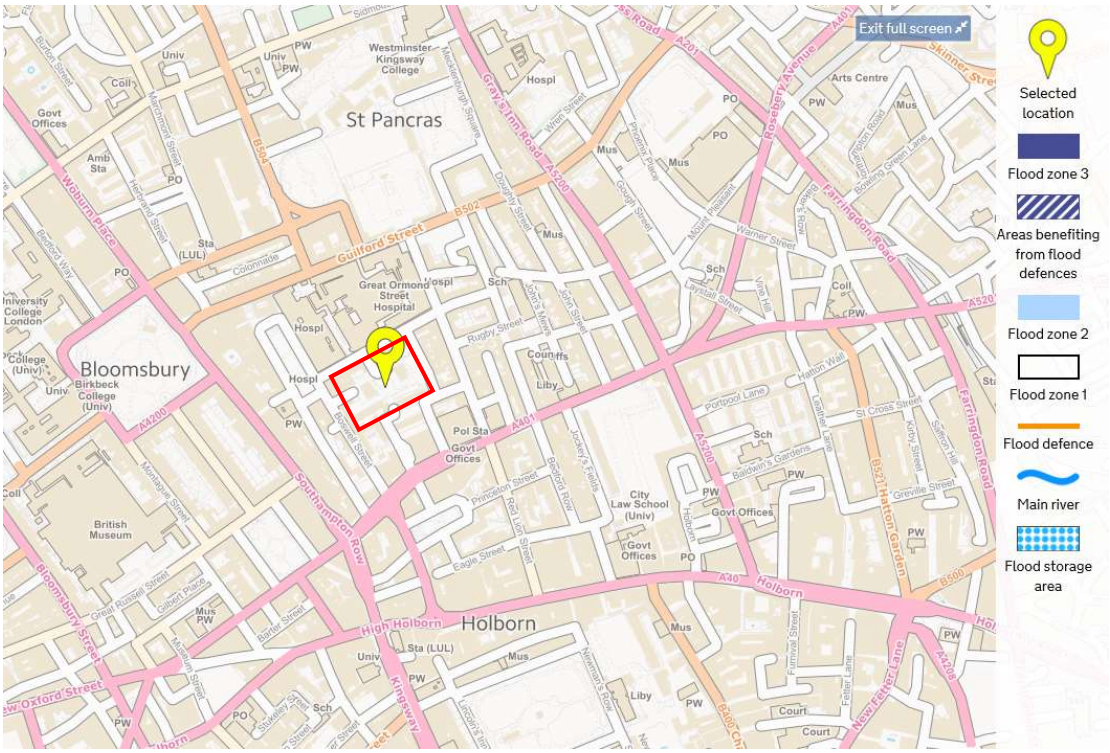
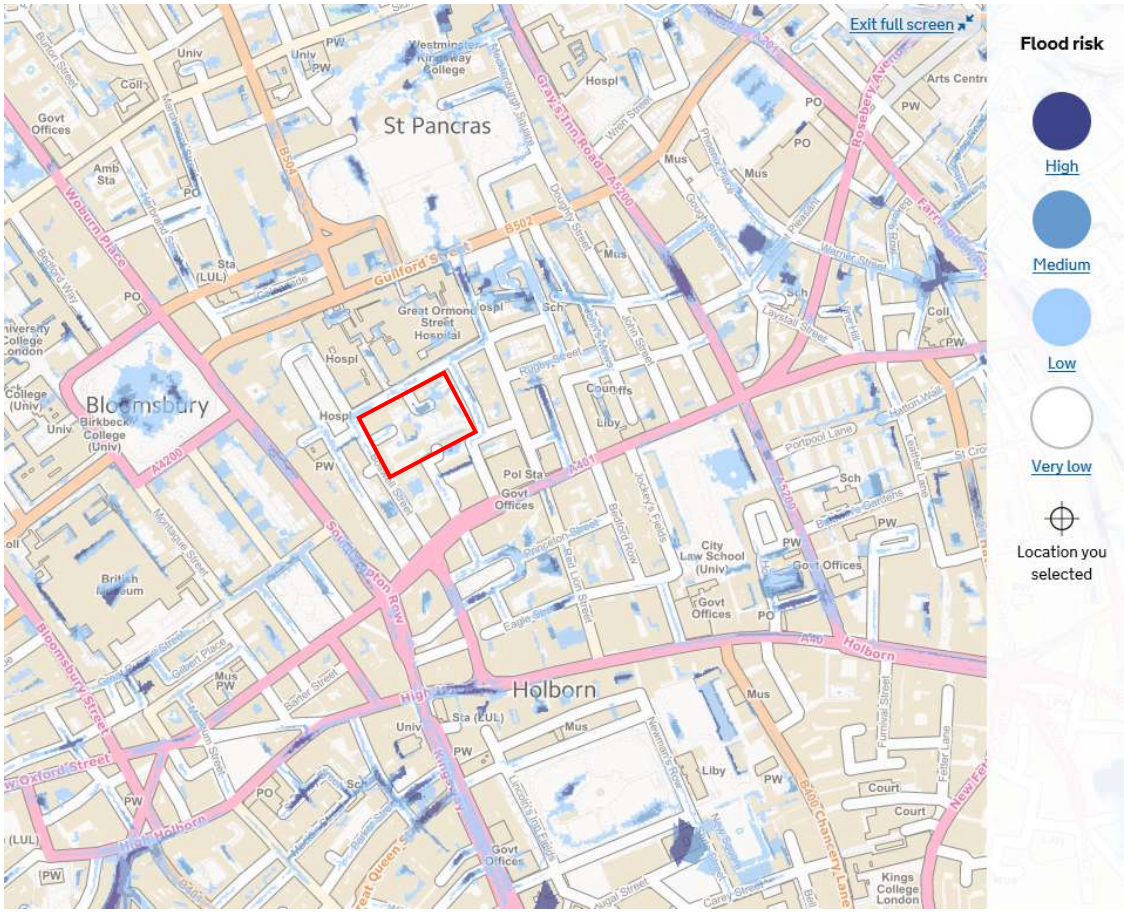
