

Havant Thicket Reservoir Project

Environmental Statement Volume 3: Chapter 15 Water Figures

Portsmouth Water Ltd.

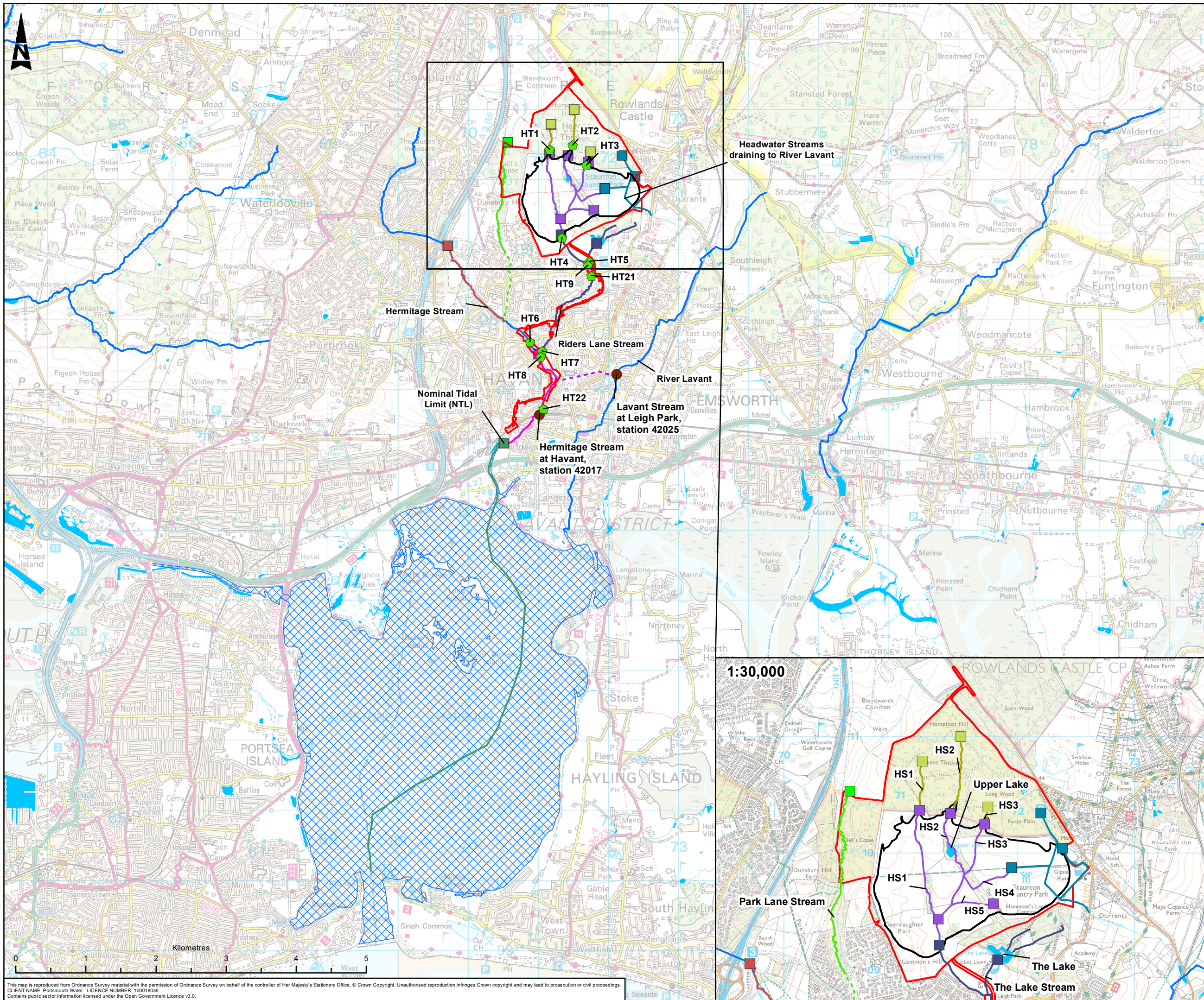
September 2020





Schedule of Drawings included in this application:

