

ID	Location	Details	
-	1965m NE	Status: Historical Licence No: 28/39/39/0151 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'A' AT LEADENHALL STREET, LONDON EC3 Data Type: Point Name: TOKIO MARINE PROPERTIES LIMITED Easting: 533100 Northing: 181100	Annual Volume (m ³): 2240 Max Daily Volume (m ³): 70.46 Original Application No: - Original Start Date: 12/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1965m NE	Status: Historical Licence No: 28/39/39/0151 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT LEADENHALL STREET, LONDON EC3 Data Type: Point Name: TOKIO MARINE PROPERTIES LIMITED Easting: 533100 Northing: 181100	Annual Volume (m ³): 2240 Max Daily Volume (m ³): 70.46 Original Application No: - Original Start Date: 12/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1965m NE	Status: Historical Licence No: 28/39/39/0151 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: LEADENHALL STREET, LONDON EC3 - BOREHOLE A Data Type: Point Name: TOKIO MARINE PROPERTIES LIMITED Easting: 533100 Northing: 181100	Annual Volume (m ³): 2240 Max Daily Volume (m ³): 70.46 Original Application No: - Original Start Date: 12/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1965m NE	Status: Historical Licence No: 28/39/39/0151 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: LEADENHALL STREET, LONDON EC3 - BOREHOLE B Data Type: Point Name: TOKIO MARINE PROPERTIES LIMITED Easting: 533100 Northing: 181100	Annual Volume (m ³): 2240 Max Daily Volume (m ³): 70.46 Original Application No: - Original Start Date: 12/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -

ID	Location	Details	
-	1990m N	Status: Historical Licence No: 28/39/39/0112 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: ST. MARTINS LE GRAND- BOREHOLE B Data Type: Point Name: ST MARTINS PROPERTY CORP. LTD Easting: 532160 Northing: 181370	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/07/1998 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	0
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Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	63
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Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 55**

ID	Location	Details	
A	566m SW	Status: Historical Licence No: 28/39/42/0076 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BROOK STREET, SE11 - BOREHOLE Data Type: Point Name: LONDON BOROUGH OF SOUTHWARK Easting: 531860 Northing: 178840	Annual Volume (m ³): 280000 Max Daily Volume (m ³): 780 Original Application No: - Original Start Date: 09/05/2008 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 09/05/2008 Version End Date: -

ID	Location	Details	
-	866m SE	Status: Historical Licence No: 28/39/42/0076 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: STEAD STREET SE17 - BOREHOLE Data Type: Point Name: LONDON BOROUGH OF SOUTHWARK Easting: 532610 Northing: 178590	Annual Volume (m ³): 280000 Max Daily Volume (m ³): 780 Original Application No: - Original Start Date: 09/05/2008 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 09/05/2008 Version End Date: -
-	1153m NW	Status: Historical Licence No: 28/39/42/0004 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: STAMFORD HOUSE, STAMFORD STREET, - BOREHOLE 'A' Data Type: Point Name: J SAINSBURY LTD Easting: 531600 Northing: 180400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 19/06/1986 Version End Date: -
-	1153m NW	Status: Historical Licence No: 28/39/42/0004 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: STAMFORD HOUSE, STAMFORD STREET, - BOREHOLE Data Type: Point Name: BEETHAM LANDMARK LONDON LTD Easting: 531600 Northing: 180400	Annual Volume (m ³): 47733 Max Daily Volume (m ³): 327.32 Original Application No: - Original Start Date: 13/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 10/07/2014 Version End Date: -
-	1469m NE	Status: Historical Licence No: 28/39/42/0062 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT GLA BUILDING, TOOLEY STREET, LONDON SE1 Data Type: Point Name: LONDON BRIDGE HOLDINGS LTD Easting: 533390 Northing: 180180	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 15/11/2001 Expiry Date: 31/12/2013 Issue No: 2 Version Start Date: 13/01/2003 Version End Date: -



ID	Location	Details	
-	1469m NE	Status: Historical Licence No: 28/39/42/0062 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GLA BUILDING, TOOLEY STREET, LONDON SE1 -BOREHOLE 'B' Data Type: Point Name: LONDON BRIDGE DEVELOPMENT LIMITED Easting: 533390 Northing: 180180	Annual Volume (m ³): 610400 Max Daily Volume (m ³): 4320 Original Application No: - Original Start Date: 15/11/2001 Expiry Date: 31/03/2013 Issue No: 4 Version Start Date: 13/12/2005 Version End Date: -
-	1469m NE	Status: Historical Licence No: 28/39/42/0062 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GLA BUILDING, TOOLEY STREET, LONDON SE1 -BOREHOLE 'B' Data Type: Point Name: LONDON BRIDGE DEVELOPMENT LIMITED Easting: 533390 Northing: 180180	Annual Volume (m ³): 610400 Max Daily Volume (m ³): 4320 Original Application No: - Original Start Date: 15/11/2001 Expiry Date: 31/03/2013 Issue No: 4 Version Start Date: 13/12/2005 Version End Date: -
-	1469m NE	Status: Historical Licence No: 28/39/42/0062 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CITY HALL, THE QUEENS WALK, LONDON SE1 -BOREHOLE 'B' Data Type: Point Name: LONDON BRIDGE DEVELOPMENT LIMITED Easting: 533390 Northing: 180180	Annual Volume (m ³): 300000 Max Daily Volume (m ³): 1850 Original Application No: - Original Start Date: 15/11/2001 Expiry Date: 31/03/2013 Issue No: 5 Version Start Date: 17/05/2007 Version End Date: -
-	1469m NE	Status: Historical Licence No: TH/039/0042/022 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CITY HALL, THE QUEENS WALK, LONDON SE1 -BOREHOLE 'B' Data Type: Point Name: MLFH Limited Easting: 533390 Northing: 180180	Annual Volume (m ³): 400000 Max Daily Volume (m ³): 1850 Original Application No: - Original Start Date: 05/06/2013 Expiry Date: 31/03/2019 Issue No: 2 Version Start Date: 30/01/2014 Version End Date: -



ID	Location	Details	
-	1469m NE	Status: Active Licence No: TH/039/0042/022/R01 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CITY HALL, THE QUEENS WALK, LONDON SE1 -BOREHOLE 'B' Data Type: Point Name: MLFH Limited Easting: 533390 Northing: 180180	Annual Volume (m ³): 340,000 Max Daily Volume (m ³): 1,850 Original Application No: - Original Start Date: 26/06/2019 Expiry Date: 31/03/2031 Issue No: 1 Version Start Date: 26/06/2019 Version End Date: -
-	1503m NE	Status: Historical Licence No: 28/39/42/0062 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'A' AT GLA BUILDING, TOOLEY STREET, LONDON SE1 Data Type: Point Name: LONDON BRIDGE HOLDINGS LTD Easting: 533450 Northing: 180150	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 15/11/2001 Expiry Date: 31/12/2013 Issue No: 2 Version Start Date: 13/01/2003 Version End Date: -
-	1503m NE	Status: Historical Licence No: 28/39/42/0062 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GLA BUILDING, TOOLEY STREET, LONDON SE1- BOREHOLE 'A' Data Type: Point Name: LONDON BRIDGE DEVELOPMENT LIMITED Easting: 533450 Northing: 180150	Annual Volume (m ³): 610400 Max Daily Volume (m ³): 4320 Original Application No: - Original Start Date: 15/11/2001 Expiry Date: 31/03/2013 Issue No: 4 Version Start Date: 13/12/2005 Version End Date: -
-	1503m NE	Status: Historical Licence No: 28/39/42/0062 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GLA BUILDING, TOOLEY STREET, LONDON SE1- BOREHOLE 'A' Data Type: Point Name: LONDON BRIDGE DEVELOPMENT LIMITED Easting: 533450 Northing: 180150	Annual Volume (m ³): 610400 Max Daily Volume (m ³): 4320 Original Application No: - Original Start Date: 15/11/2001 Expiry Date: 31/03/2013 Issue No: 4 Version Start Date: 13/12/2005 Version End Date: -