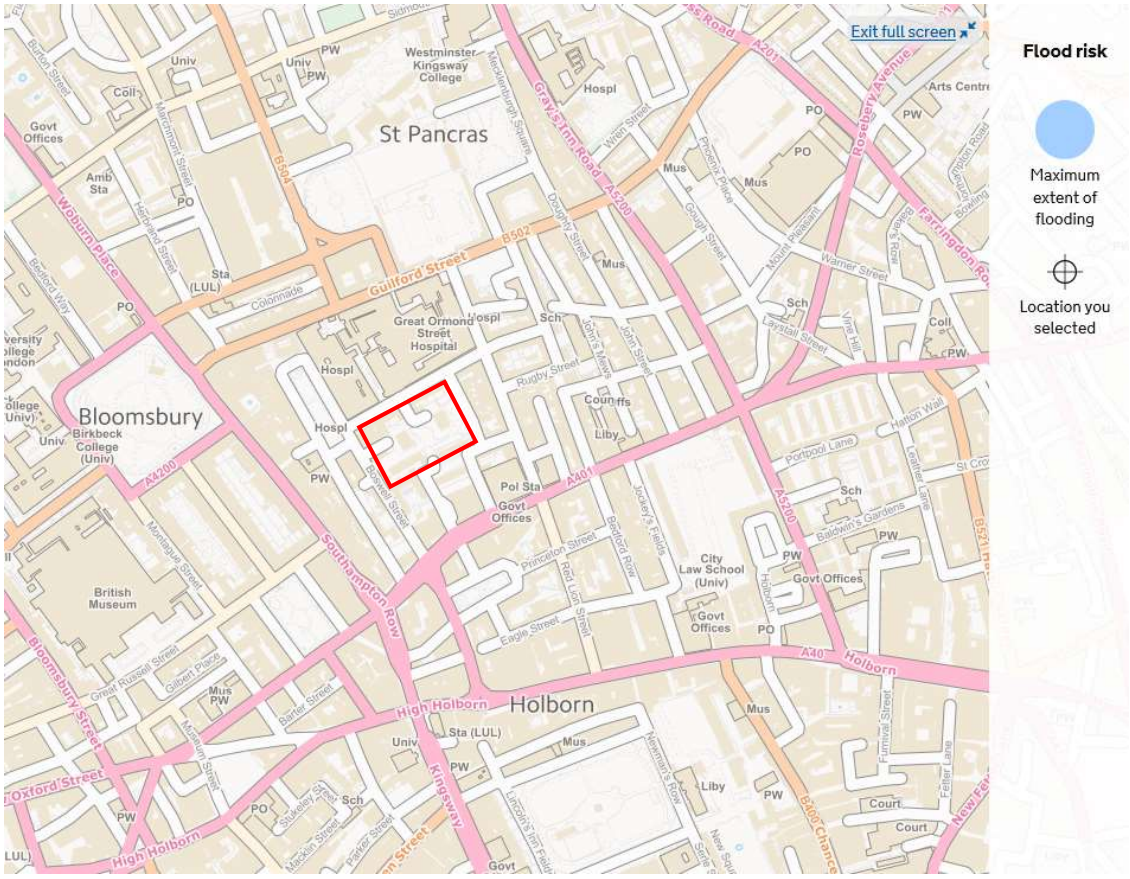
Flood Risk Map from Rivers & Seas