Drawing title	Drawing number
Figure 15.1 Surface Waterbodies and WFD Waterbodies	HTR-ATK-ZZ-ZZ-GS-Z-0033
Figure 15.2 Surface Water Hydrology	HTR-ATK-ZZ-ZZ-GS-Z-0034
Figure 15.3 Surface Water Quality	HTR-ATK-ZZ-ZZ-GS-Z-0035
Figure 15.4 Flood Map for Planning (Rivers and Sea)	HTR-ATK-ZZ-ZZ-GS-Z-0061
Figure 15.5 Flood Risk from Surface Water	HTR-ATK-ZZ-ZZ-GS-Z-0062
Figure 15.6 Baseline Flood Risk - 1% (1 in 100) Annual Probability	HTR-ATK-ZZ-ZZ-GS-Z-0063
Figure 15.7 Operational Flood Risk - 1% (1 in 100) Annual Probability	HTR-ATK-ZZ-ZZ-GS-Z-0064
Figure 15.8	NOT USED
Figure 15.9	NOT USED
Figure 15.10 Geology and Hydrogeology	HTR-ATK-ZZ-ZZ-GS-Z-0054
Figure 15.11 Reservoir Geology	HTR-ATK-ZZ-ZZ-GS-Z-0057
Figure 15.12 WFD Groundwater Bodies	HTR-ATK-ZZ-ZZ-GS-Z-0055
Figure 15.13 Groundwater Designations	HTR-ATK-ZZ-ZZ-GS-Z-0056



-  Red Line Boundary
-  Reservoir Footprint
-  Environment Agency Gauging Station
-  Portsmouth Water hydrology monitoring locations
-  Study Section Start
-  Study Section 1
-  Study Section 2
-  Study Section 3
-  Study Section 4
-  Study Section 5
-  Study Section 6
-  Study Section 7
-  Study Section 8
-  Park Lane Stream - Culverted
-  River Lavant to Hermitage Stream Pipeline Connection
-  WFD River, Canal and Surface Water Transfer Waterbody
-  Langstone Harbour - WFD Coastal Waterbody

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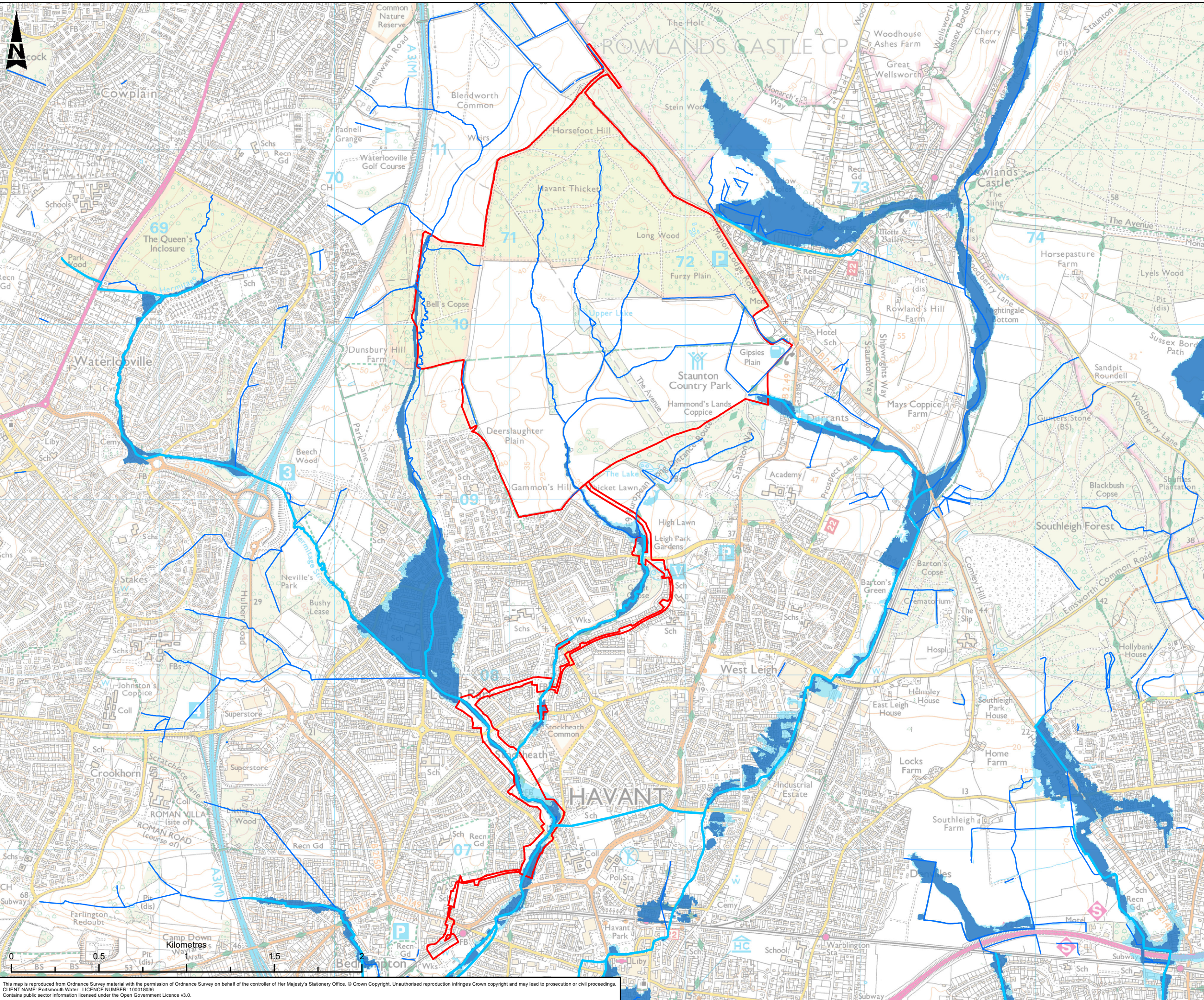
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HAVANT THICKET RESERVOIR

