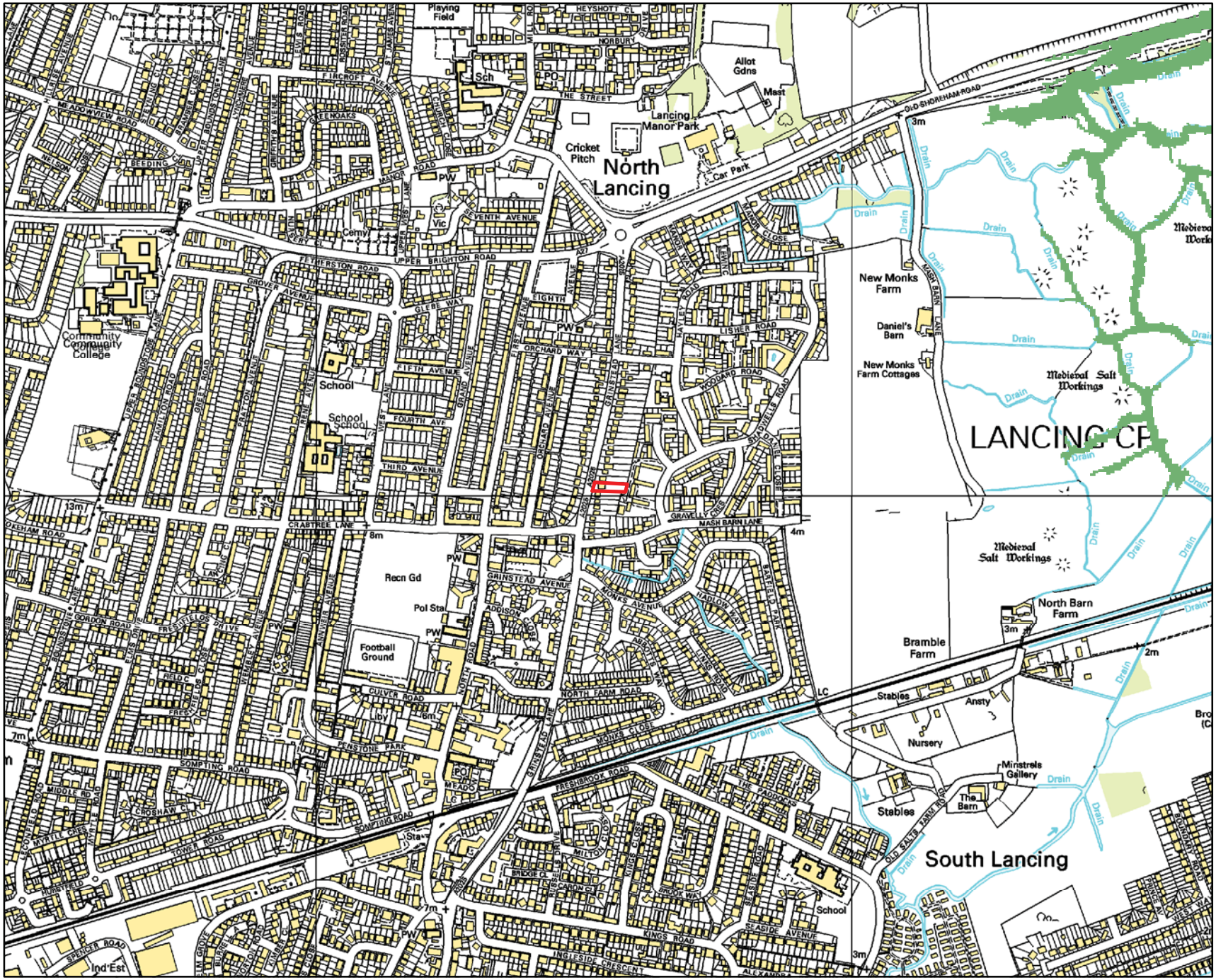
Modelled Flood Outlines (Defended Tidal). Centred BN15 9DT. Created 23/06/2020.



N

Environment Agency

Legend

- Site_Boundary
- 0.5% AEP (Defended)
- 0.5% AEP (2067) (Defended)
- 0.5% AEP (2117) (Defended)