Flood Risk map from Surface Water



Flood Risk Map from Reservoirs



APPENDIX C

Existing Drainage Plan

General
1.1 This drawing is to be read in conjunction with all Architect's, Engineer's and Services Engineer's drawings and specifications.
1.2 Do not scale from any of the structural drawings. All dimensions to be verified on site and any discrepancies should be highlighted.
1.3 The contractor is responsible for the stability of the building and adjoining structures during construction and shall design, install, adapt and maintain all necessary propping and temporary works. A method statement for the temporary works must be submitted to the contractor
administrator for comment before work begins.
1.4 All materials to comply with the relevant British Standard.

REV	COMMENTS	DATE	CHK
P2	Revised for Site Layout	14.06.21	RJ
P1	For Information	26.09.19	RJ

STATUS
PRELIMINARY

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CLIENT
Camden

PROJECT
Tybalds Estate
Camden

DRAWING TITLE
Drainage Survey Plan

SCALE	DRAWN BY	DATE
1:500 @ A1	AQ	Sept 2019

DRAWING No.	REV
219218-C-901	P2

APPENDIX D

Greenfield Runoff Rate

Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by:	Andrew Quinn
Site name:	Tybalds Estate
Site location:	London

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013) , the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be
the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	51.52129° N
Longitude:	0.12008° W
Reference:	650627083
Date:	Jun 08 2021 13:50

Runoff estimation approach

IH124

Site characteristics

Total site area (ha): 1.584

Methodology

Q_{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Soil characteristics

	Default	Edited
SOIL type:	2	2
HOST class:	N/A	N/A
SPR/SPRHOST:	0.3	0.3

Hydrological characteristics

	Default	Edited
SAAR (mm):	611	611
Hydrological region:	6	6
Growth curve factor 1 year:	0.85	0.85
Growth curve factor 30 years:	2.3	2.3
Growth curve factor 100 years:	3.19	3.19
Growth curve factor 200 years:	3.74	3.74

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

	Default	Edited
Q_{BAR} (l/s):	2.46	2.46
1 in 1 year (l/s):	2.09	2.09
1 in 30 years (l/s):	5.66	5.66
1 in 100 year (l/s):	7.85	7.85
1 in 200 years (l/s):	9.21	9.21

Greenfield Runoff Volume

FSR Data

Return Period (years)	1
Storm Duration (mins)	360
Region	England and Wales
M5-60 (mm)	20.500
Ratio R	0.437
Areal Reduction Factor	1.00
Area (ha)	1.584
SAAR (mm)	613
CWI	45.000
Urban	0.000
SPR	47.000

Results

Percentage Runoff (%)	27.00
Greenfield Runoff Volume (m^3)	91.971

Greenfield Runoff Volume

FSR Data

Return Period (years)	30
Storm Duration (mins)	360
Region	England and Wales
M5-60 (mm)	20.500
Ratio R	0.437
Areal Reduction Factor	1.00
Area (ha)	1.584
SAAR (mm)	613
CWI	45.000
Urban	0.000
SPR	47.000

Results

Percentage Runoff (%)	28.85
Greenfield Runoff Volume (m^3)	217.137

Greenfield Runoff Volume

FSR Data

Return Period (years)	100
Storm Duration (mins)	360
Region	England and Wales
M5-60 (mm)	20.500
Ratio R	0.437
Areal Reduction Factor	1.00
Area (ha)	1.584
SAAR (mm)	613
CWI	45.000
Urban	0.000
SPR	47.000

Results

Percentage Runoff (%)	30.88
Greenfield Runoff Volume (m^3)	301.600

APPENDIX E

Existing Impermeable Area Plan

General

1.1 This drawing is to be read in conjunction with all Architect's, Engineer's and Services Engineer's drawings and specifications.
1.2 Do not scale from any of the structural drawings. All dimensions to be verified on site and any discrepancies should be highlighted.
1.3 The contractor is responsible for the stability of the building and adjoining structures during construction and shall design, install, adapt and maintain all necessary propping and temporary works. A method statement for the temporary works must be submitted to the contractor
administrator for comment before work begins.
1.4 All materials to comply with the relevant British Standard.

Legend

Key	Description
	Impermeable Area = 14,031,942m^2
	Permeable Area = 1,804,370m^2

REV	COMMENTS	DATE	CHK
P3	Revised for Site Layout	14.06.21	RJ
P2	Minor update	05.05.21	RJ
P1	Preliminary Issue	25.09.19	RJ