ID	Location	Details	
-	1503m NE	Status: Historical Licence No: 28/39/42/0062 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CITY HALL, THE QUEENS WALK, LONDON SE1-BOREHOLE 'A' Data Type: Point Name: LONDON BRIDGE DEVELOPMENT LIMITED Easting: 533450 Northing: 180150	Annual Volume (m ³): 300000 Max Daily Volume (m ³): 1850 Original Application No: - Original Start Date: 15/11/2001 Expiry Date: 31/03/2013 Issue No: 5 Version Start Date: 17/05/2007 Version End Date: -
-	1503m NE	Status: Historical Licence No: TH/039/0042/022 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CITY HALL, THE QUEENS WALK, LONDON SE1-BOREHOLE 'A' Data Type: Point Name: MLFH Limited Easting: 533450 Northing: 180150	Annual Volume (m ³): 400000 Max Daily Volume (m ³): 1850 Original Application No: - Original Start Date: 05/06/2013 Expiry Date: 31/03/2019 Issue No: 2 Version Start Date: 30/01/2014 Version End Date: -
-	1503m NE	Status: Active Licence No: TH/039/0042/022/R01 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CITY HALL, THE QUEENS WALK, LONDON SE1-BOREHOLE 'A' Data Type: Point Name: MLFH Limited Easting: 533450 Northing: 180150	Annual Volume (m ³): 340,000 Max Daily Volume (m ³): 1,850 Original Application No: - Original Start Date: 26/06/2019 Expiry Date: 31/03/2031 Issue No: 1 Version Start Date: 26/06/2019 Version End Date: -
-	1523m N	Status: Historical Licence No: 28/39/39/0094 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT 98/106 CANNON STREET, LONDON EC4 Data Type: Point Name: ASGARD ESTATES LTD Easting: 532700 Northing: 180800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/02/1990 Version End Date: -



ID	Location	Details	
-	1528m N	Status: Historical Licence No: 28/39/39/0071 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT BEAVER HOUSE, GREAT TRINITY STREET, LONDON EC4 Data Type: Point Name: DTZ DEBENHAM TIE LEUNG LIMITED Easting: 532300 Northing: 180900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/01/2000 Version End Date: -
-	1648m NW	Status: Historical Licence No: 28/39/39/0057 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: TWO BOREHOLES AT UNILEVER HOUSE, BLACKFRIARS, LONDON EC4 Data Type: Point Name: UNILEVER LTD Easting: 531500 Northing: 180900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 09/05/1966 Version End Date: -
-	1660m N	Status: Historical Licence No: 28/39/39/0229 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GRANGE ST PAUL'S HOTEL- BOREHOLE Data Type: Point Name: GLOBAL GRANGE LIMITED Easting: 531950 Northing: 181030	Annual Volume (m ³): 73000 Max Daily Volume (m ³): 200 Original Application No: - Original Start Date: 17/01/2007 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 17/01/2007 Version End Date: -
-	1660m N	Status: Historical Licence No: TH/039/0039/066 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GRANGE ST PAUL'S HOTEL- BOREHOLE Data Type: Point Name: GLOBAL GRANGE LIMITED Easting: 531950 Northing: 181030	Annual Volume (m ³): 45625 Max Daily Volume (m ³): 125 Original Application No: - Original Start Date: 01/04/2013 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 01/04/2013 Version End Date: -

ID	Location	Details	
-	1766m NE	Status: Historical Licence No: 28/39/39/0011 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT PLANTATION HOUSE, 4/7 MINCING LANE, LONDON Data Type: Point Name: BLCT LIMITED Easting: 533200 Northing: 180800	Annual Volume (m ³): 71074 Max Daily Volume (m ³): 208 Original Application No: - Original Start Date: 08/11/1965 Expiry Date: - Issue No: 101 Version Start Date: 04/06/2001 Version End Date: -
-	1766m NE	Status: Historical Licence No: 28/39/39/0011 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'A' AT PLANTATION HOUSE, 4/7 MINCING LANE, LONDON Data Type: Point Name: BLCT LIMITED Easting: 533200 Northing: 180800	Annual Volume (m ³): 71074 Max Daily Volume (m ³): 208 Original Application No: - Original Start Date: 08/11/1965 Expiry Date: - Issue No: 101 Version Start Date: 04/06/2001 Version End Date: -
-	1766m NE	Status: Historical Licence No: 28/39/39/0011 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'D' AT PLANTATION HOUSE, 4/7 MINCING LANE, LONDON Data Type: Point Name: BLCT LIMITED Easting: 533200 Northing: 180800	Annual Volume (m ³): 71074 Max Daily Volume (m ³): 208 Original Application No: - Original Start Date: 08/11/1965 Expiry Date: - Issue No: 101 Version Start Date: 04/06/2001 Version End Date: -
-	1772m NE	Status: Historical Licence No: 28/39/39/0011 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 1 PLANTATION PLACE, 30 FENCHURCH ST, LNDON EC3 - BOREHOLE A Data Type: Point Name: THE ONE PLANTATION PLACE UNIT TRUST Easting: 533140 Northing: 180850	Annual Volume (m ³): 71074 Max Daily Volume (m ³): 624 Original Application No: - Original Start Date: 08/11/1965 Expiry Date: - Issue No: 103 Version Start Date: 14/11/2006 Version End Date: -



ID	Location	Details	
-	1772m NE	Status: Active Licence No: 28/39/39/0011 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 1 PLANTATION PLACE, 30 FENCHURCH ST, LONDON EC3 - BOREHOLE A Data Type: Point Name: THE ONE PLANTATION PLACE UNIT TRUST Easting: 533140 Northing: 180850	Annual Volume (m ³): 71,074 Max Daily Volume (m ³): 624 Original Application No: - Original Start Date: 08/11/1965 Expiry Date: - Issue No: 103 Version Start Date: 14/11/2006 Version End Date: -
-	1785m NE	Status: Historical Licence No: 28/39/39/0056 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: THREE BOREHOLES AT 9 GRACECHURCH STREET, LONDON EC3 Data Type: Point Name: J.P.I.T. (Pte) LIMITED Easting: 532900 Northing: 181000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/01/1997 Version End Date: -
-	1819m NW	Status: Historical Licence No: 28/39/39/0025 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'A' AT GLOBE HOUSE, TEMPLE PLACE, LONDON Data Type: Point Name: HAMMERSON UK PROPERTIES PLC Easting: 531000 Northing: 180800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 10/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 14/12/1995 Version End Date: -
-	1819m NW	Status: Historical Licence No: 28/39/39/0025 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT GLOBE HOUSE, TEMPLE PLACE, LONDON Data Type: Point Name: HAMMERSON UK PROPERTIES PLC Easting: 531000 Northing: 180800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 10/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 14/12/1995 Version End Date: -



ID	Location	Details	
-	1819m NW	Status: Historical Licence No: 28/39/39/0025 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'C' AT GLOBE HOUSE, TEMPLE PLACE, LONDON Data Type: Point Name: HAMMERSON UK PROPERTIES PLC Easting: 531000 Northing: 180800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 10/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 14/12/1995 Version End Date: -
-	1839m N	Status: Historical Licence No: 28/39/39/0166 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 71 LOMBARD STREET, LONDON - BOREHOLE Data Type: Point Name: LLOYDS TSB BANK PLC Easting: 532800 Northing: 181100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 25/03/1982 Expiry Date: - Issue No: 100 Version Start Date: 06/04/2000 Version End Date: -
-	1843m N	Status: Active Licence No: 28/39/39/0166 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 71 LOMBARD STREET- BOREHOLE A Data Type: Point Name: Ashton Global Investments Ltd Easting: 532810 Northing: 181100	Annual Volume (m ³): 6,819 Max Daily Volume (m ³): 250.94 Original Application No: - Original Start Date: 25/03/1982 Expiry Date: - Issue No: 102 Version Start Date: 24/06/2009 Version End Date: -
-	1850m NE	Status: Historical Licence No: 28/39/39/0011 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 1 PLANTATION PLACE, 30 FENCHURCH ST, LNDON EC3 - BOREHOLE B Data Type: Point Name: THE ONE PLANTATION PLACE UNIT TRUST Easting: 533220 Northing: 180890	Annual Volume (m ³): 71074 Max Daily Volume (m ³): 624 Original Application No: - Original Start Date: 08/11/1965 Expiry Date: - Issue No: 103 Version Start Date: 14/11/2006 Version End Date: -