Figure Title

FIGURE 15.2
SURFACE WATER HYDROLOGY

Portsmouth Water Drawing Number	Rev C01
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Red Line Boundary

Main River

Watercourse

Flood Zone 1

Flood Zone 2

Flood Zone 3

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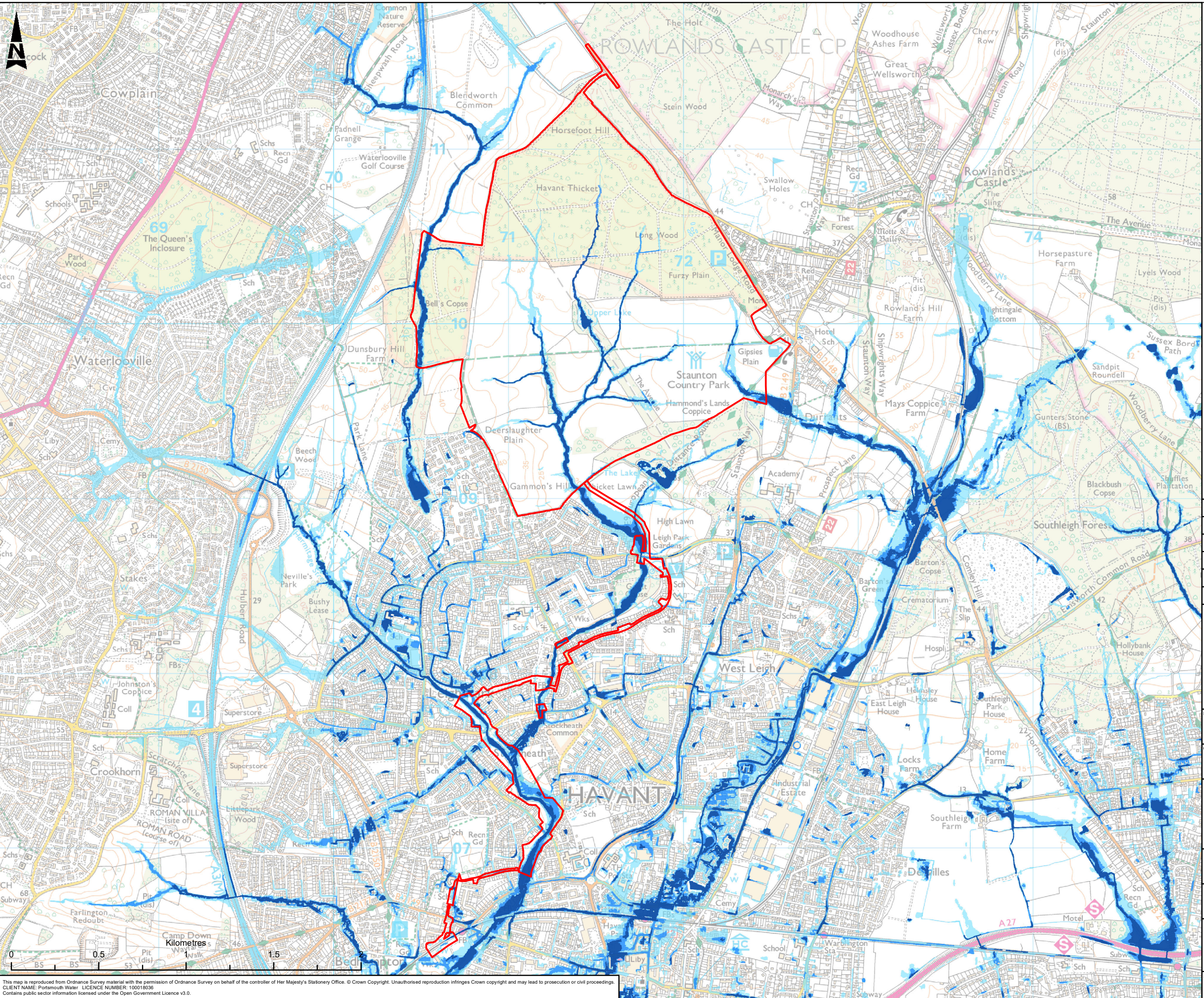
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HAVANT THICKET RESERVOIR