STATUS

PRELIMINARY

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www.mnp.co.uk

CLIENT

Camden

PROJECT

Tybald Estate
Orde Hall Street
Camden

DRAWING TITLE

Existing Impermeable Area Plan

SCALE	DRAWN BY	DATE
1:500 @ A1	AQ	Sept 2019

DRAWING No.	REV
219218-C-SK001	P3

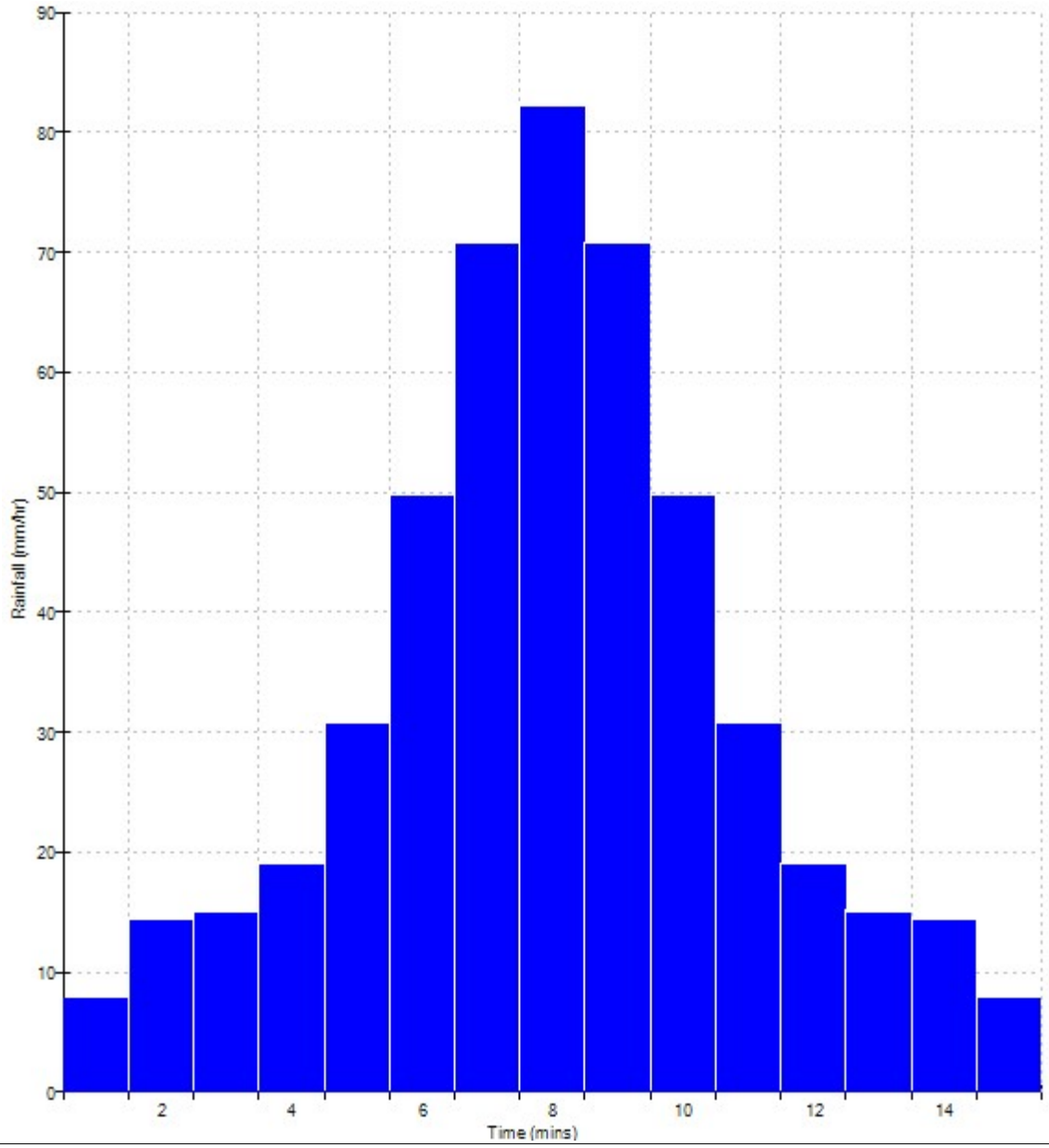
APPENDIX F

Existing Brownfield Intensity Values

Rainfall profile

Storm duration (mins) 15