ID	Location	Details	
-	1850m NE	Status: Active Licence No: 28/39/39/0011 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 1 PLANTATION PLACE, 30 FENCHURCH ST, LONDON EC3 - BOREHOLE B Data Type: Point Name: THE ONE PLANTATION PLACE UNIT TRUST Easting: 533220 Northing: 180890	Annual Volume (m ³): 71,074 Max Daily Volume (m ³): 624 Original Application No: - Original Start Date: 08/11/1965 Expiry Date: - Issue No: 103 Version Start Date: 14/11/2006 Version End Date: -
-	1875m N	Status: Historical Licence No: 28/39/39/0098 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'D' AT POULTRY, LONDON EC2 Data Type: Point Name: HSBC BANK plc Easting: 532600 Northing: 181200	Annual Volume (m ³): 33317.6 Max Daily Volume (m ³): 90.92 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/04/2000 Version End Date: -
-	1875m N	Status: Historical Licence No: 28/39/39/0098 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'A' AT POULTRY, LONDON EC2 Data Type: Point Name: HSBC BANK plc Easting: 532600 Northing: 181200	Annual Volume (m ³): 33317.6 Max Daily Volume (m ³): 90.92 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/04/2000 Version End Date: -
-	1875m N	Status: Historical Licence No: 28/39/39/0098 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT POULTRY, LONDON EC2 Data Type: Point Name: HSBC BANK plc Easting: 532600 Northing: 181200	Annual Volume (m ³): 33317.6 Max Daily Volume (m ³): 90.92 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/04/2000 Version End Date: -



ID	Location	Details	
-	1875m N	Status: Historical Licence No: 28/39/39/0098 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'C' AT POULTRY, LONDON EC2 Data Type: Point Name: HSBC BANK plc Easting: 532600 Northing: 181200	Annual Volume (m ³): 33317.6 Max Daily Volume (m ³): 90.92 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/04/2000 Version End Date: -
-	1902m N	Status: Historical Licence No: 28/39/39/0024 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: NINE BOREHOLES AT THE BANK OF ENGLAND, THREADNEEDLE STREET Data Type: Point Name: BANK OF ENGLAND Easting: 532700 Northing: 181200	Annual Volume (m ³): 36368 Max Daily Volume (m ³): 127 Original Application No: - Original Start Date: 10/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 09/11/1993 Version End Date: -
-	1902m N	Status: Active Licence No: 28/39/39/0024 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BANK OF ENGLAND, THREADNEEDLE STREET - NINE BOREHOLES Data Type: Point Name: BANK OF ENGLAND Easting: 532700 Northing: 181200	Annual Volume (m ³): 36,368 Max Daily Volume (m ³): 127 Original Application No: - Original Start Date: 10/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 09/11/1993 Version End Date: -
-	1909m W	Status: Historical Licence No: TH/039/0039/065 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: NEW PARLIAMENTARY BUILDINGS, LONDON-BOREHOLE A Data Type: Point Name: THE CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530258 Northing: 179733	Annual Volume (m ³): 400000 Max Daily Volume (m ³): 2074 Original Application No: - Original Start Date: 08/04/2013 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 08/04/2013 Version End Date: -



ID	Location	Details	
-	1909m W	Status: Active Licence No: TH/039/0039/065/R01 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: NEW PARLIAMENTARY BUILDINGS, LONDON-BOREHOLE A Data Type: Point Name: THE CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530258 Northing: 179733	Annual Volume (m ³): 300,000 Max Daily Volume (m ³): 2,074 Original Application No: - Original Start Date: 03/05/2019 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 03/05/2019 Version End Date: -
-	1913m NW	Status: Historical Licence No: 28/39/39/0077 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT 37 FLEET STREET, LONDON EC4 Data Type: Point Name: C HOARE & CO Easting: 531300 Northing: 181100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/06/1968 Version End Date: -
-	1920m N	Status: Historical Licence No: 28/39/39/0112 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: ST. MARTINS LE GRAND, LONDON- BOREHOLE C Data Type: Point Name: ST MARTINS PROPERTY CORP. LTD Easting: 532160 Northing: 181300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/07/1998 Version End Date: -
-	1920m N	Status: Historical Licence No: 28/39/39/0112 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'C' AT ST. MARTINS LE GRAND, LONDON EC1 Data Type: Point Name: ST MARTINS PROPERTY CORPORATION LTD Easting: 532100 Northing: 181300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: 24/10/1974 Version End Date: -



ID	Location	Details	
-	1929m NW	Status: Historical Licence No: 28/39/39/0025 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GLOBE HOUSE, VICTORIA EMBANKMENT-BOREHOLE A Data Type: Point Name: COMMERZ GRUNDBESITZ INVEST. MBH Easting: 531060 Northing: 180980	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 10/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 28/03/2003 Version End Date: -
-	1932m W	Status: Historical Licence No: TH/039/0039/065 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: NEW PARLIAMENTARY BUILDINGS, LONDON-BOREHOLE B Data Type: Point Name: THE CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530231 Northing: 179715	Annual Volume (m ³): 400000 Max Daily Volume (m ³): 2074 Original Application No: - Original Start Date: 08/04/2013 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 08/04/2013 Version End Date: -
-	1932m W	Status: Active Licence No: TH/039/0039/065/R01 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: NEW PARLIAMENTARY BUILDINGS, LONDON-BOREHOLE B Data Type: Point Name: THE CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530231 Northing: 179715	Annual Volume (m ³): 300,000 Max Daily Volume (m ³): 2,074 Original Application No: - Original Start Date: 03/05/2019 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 03/05/2019 Version End Date: -
-	1934m NW	Status: Historical Licence No: 28/39/39/0025 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GLOBE HOUSE, VICTORIA EMBANKMENT-BOREHOLE C Data Type: Point Name: COMMERZ GRUNDBESITZ INVEST. MBH Easting: 531050 Northing: 180980	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 10/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 28/03/2003 Version End Date: -



ID	Location	Details	
-	1936m W	Status: Historical Licence No: 28/39/39/0178 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: EAST BOREHOLE AT NEW PARLIAMENTARY BUILDINGS, LONDON Data Type: Point Name: CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530230 Northing: 179730	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/11/1999 Expiry Date: 31/12/2004 Issue No: 1 Version Start Date: 24/11/1999 Version End Date: -
-	1936m W	Status: Historical Licence No: 28/39/39/0213 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: EAST BOREHOLE AT NEW PARLIAMENTARY BUILDINGS, LONDON Data Type: Point Name: CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530230 Northing: 179730	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/11/1999 Expiry Date: 31/01/2006 Issue No: 1 Version Start Date: 10/02/2005 Version End Date: -
-	1936m W	Status: Historical Licence No: 28/39/39/0224 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: PORTCULLIS HOUSE- BOREHOLE B Data Type: Point Name: CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530230 Northing: 179730	Annual Volume (m ³): 400000 Max Daily Volume (m ³): 2074 Original Application No: - Original Start Date: 30/08/2006 Expiry Date: 31/03/2009 Issue No: 1 Version Start Date: 30/08/2006 Version End Date: -
-	1936m W	Status: Historical Licence No: TH/039/0039/005 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: PORTCULLIS HOUSE- BOREHOLE B Data Type: Point Name: CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530230 Northing: 179730	Annual Volume (m ³): 400000 Max Daily Volume (m ³): 2074 Original Application No: - Original Start Date: 01/04/2009 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/04/2009 Version End Date: -