Drawing Title
**FIGURE 15.4
FLOOD MAP FOR PLANNING
(RIVERS AND SEA)**

Portsmouth Water Drawing Number
C01

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- Red Line Boundary
- High risk – greater than 3.3% (1 in 30) AP
- Medium risk – between 1% and 3.3% (1 in 100 and 1 in 30) AP
- Low risk – between 0.1% and 1% (1 in 1000 and 1 in 100) AP
- Very low risk – less than 0.1% (1 in 1000) AP

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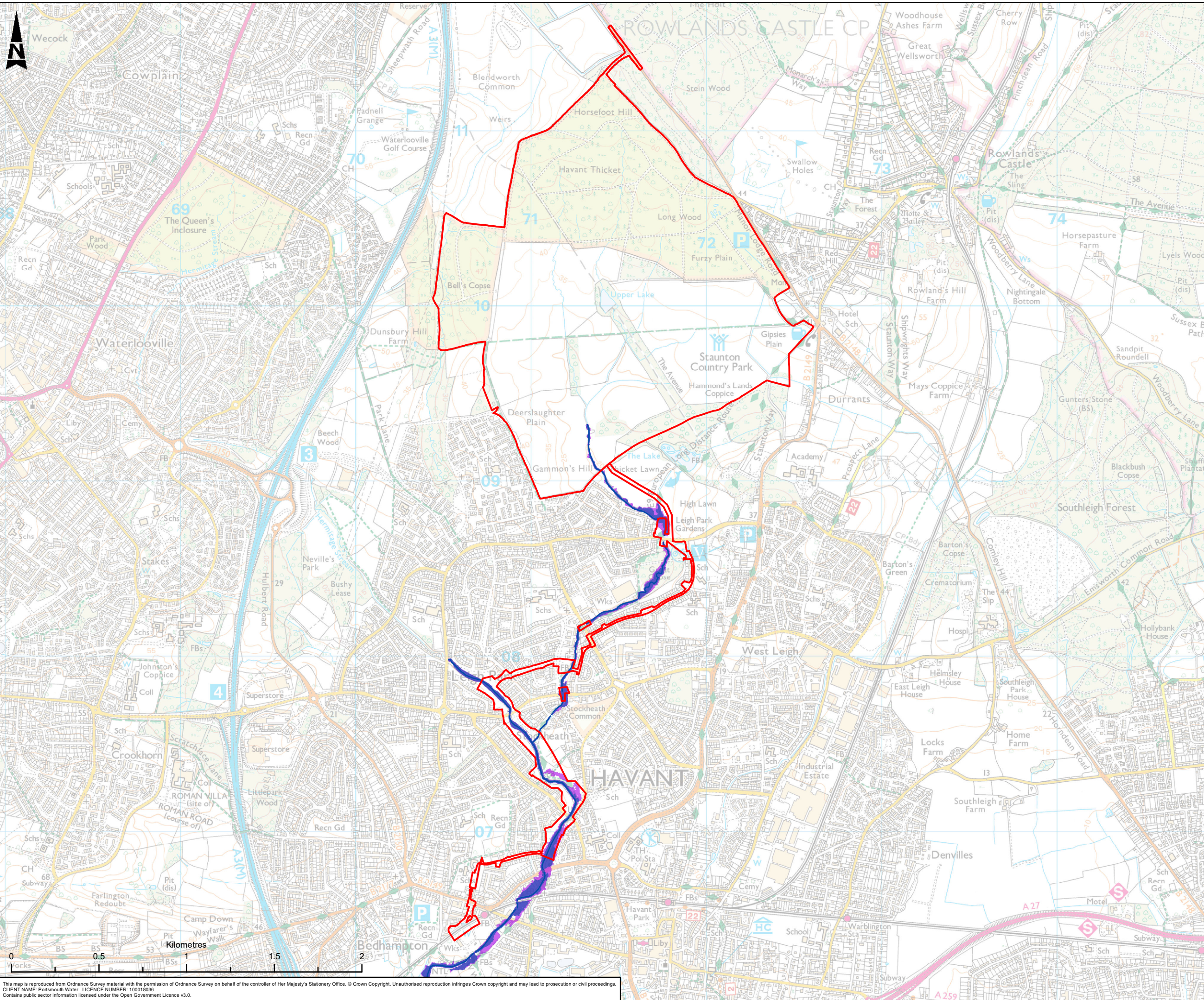
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HAVANT THICKET RESERVOIR