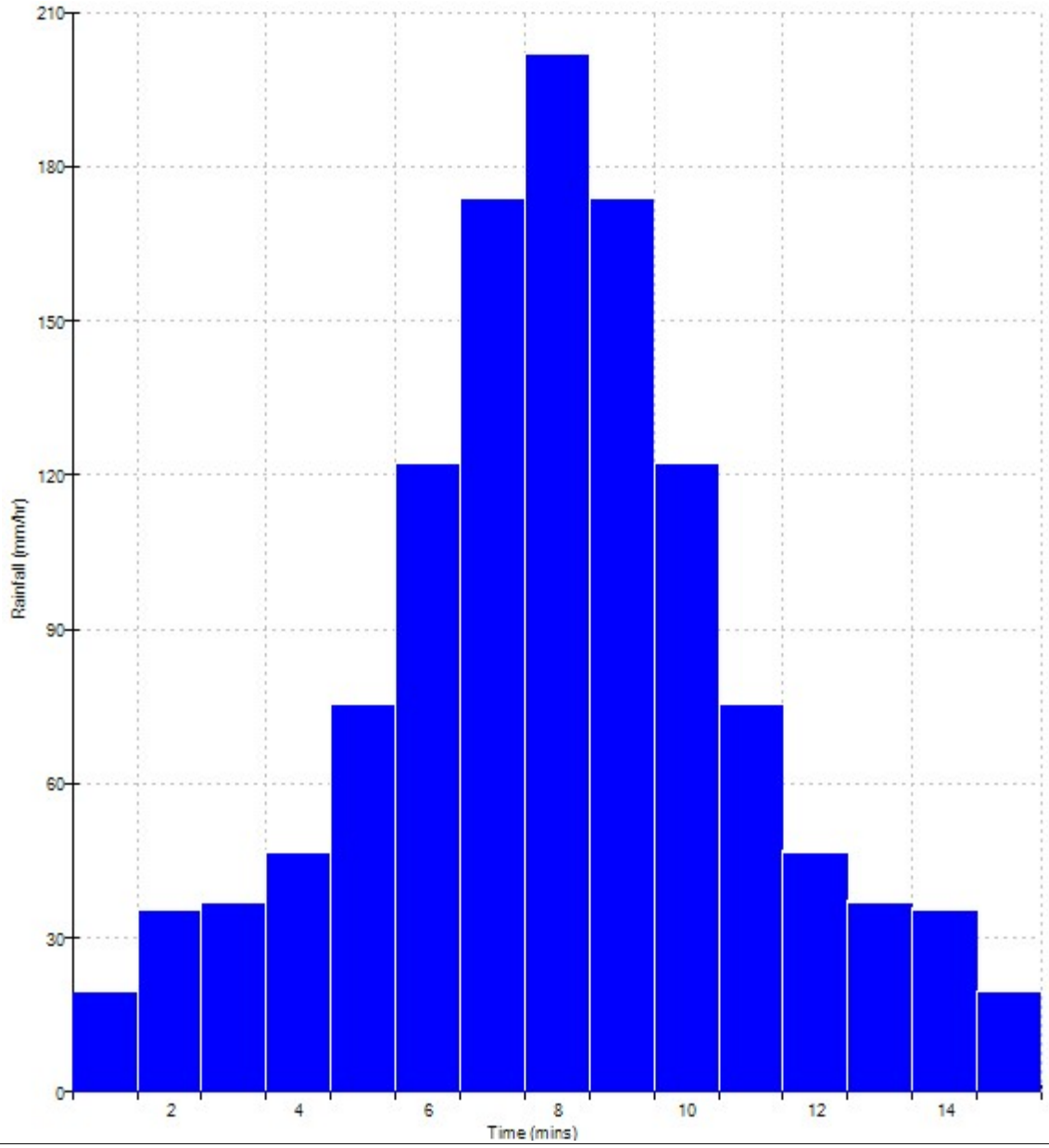
FSR Data	
Region	England and Wales
M5-60 (mm)	20.700
Ratio R	0.438
Peak Intensity (mm/hr)	82.101
Ave. Intensity (mm/hr)	33.106
Return Period (years)	1.0



Rainfall profile

Storm duration (mins) 15

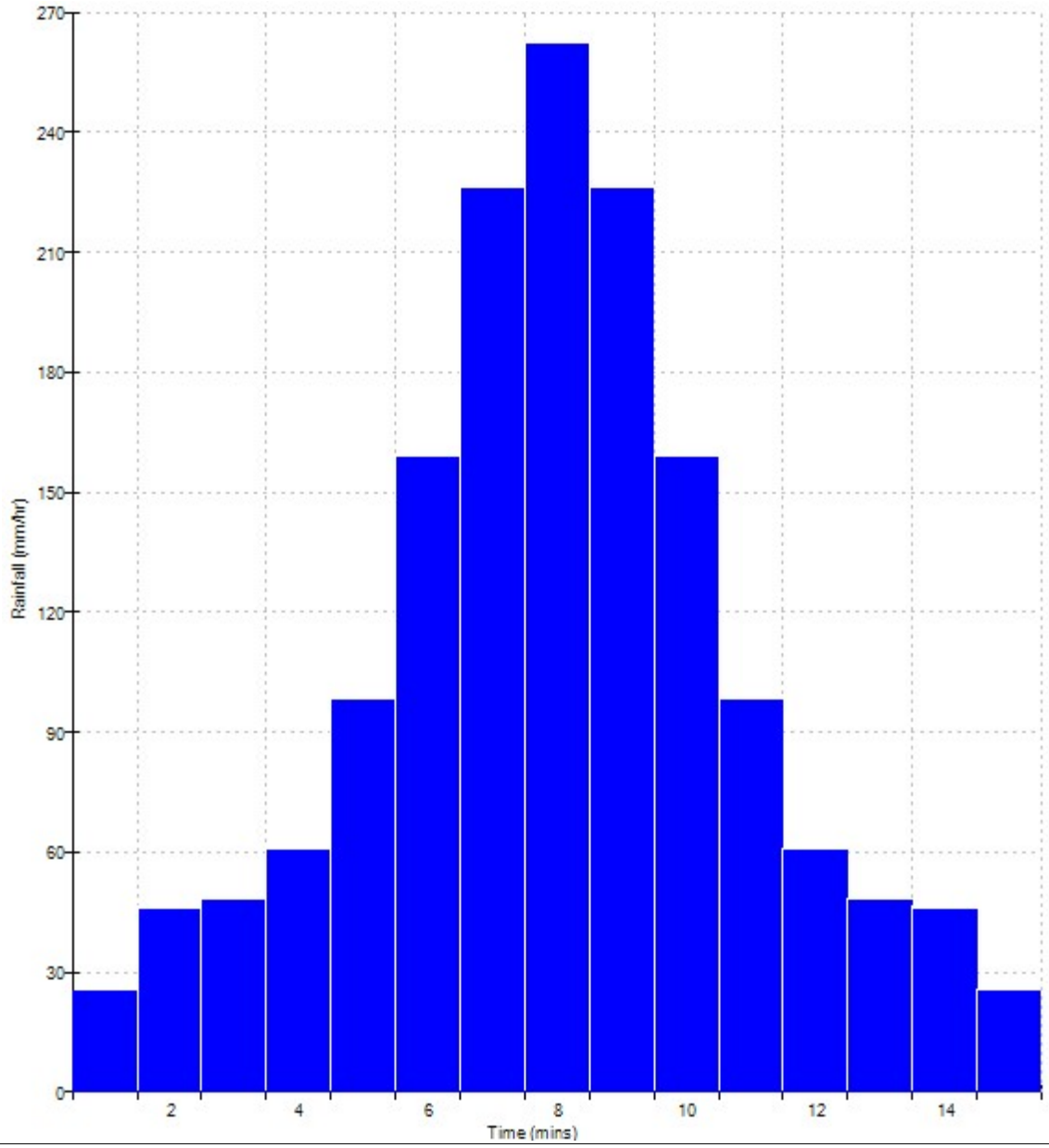
FSR Data	
Region	England and Wales
M5-60 (mm)	20.700
Ratio R	0.438
Peak Intensity (mm/hr)	201.632
Ave. Intensity (mm/hr)	81.304
Return Period (years)	30.0