ID	Location	Details	
-	1937m NW	Status: Historical Licence No: 28/39/39/0025 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: GLOBE HOUSE, VICTORIA EMBANKMENT-BOREHOLE B Data Type: Point Name: COMMERZ GRUNDBESITZ INVEST. MBH Easting: 531030 Northing: 180970	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 10/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 28/03/2003 Version End Date: -
-	1942m W	Status: Historical Licence No: 28/39/39/0178 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: WEST BOREHOLE AT NEW PARLIAMENTARY BUILDINGS, LONDON Data Type: Point Name: CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530220 Northing: 179710	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/11/1999 Expiry Date: 31/12/2004 Issue No: 1 Version Start Date: 24/11/1999 Version End Date: -
-	1942m W	Status: Historical Licence No: 28/39/39/0213 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: WEST BOREHOLE AT NEW PARLIAMENTARY BUILDINGS, LONDON Data Type: Point Name: CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530220 Northing: 179710	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/11/1999 Expiry Date: 31/01/2006 Issue No: 1 Version Start Date: 10/02/2005 Version End Date: -
-	1942m W	Status: Historical Licence No: 28/39/39/0224 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: NEW PARLIAMENTARY BUILDINGS, LONDON-BOREHOLE A Data Type: Point Name: CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530220 Northing: 179710	Annual Volume (m ³): 400000 Max Daily Volume (m ³): 2074 Original Application No: - Original Start Date: 30/08/2006 Expiry Date: 31/03/2009 Issue No: 1 Version Start Date: 30/08/2006 Version End Date: -

ID	Location	Details	
-	1942m W	Status: Historical Licence No: TH/039/0039/005 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: NEW PARLIAMENTARY BUILDINGS, LONDON-BOREHOLE A Data Type: Point Name: CORPORATE OFFICER OF THE HOUSE OF COMMONS Easting: 530220 Northing: 179710	Annual Volume (m ³): 400000 Max Daily Volume (m ³): 2074 Original Application No: - Original Start Date: 01/04/2009 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/04/2009 Version End Date: -
-	1965m NE	Status: Historical Licence No: 28/39/39/0151 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'A' AT LEADENHALL STREET, LONDON EC3 Data Type: Point Name: TOKIO MARINE PROPERTIES LIMITED Easting: 533100 Northing: 181100	Annual Volume (m ³): 2240 Max Daily Volume (m ³): 70.46 Original Application No: - Original Start Date: 12/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1965m NE	Status: Historical Licence No: 28/39/39/0151 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT LEADENHALL STREET, LONDON EC3 Data Type: Point Name: TOKIO MARINE PROPERTIES LIMITED Easting: 533100 Northing: 181100	Annual Volume (m ³): 2240 Max Daily Volume (m ³): 70.46 Original Application No: - Original Start Date: 12/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1965m NE	Status: Historical Licence No: 28/39/39/0151 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: LEADENHALL STREET, LONDON EC3 - BOREHOLE A Data Type: Point Name: TOKIO MARINE PROPERTIES LIMITED Easting: 533100 Northing: 181100	Annual Volume (m ³): 2240 Max Daily Volume (m ³): 70.46 Original Application No: - Original Start Date: 12/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -



ID	Location	Details	
-	1965m NE	Status: Historical Licence No: 28/39/39/0151 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: LEADENHALL STREET, LONDON EC3 - BOREHOLE B Data Type: Point Name: TOKIO MARINE PROPERTIES LIMITED Easting: 533100 Northing: 181100	Annual Volume (m ³): 2240 Max Daily Volume (m ³): 70.46 Original Application No: - Original Start Date: 12/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1990m N	Status: Historical Licence No: 28/39/39/0112 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: ST. MARTINS LE GRAND- BOREHOLE B Data Type: Point Name: ST MARTINS PROPERTY CORP. LTD Easting: 532160 Northing: 181370	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/07/1998 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	0
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

0

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

0

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1
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The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 108**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	Coastal Catchment	Not part of a river WB catchment	128	Land area part of London Management Catchment draining to the Tidal Thames	London

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	0
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Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

This data is sourced from the Environment Agency and Natural Resources Wales.

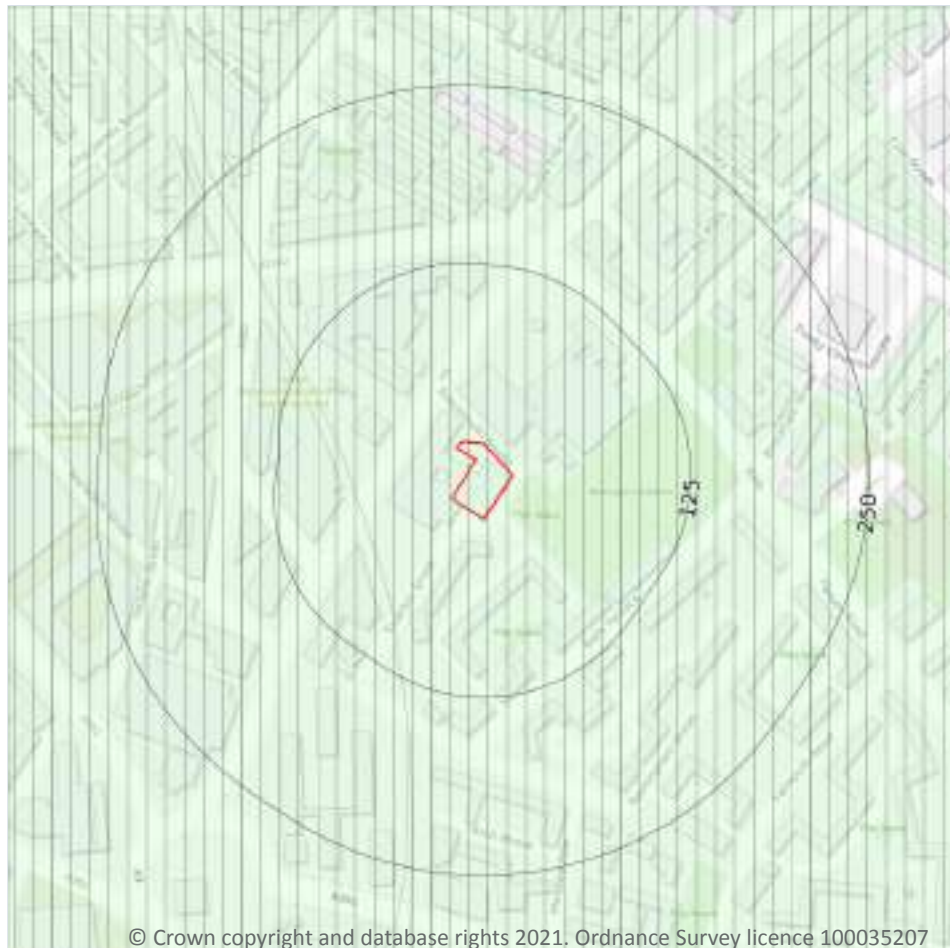
6.5 WFD Groundwater bodies

Records on site	0
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Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding



- Site Outline
- Search buffers in metres (m)
- Environment Agency river and coastal flooding:
 - High
 - Medium
 - Low
 - Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m