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**FIGURE 15.5
FLOOD RISK FROM SURFACE WATER**

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Red Line Boundary

River Reach

Baseline 1% (1 in 100) AP Flood Extent

Baseline 1% (1 in 100) + 35% climate change uplift flood extent

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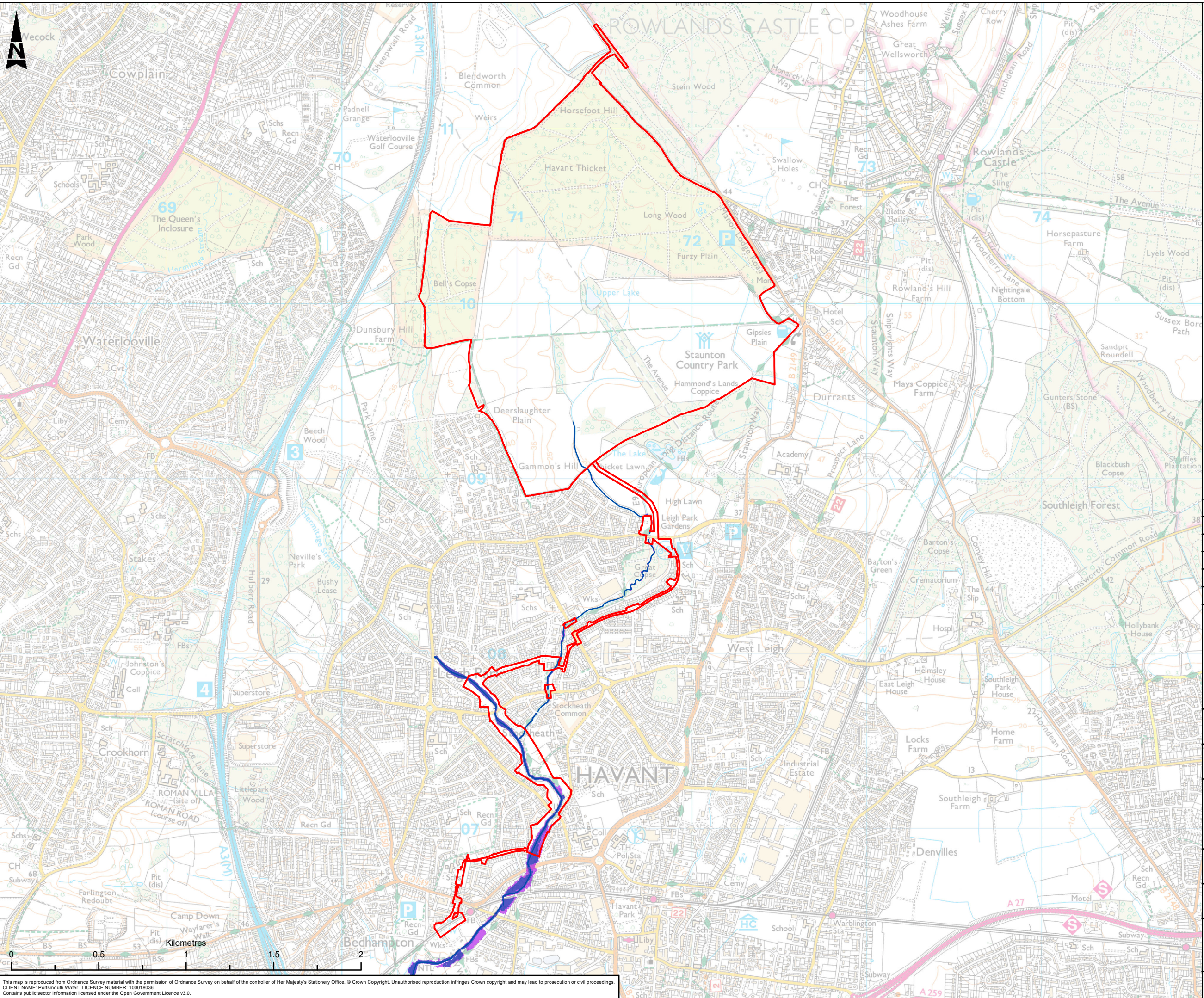
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HAVANT THICKET RESERVOIR

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FIGURE 15.6
BASELINE FLOOD RISK - 1%
(1 IN 100) AP

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- Red Line Boundary
- River Reach
- Operational 1% (1 in 100) AP flood extent
- Operational 1% (1 in 100) + 35% climate change uplift flood extent