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

Scale: 1:10,000

0 0.225 0.45
Kilometers

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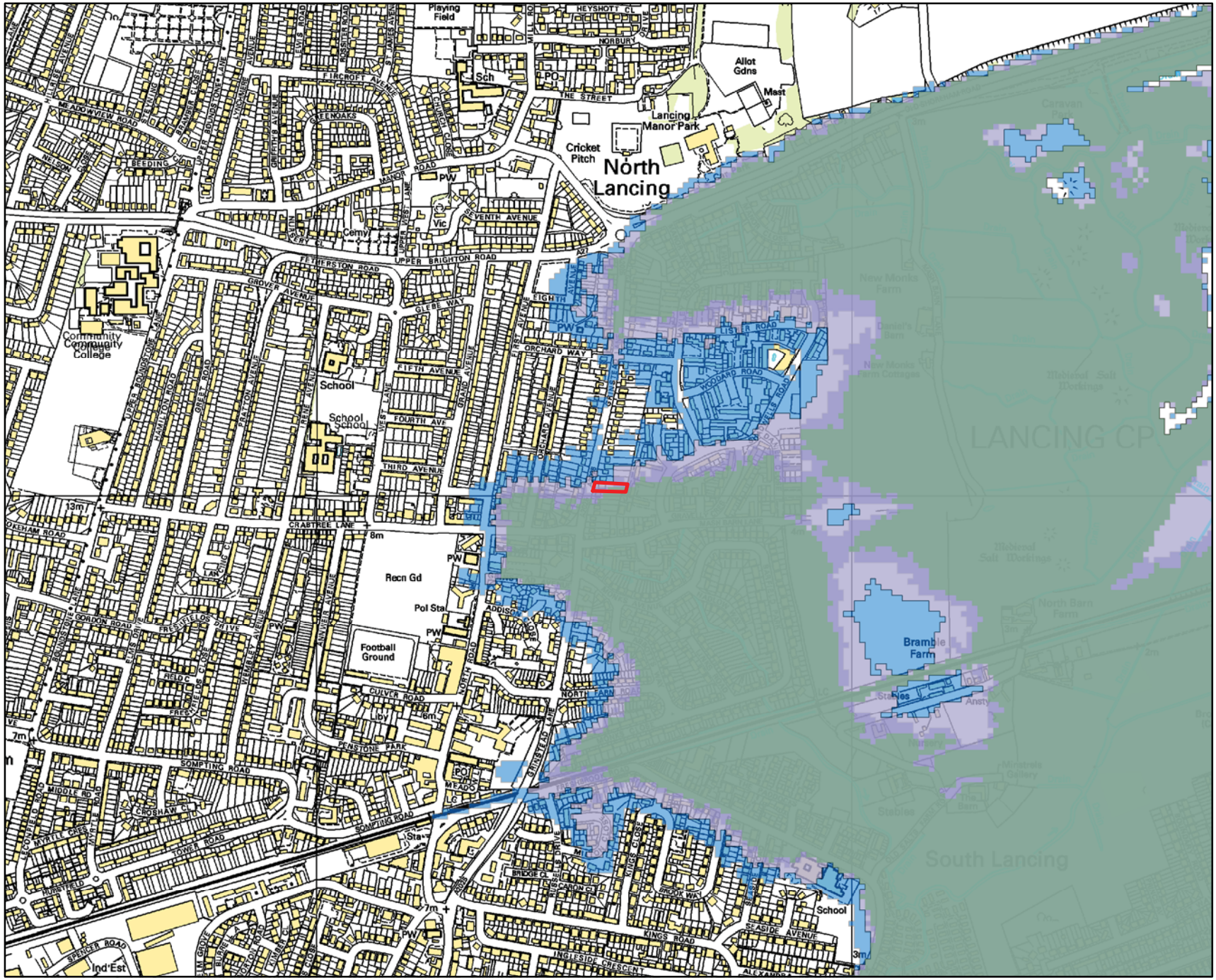
Modelled Flood Outlines (Undefended Tidal). Centred BN15 9DT. Created 23/06/2020.



Environment Agency

N

Legend

- Site_Boundary
- 0.5% AEP (2012) (Undefended)
- 0.5% AEP (2070) (Undefended)
- 0.5% AEP (2115) (Undefended)
- 0.1% AEP (2012) (Undefended)

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

Scale: 1:10,000

0 0.225 0.45
Kilometers

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FRA Site Boundary & Node Points. Centred BN15 9DT. Created 26/06/2020.



Environment Agency

N

Legend

- Site_Nodes
- Site_Boundary

Scale: 1:1,000

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Product 4 Flood Risk Data Requested by: Adur & Worthing Councils

Site: 91 Grinstead Lane, Lancing, BN15 9DT

Table 1: Water Levels: Tidal Undefended

	NGR		Modelled Flood Levels in Metres AOD Undefended Annual Exceedance Probability			
Node Ref	Eastings	Northings	0.5%	0.5% (2070) *	0.5% (2115) *	0.1%
1	518532	105014	-	4.79	5.41	4.48
2	518563	105013	4.26	4.79	5.41	4.48

Table 2: Water Levels: Tidal Defended

	NGR		Modelled Flood Levels in Metres AOD Defended Annual Exceedance Probability		
Node Ref	Eastings	Northings	0.5%	0.5% (2067) *	0.5% (2117) *
1	518532	105014	-	-	-
2	518563	105013	-	-	-

Table 3: Water Depths: Tidal Undefended

	NGR		Modelled Flood Depths in Metres Undefended Annual Exceedance Probability			
Node Ref	Eastings	Northings	0.5%	0.5% (2070) *	0.5% (2115) *	0.1%
1	518532	105014	-	0.32	0.93	0.21
2	518563	105013	0.17	0.69	1.31	0.38

Table 4: Water Depths: Tidal Defended

	NGR		Modelled Flood Depths in Metres Defended Annual Exceedance Probability		
Node Ref	Eastings	Northings	0.5%	0.5% (2067) *	0.5% (2117) *
1	518532	105014	-	-	-
2	518563	105013	-	-	-

Office Address: Guildbourne House, Chatsworth Road, Worthing BN11 1LD.
Customer services line: 03708 506 506. Email: enquiries@environment-agency.gov.uk
www.gov.uk/government/organisations/environment-agency

All levels taken from: Adur Coastal Modelling (2012) with updated Adur Tidal Wall Scheme Modelling (2018)

Produced on: 23/06/2020

***The flood risk data provided is based on existing EA hydraulic models for existing 0.5% annual probability events with an allowance for climate change. Please note the climate change allowances provided are not up to date. These were updated on 17 December 2019.**
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.

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Customer services line: 03708 506 506. Email: enquiries@environment-agency.gov.uk
www.gov.uk/government/organisations/environment-agency