1

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on **page 110**

Distance	RoFRaS flood risk
On site	Very Low
0 - 50m	Very Low



This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m

0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m

0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m

1

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 110**

ID	Location	
A	On site	Area benefiting from flood defences

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

7.6 Flood Zone 2

Records within 50m

1

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

Features are displayed on the River and coastal flooding map on **page 110**

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m

1

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

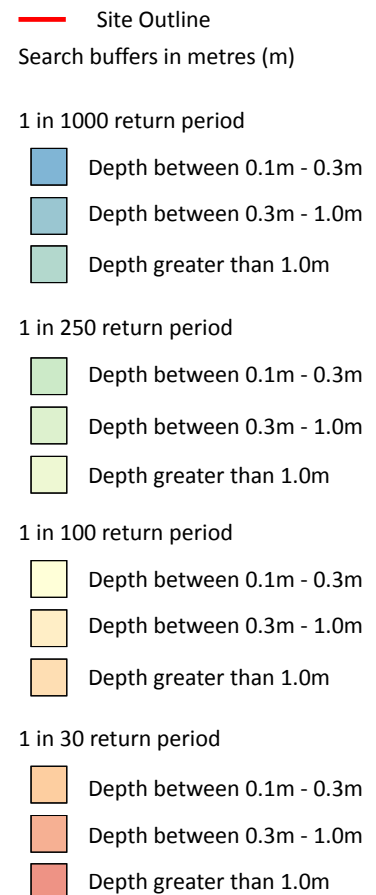
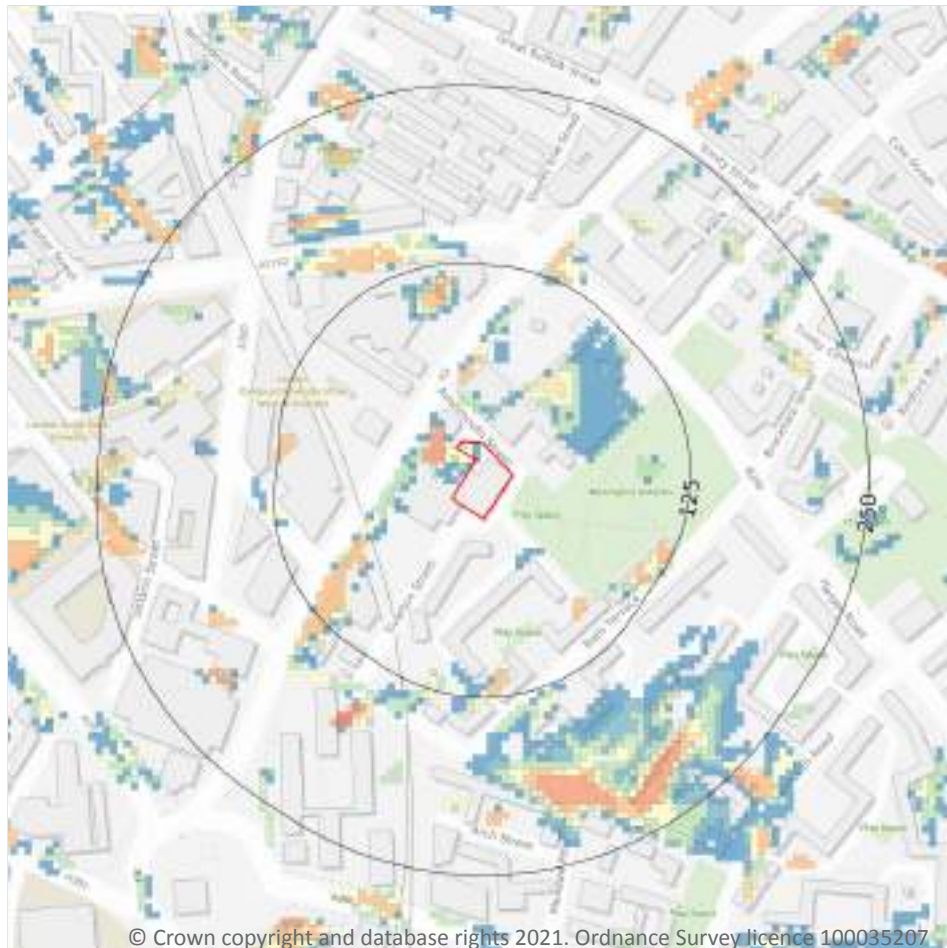
Features are displayed on the River and coastal flooding map on **page 110**

Location	Type
On site	Zone 3 - (Fluvial Models)

This data is sourced from the Environment Agency and Natural Resources Wales.



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

1 in 100 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 114**

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

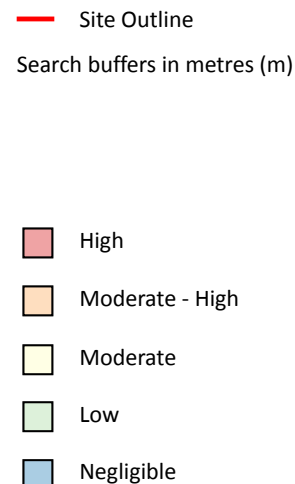
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

Moderate

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 116**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m

0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m

0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.



10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

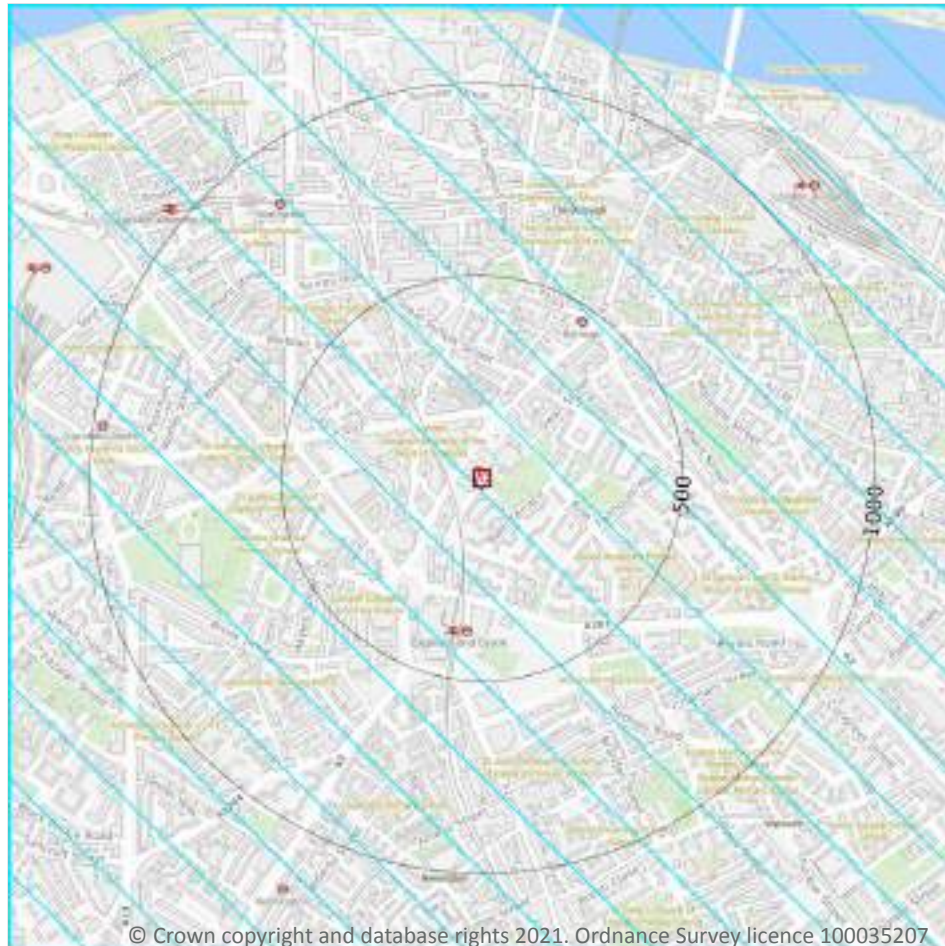
Records within 2000m

0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 121**

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Airports, helipads and other aviation proposals.</p> <p>Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m².</p> <p>Combustion - General combustion processes > 50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion</p>