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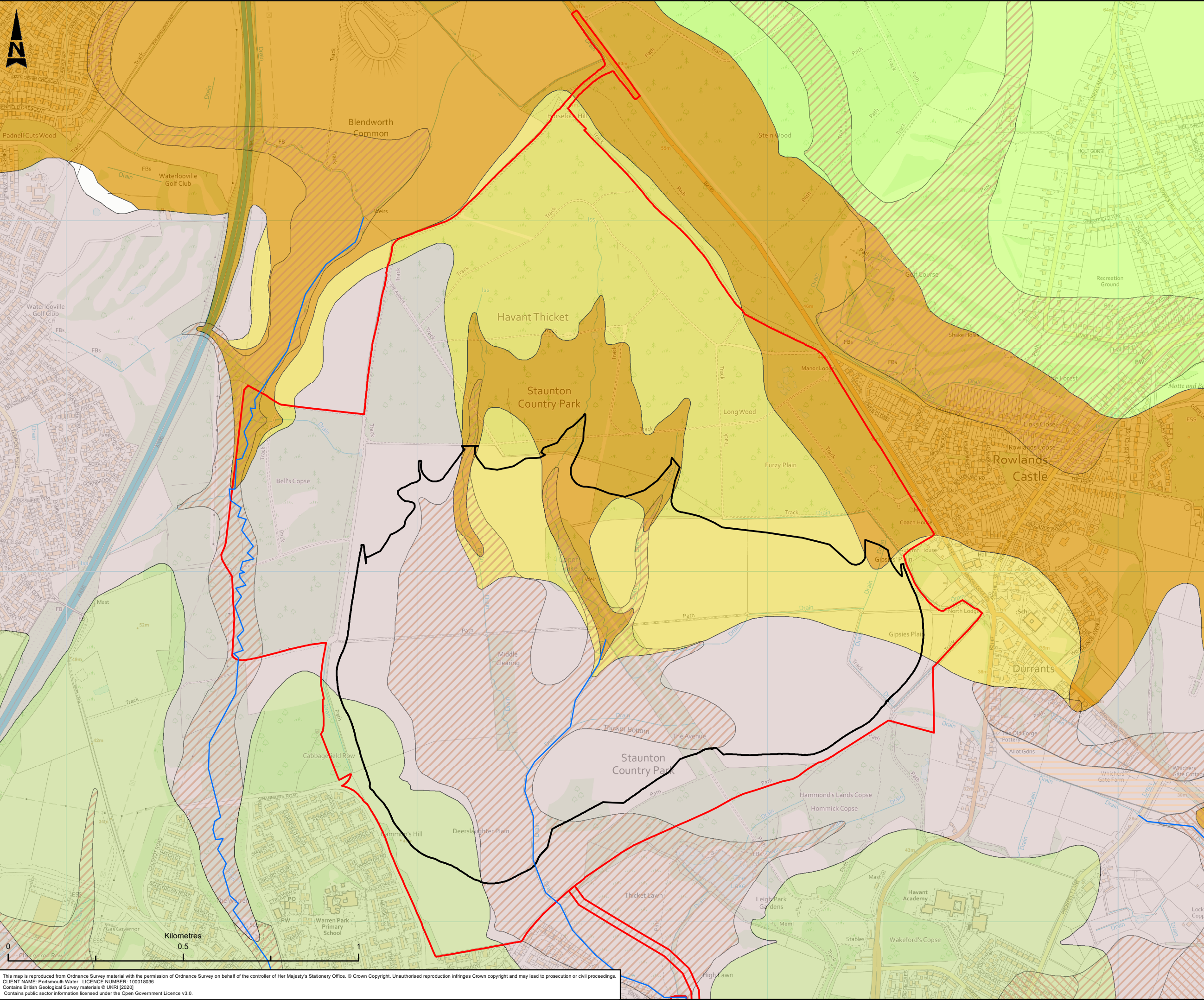
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FIGURE 15.7 OPERATIONAL FLOOD RISK - 1% (1 IN 100) AP