Rainfall profile

Storm duration (mins) 15

FSR Data	
Region	England and Wales
M5-60 (mm)	20.700
Ratio R	0.438
Peak Intensity (mm/hr)	262.293
Ave. Intensity (mm/hr)	105.764
Return Period (years)	100.0



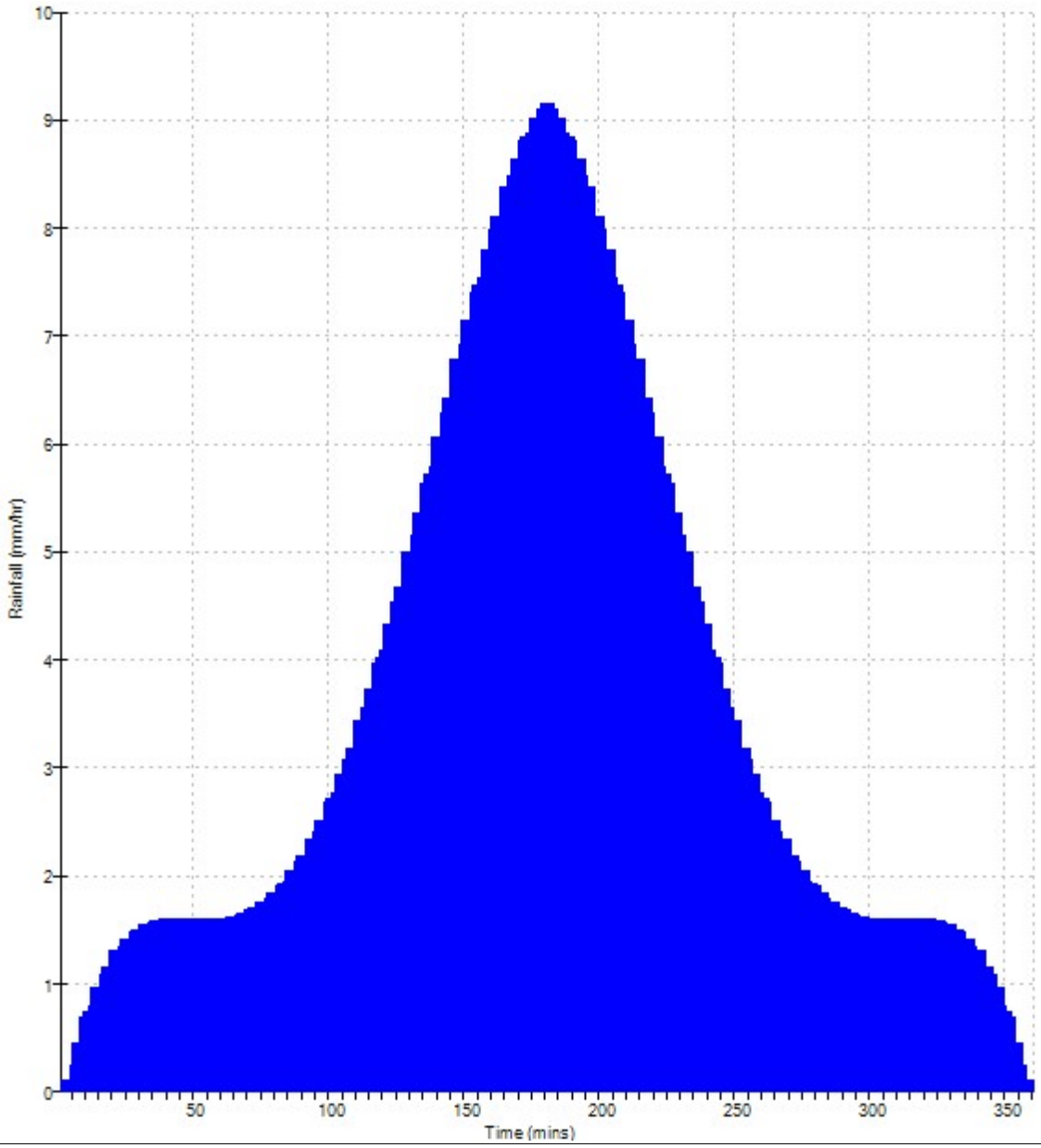
APPENDIX G