This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

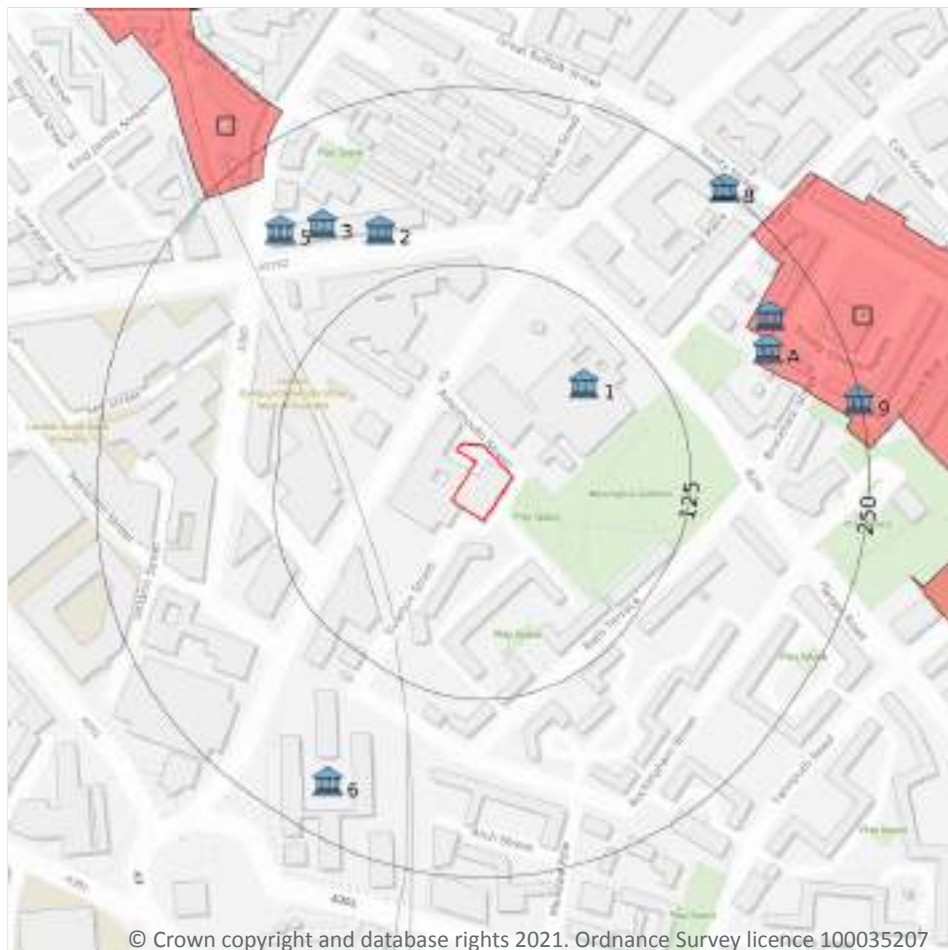
0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m**0**

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m**0**

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m**9**

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on **page 123**

ID	Location	Name	Grade	Reference Number	Listed date
1	81m NE	Inner London Sessions Court, Chaucer, Southwark, London, SE1	II	1385732	17/09/1998
2	161m N	62, Borough Road, Borough And Bankside, Southwark, London, SE1	II	1378374	16/05/1994
3	183m NW	Hanover House, Borough And Bankside, Southwark, London, SE1	II	1378373	27/09/1972



ID	Location	Name	Grade	Reference Number	Listed date
5	197m NW	Duke Of York Public House, Borough And Bankside, Southwark, London, SE1	II	1378372	17/09/1998
A	201m NE	Numbers 16-22 And Attached Railings, Chaucer, Southwark, London, SE1	II	1385994	27/09/1972
6	213m SW	Metro Central Heights, Chaucer, Southwark, London, SE1	II	1405570	08/07/2013
A	213m NE	Numbers 1-15 And Attached Railings, Chaucer, Southwark, London, SE1	II	1385993	27/09/1972
8	248m NE	2-12, Trinity Street, Chaucer, Southwark, London, SE1	II	1386001	29/07/1996
9	249m E	Numbers 23-29 And Attached Railings, Chaucer, Southwark, London, SE1	II	1385995	27/09/1972

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m

2

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

Features are displayed on the Visual and cultural designations map on **page 123**

ID	Location	Name	District	Date of designation
4	188m NE	Trinity Church Square	Southwark	27/09/1968
7	233m NW	King's Bench	Southwark	11/01/2010

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.



This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

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12.1 Agricultural Land Classification

Records within 250m

1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 127**

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.

13 Habitat designations



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

6

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 129**

ID	Location	Main Habitat	Other habitats
1	8m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	11m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	52m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	58m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)



ID	Location	Main Habitat	Other habitats
A	85m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	212m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

1

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

Features are displayed on the Habitat designations map on **page 129**

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
B	215m E	Land at Dickens Square	Low	BugLife All Of A Buzz Data	-	-

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK



Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Full coverage
 - Partial coverage
 - No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 132**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	TQ37NW

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground

14.2 Artificial and made ground (10k)

Records within 500m

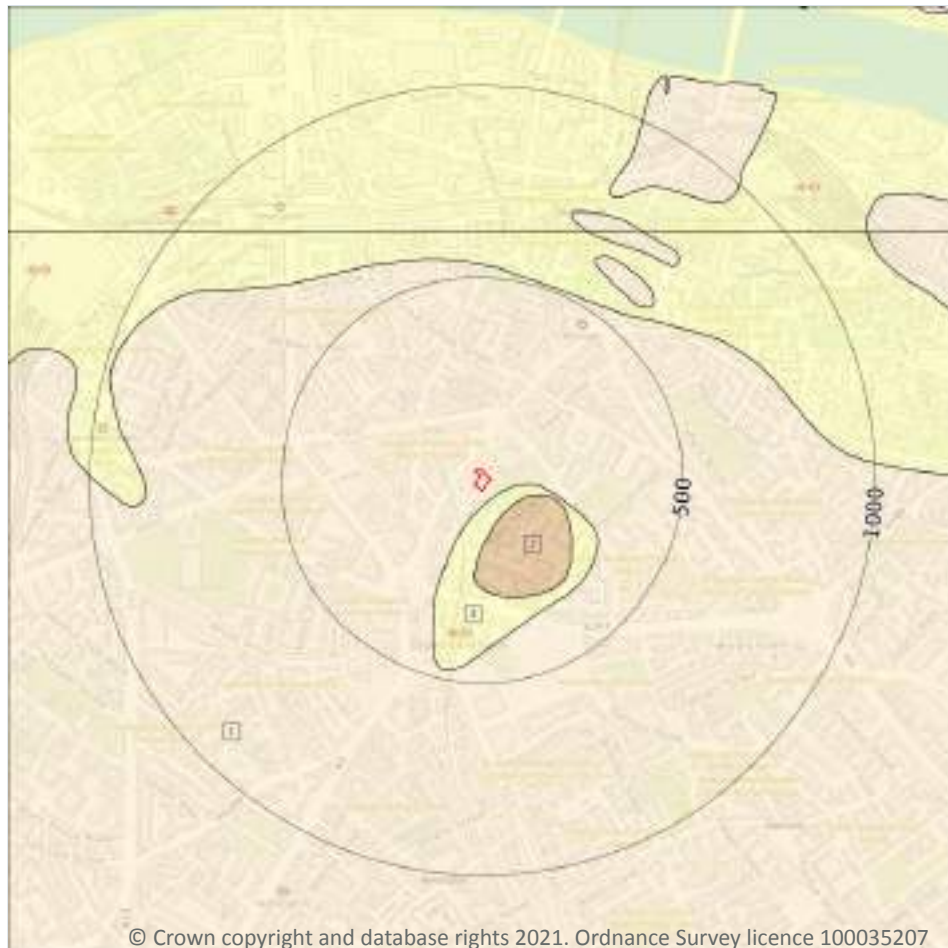
0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.