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Red Line Boundary

Reservoir Footprint

Watercourse

Superficial Geology

Head - Clay and gravel

Head - Clay, silt, sand and gravel

River Terrace Deposits (Undifferentiated) - Sand, silt and clay

Bedrock Geology

London Clay Formation - Sand

London Clay Formation - Clay, silt and sand

Bognor Sand Member - Sand

Lambeth Group - Clay, silt and sand

Tarrant Chalk Member - Chalk

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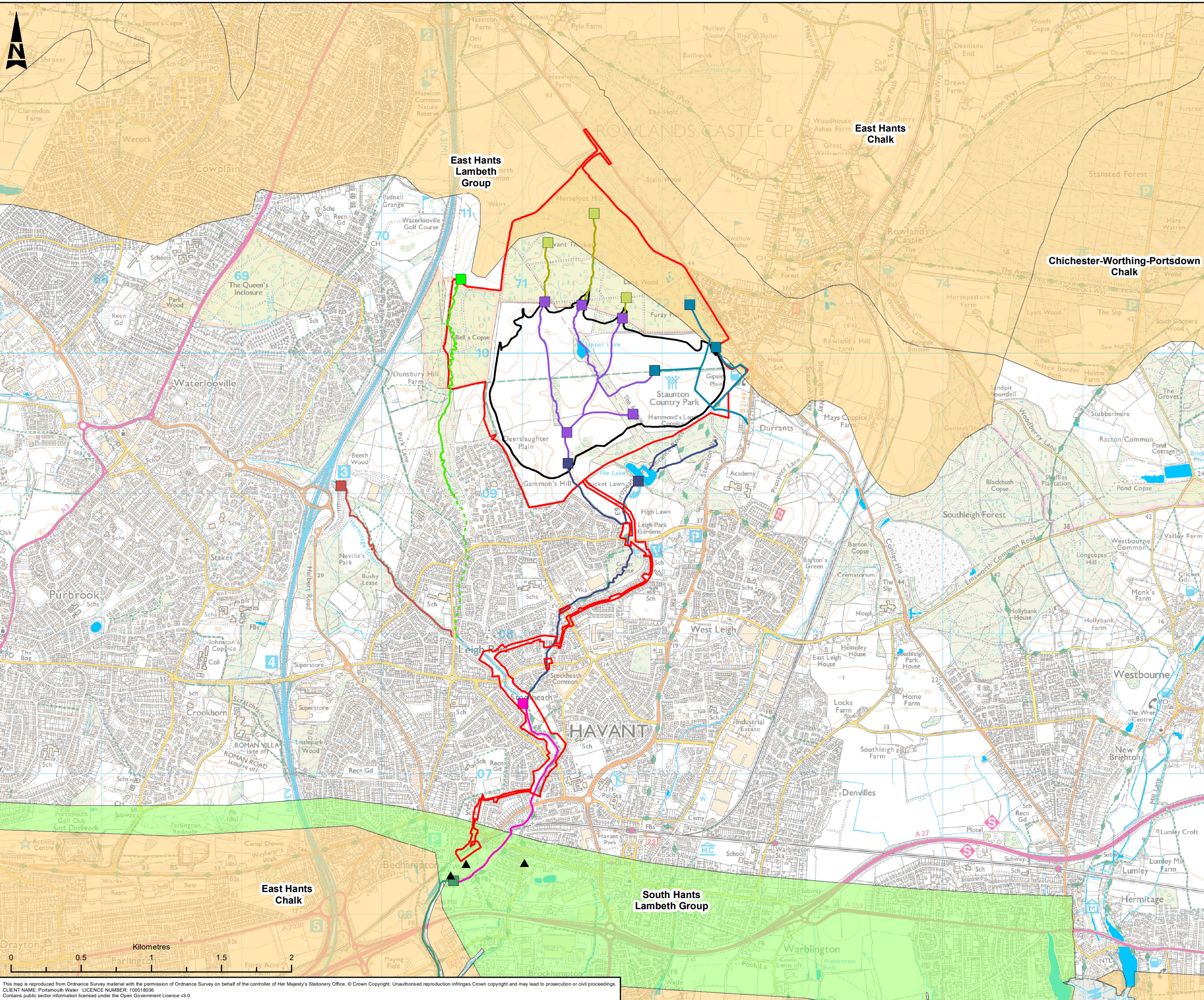
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HAVANT THICKET RESERVOIR

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**FIGURE 15.11
RESERVOIR GEOLOGY**