Existing Brownfield Volume Run Off

Rainfall profile

Storm duration (mins) 360

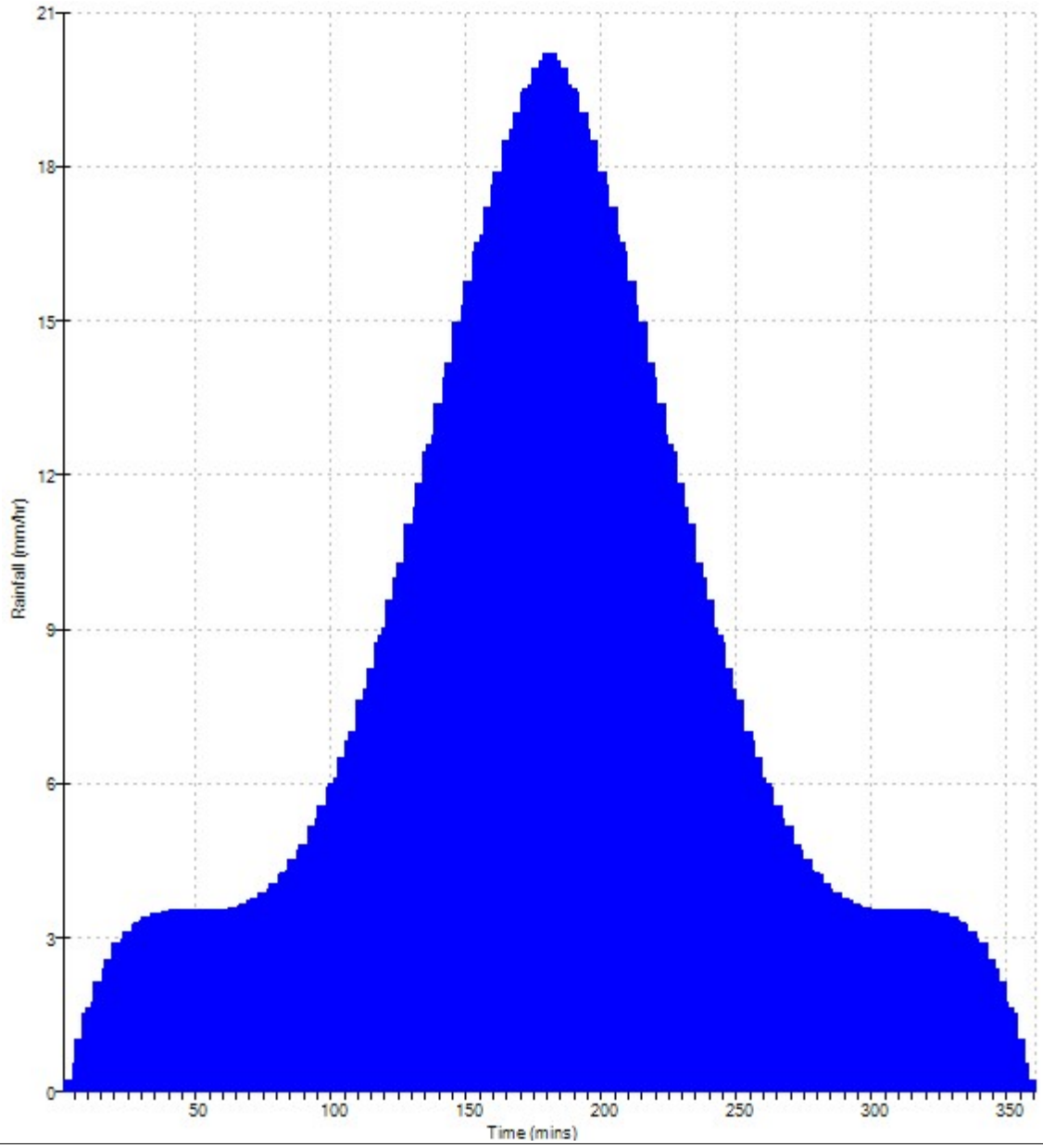
FSR Data	
Region	England and Wales
M5-60 (mm)	20.700
Ratio R	0.438
Peak Intensity (mm/hr)	9.151
Ave. Intensity (mm/hr)	3.618
Return Period (years)	1.0