This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



— Site Outline
Search buffers in metres (m)

 Landslip (10k)
 Superficial geology (10k)
 Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

3

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 134**

ID	Location	LEX Code	Description	Rock description
1	On site	KPGR-XSV	Kempton Park Gravel Formation - Sand And Gravel	Sand And Gravel
2	31m SE	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt
3	80m SE	PEAT-P	Peat - Peat	Peat

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

1

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 136**

ID	Location	LEX Code	Description	Rock age
1	On site	LC-CLAY	London Clay Formation - Clay	Eocene Epoch

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

2

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 136**

ID	Location	Category	Description
2	116m S	LANDFORM	Hollow filled with Superficial Deposits
3	135m SE	LANDFORM	Hollow filled with Superficial Deposits

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 138**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW270_south_london_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

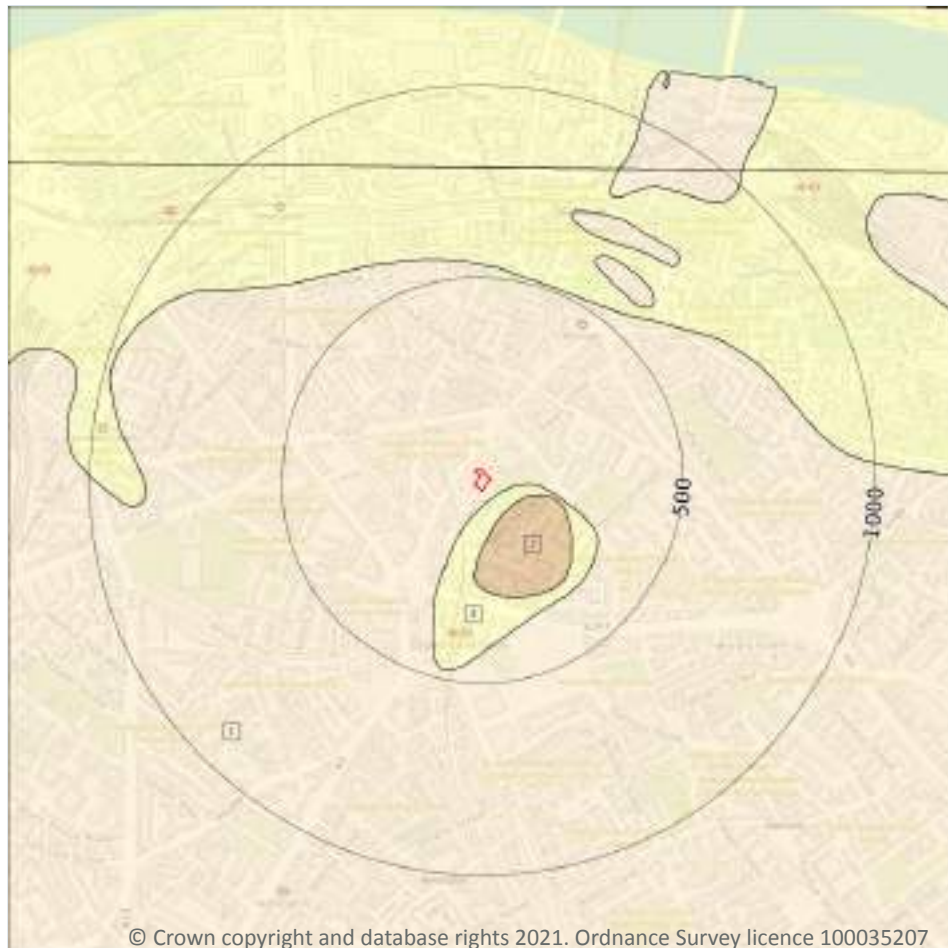
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

3

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 140**

ID	Location	LEX Code	Description	Rock description
1	On site	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL
2	31m SE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	80m SE	PEAT-P	PEAT	PEAT

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**2**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	Very High	High
31m S	Intergranular	High	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m**0**

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m**0**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (50k)
- Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 142**

ID	Location	LEX Code	Description	Rock age
1	On site	LC-XCZ	LONDON CLAY FORMATION - CLAY AND SILT	YPRESIAN

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Low	Very Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

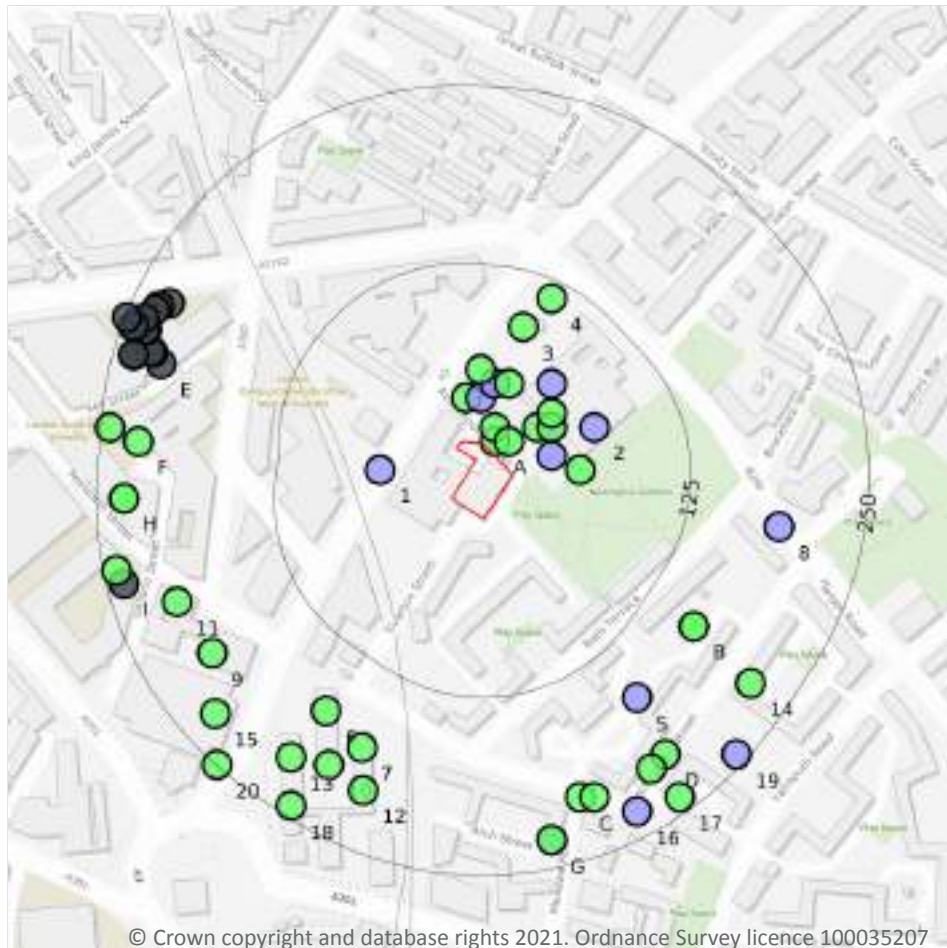
Records within 500m**0**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

65

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 144**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	7m NE	532160 179380	LONDON SESSIONS HOUSE BH6	18.29	N	599155
A	14m NE	532160 179390	NEWINGTON CAUSEWAY C	15.0	N	599547
A	14m NE	532170 179380	LONDON SESSIONS HOUSE BH2	11.43	N	599151