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Red Line Boundary

Reservoir Footprint

Bedhampton Springs

Study Section Start

Study Section 1

Study Section 2

Study Section 3

Study Section 4

Study Section 5

Study Section 6

Study Section 7

Study Section 8

Park Lane Stream - Culverted

WFD Groundwater Body

Chichester-Worthing-Portsdown Chalk

East Hants Chalk

East Hants Lambeth Group

South Hants Lambeth Group

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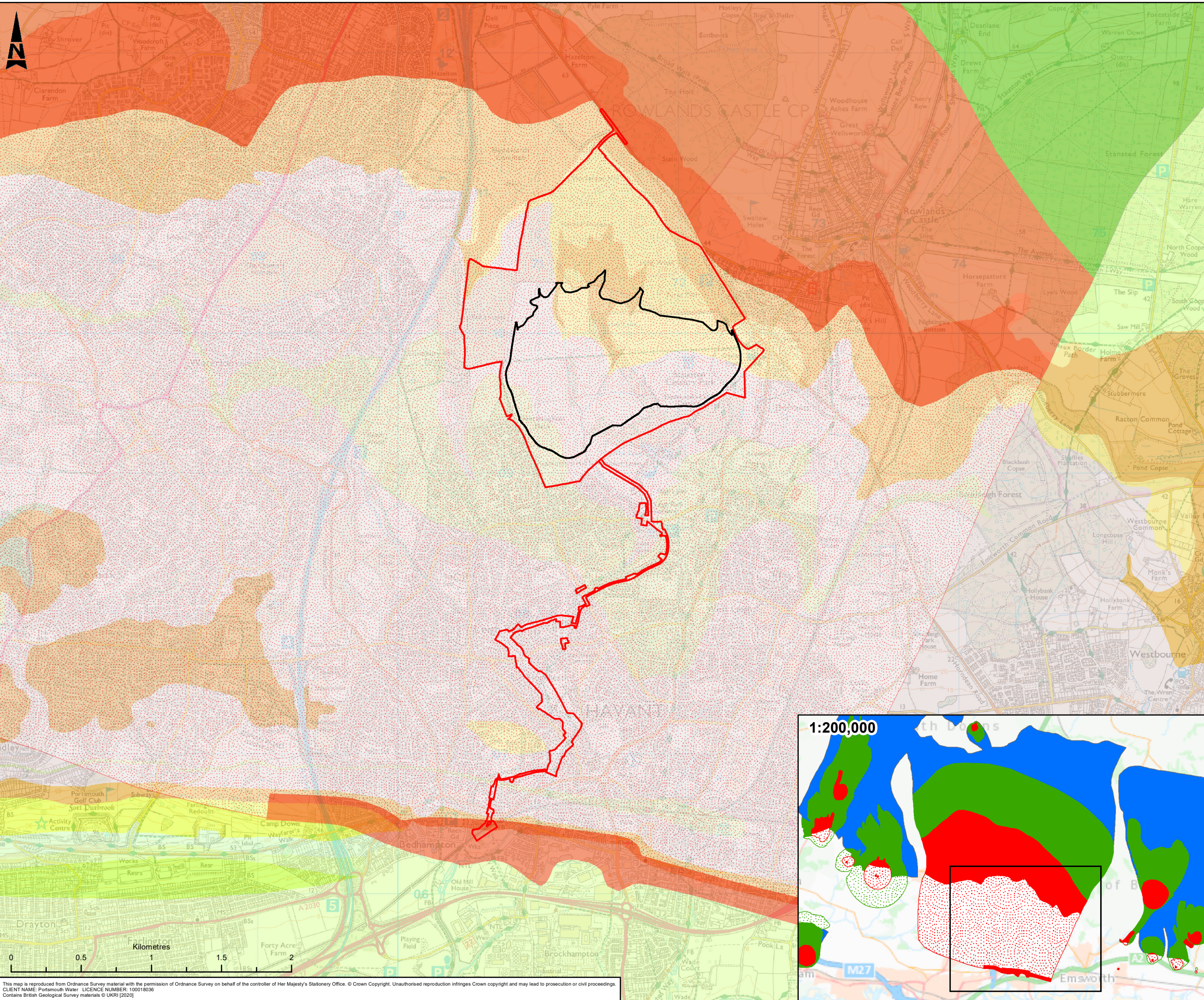
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FIGURE 15.12			
WFD GROUNDWATER BODIES			
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Red Line Boundary

Reservoir Footprint

PWS Groundwater Abstractions

Source Protection Zone

Zone I - Inner Protection Zone

Zone I - Subsurface Activity

Zone II - Outer Protection

Zone II - Subsurface Activity

Zone III - Total Catchment

Zone III - Subsurface Activity

Zone of Special Interest

Bedrock Geology

London Clay Formation - Sand

London Clay Formation - Clay, silt and sand

Wittering Formation - Sand

Wittering Formation - Sand, silt and clay

Bognor Sand Member - Sand

Lambeth Group - Clay, silt and sand

Whitecliff Sand Member - Sand

Portsdown Chalk Formation - Chalk

Spetisbury Chalk Member - Chalk

Tarrant Chalk Member - Chalk

Newhaven Chalk Formation - Chalk

Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation And Portsdown Chalk Formation (Undifferentiated) - Chalk

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HAVANT THICKET RESERVOIR				
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FIGURE 15.13				
GROUNDWATER DESIGNATIONS				
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				C01

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