Rainfall profile

Storm duration (mins) 360

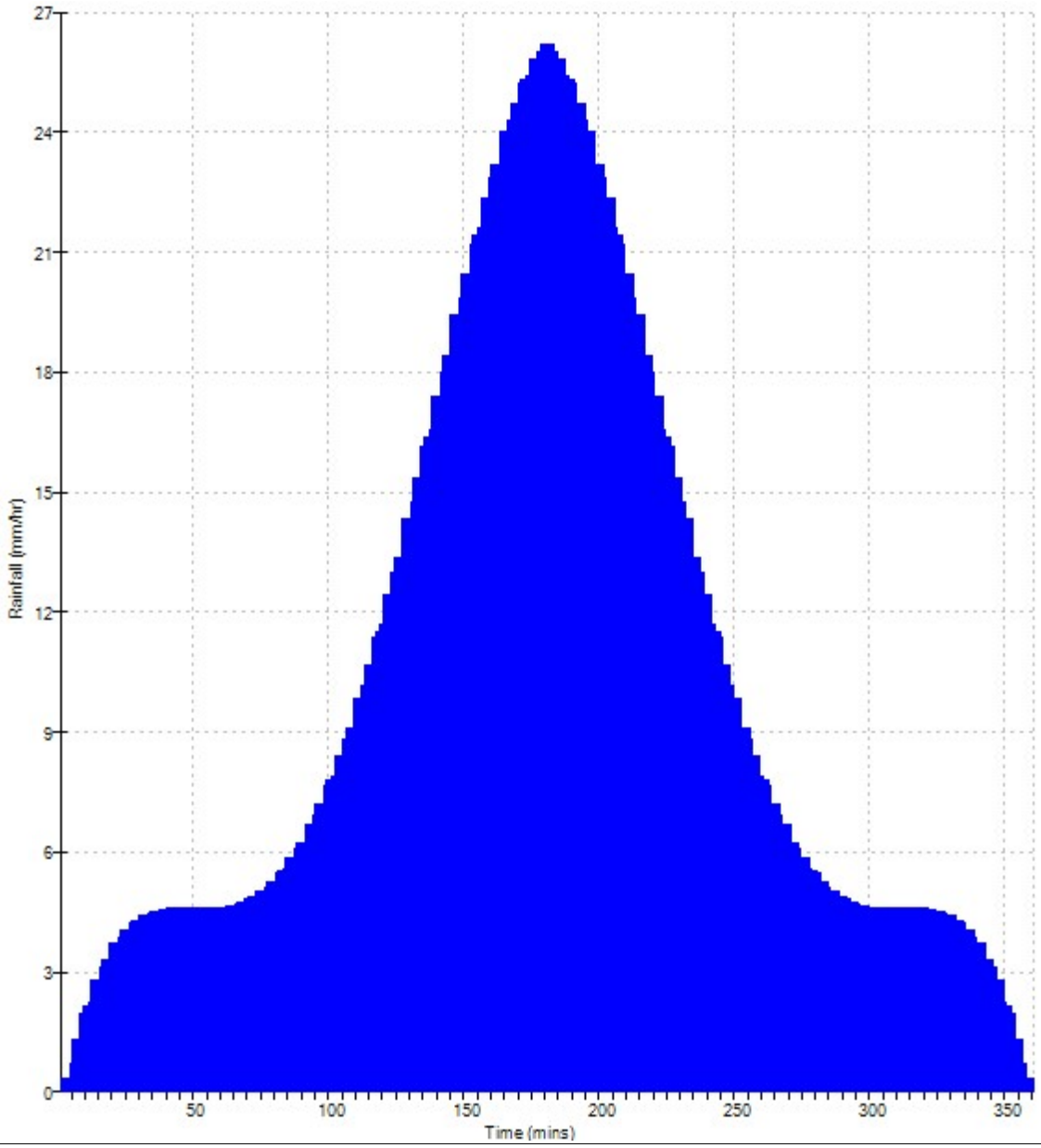
FSR Data	
Region	England and Wales
M5-60 (mm)	20.700
Ratio R	0.438
Peak Intensity (mm/hr)	20.190
Ave. Intensity (mm/hr)	7.983
Return Period (years)	30.0



Rainfall profile

Storm duration (mins) 360

FSR Data	
Region	England and Wales
M5-60 (mm)	20.700
Ratio R	0.438
Peak Intensity (mm/hr)	26.189
Ave. Intensity (mm/hr)	10.355
Return Period (years)	100.0



APPENDIX H

Proposed Impermeable Area Plan