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	30m NE	532200 179370	LONDON SESSIONS HOUSE BH3	9.45	N	599152
A	30m N	532140 179410	NEWINGTON CAUSEWAY B	25.0	N	599546
A	31m N	532150 179410	NEWINGTON CAUSEWAY F	3.16	N	599549
A	36m NE	532190 179390	LONDON SESSIONS HOUSE BH7	18.29	N	599156
A	42m N	532160 179420	LONDON SESSIONS HSE NEWINGTON	2.0	N	598190
A	42m N	532160 179420	LONDON SESSIONS HSE NEWINGTON CAUSEWAY	3.04	N	598191
A	43m NE	532200 179390	LONDON SESSIONS HOUSE BH1	9.14	N	599150
A	43m NE	532200 179390	LONDON SESSIONS HOUSE BH5	18.29	N	599154
A	45m NE	532170 179420	SESSIONS HOUSE NO.7	18.29	N	597572
A	47m E	532220 179360	LONDON SESSIONS HOUSE BH4	22.86	N	599153
A	50m NE	532200 179400	NEWINGTON CAUSEWAY D	22.0	N	599548
A	51m N	532150 179430	NEWINGTON CAUSEWAY A	15.0	N	599545
1	54m W	532080 179360	L.C.C. K108	3.0	N	597065
A	63m NE	532200 179420	LONDON QUARTER SESSIONS HOUSE	3.0	N	597321
2	66m NE	532230 179390	L.C.C. LONDON SESSIONS HOUSE	4.57	N	597263
3	86m N	532180 179460	LONDON SESSIONS HOUSE BH8	15.24	N	599157
4	112m NE	532200 179480	SESSIONS HOUSE NO.8	15.24	N	597573
B	165m SE	532300 179250	DICKENS SQUARE	12.0	N	597223
B	165m SE	532300 179250	DICKENS SQUARE	12.0	N	597222
5	165m SE	532260 179200	SOUTHWARK & BERMONDSEY SEWER K111	9.0	N	597068
6	173m SW	532042 179191	ELEPHANT & CASTLE SITE 2 BH4	21.95	N	598044
7	181m SW	532067 179165	ELEPHANT & CASTLE SITE 2 BH6	15.24	N	598046
8	190m E	532360 179320	L.C.C. K107	4.0	N	597064
9	200m SW	531962 179231	ST GEORGES MARKET BH7	18.29	N	598818
10	203m SW	532044 179153	ELEPHANT & CASTLE SITE 2 BH3	15.24	N	598043
11	207m W	531937 179267	ST GEORGES MKT BH5	18.29	N	597621
C	207m S	532220 179130	SOUTHWARK & BERMONDSEY STORM RELIEF SEWER M	16.18	N	599538
12	208m SW	532068 179135	ELEPHANT & CASTLE SITE 2 BH5	15.24	N	598045



ID	Location	Grid reference	Name	Length	Confidential	Web link
D	209m SE	532280 179160	SOUTHWARK & BERMONDSEY SEWER K114	12.0	N	597071
C	210m S	532230 179130	SOUTHWARK & BERMONDSEY SEWER K112	16.0	N	597069
D	211m SE	532270 179150	SOUTHWARK & BERMONDSEY STORM RELIEF SEWER N	12.49	N	599539
13	214m SW	532017 179158	ELEPHANT & CASTLE SITE 2 BH2	15.24	N	598042
E	215m W	531926 179434	London South Bank University WS1	-	Y	N/A
14	220m SE	532340 179210	ROCKINGHAM ESTATE 9	10.66	N	599542
E	223m W	531921 179442	London South Bank University TP1	-	Y	N/A
F	223m W	531910 179380	BOROUGH POLY NO.2	11.28	N	597374
15	224m SW	531964 179189	ST GEORGES MKT BH6	27.43	N	597624
E	225m W	531919 179443	London South Bank University TP1A	-	Y	N/A
E	226m NW	531932 179477	London South Bank University WS2	-	Y	N/A
G	230m S	532200 179100	ROCKINGHAM ST ARCH STREET BH1-9	21.03	N	597283
G	230m S	532200 179100	ROCKINGHAM ST ARCH STREET BH1-	2.0	N	597282
G	230m S	532200 179100	ROCKINGHAM STREET SOUTHWARK	12.0	N	599149
H	230m W	531900 179340	BOROUGH CB	15.55	N	597285
H	230m W	531900 179340	BOROUGH CB	15.0	N	597286
E	231m NW	531925 179475	London South Bank University TP5	-	Y	N/A
16	232m SE	532260 179120	SOUTHWARK & BERMONDSEY SEWER K113	7.0	N	597070
E	232m NW	531922 179472	London South Bank University TP5A	-	Y	N/A
E	233m W	531916 179458	London South Bank University TP4	-	Y	N/A
E	233m W	531915 179458	London South Bank University TP4A	-	Y	N/A
E	235m W	531907 179440	London South Bank University TP2	-	Y	N/A
E	236m W	531907 179441	London South Bank University TP2A	-	Y	N/A
E	237m W	531914 179466	London South Bank University TP5B	-	Y	N/A
I	238m W	531900 179280	SOUTHWARK TECHNOPARK 6	-	Y	N/A
17	239m SE	532290 179130	ROCKINGHAM ESTATE 8	15.54	N	599541
I	241m W	531895 179289	ST GEORGES MARKET BH3	12.19	N	598817
E	242m W	531907 179460	London South Bank University TP3A	-	Y	N/A

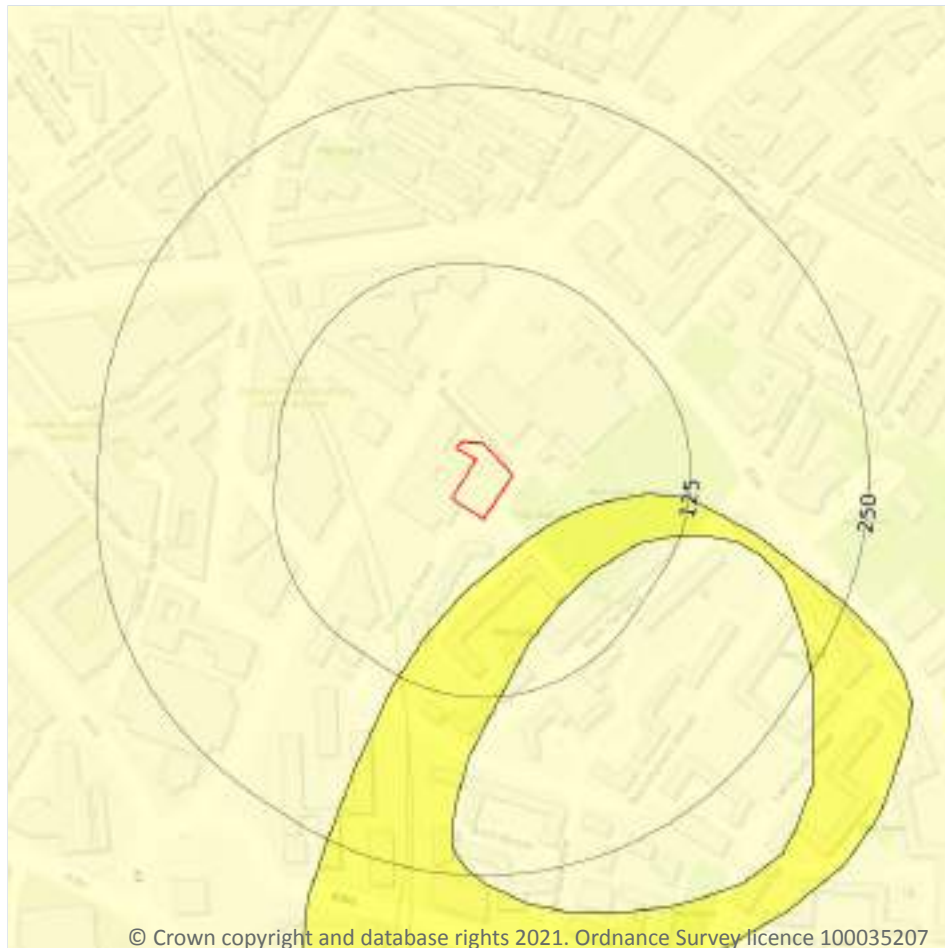


ID	Location	Grid reference	Name	Length	Confidential	Web link
E	242m W	531907 179461	London South Bank University TP3	-	Y	N/A
18	242m SW	532017 179124	ELEPHANT & CASTLE SITE 2 BH1	10.36	N	598041
19	243m SE	532330 179160	SOUTHWARK & BERMONDSEY STORM RELIEF SEWER O	8.17	N	599540
F	244m W	531890 179390	BOROUGH POLY NO.1	10.36	N	597373
E	249m W	531902 179467	London South Bank University BH1	-	Y	N/A
20	249m SW	531965 179153	ELEPHANT & CASTLE NEWINGTON C/WAY BH6	10.66	N	597876

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

2

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

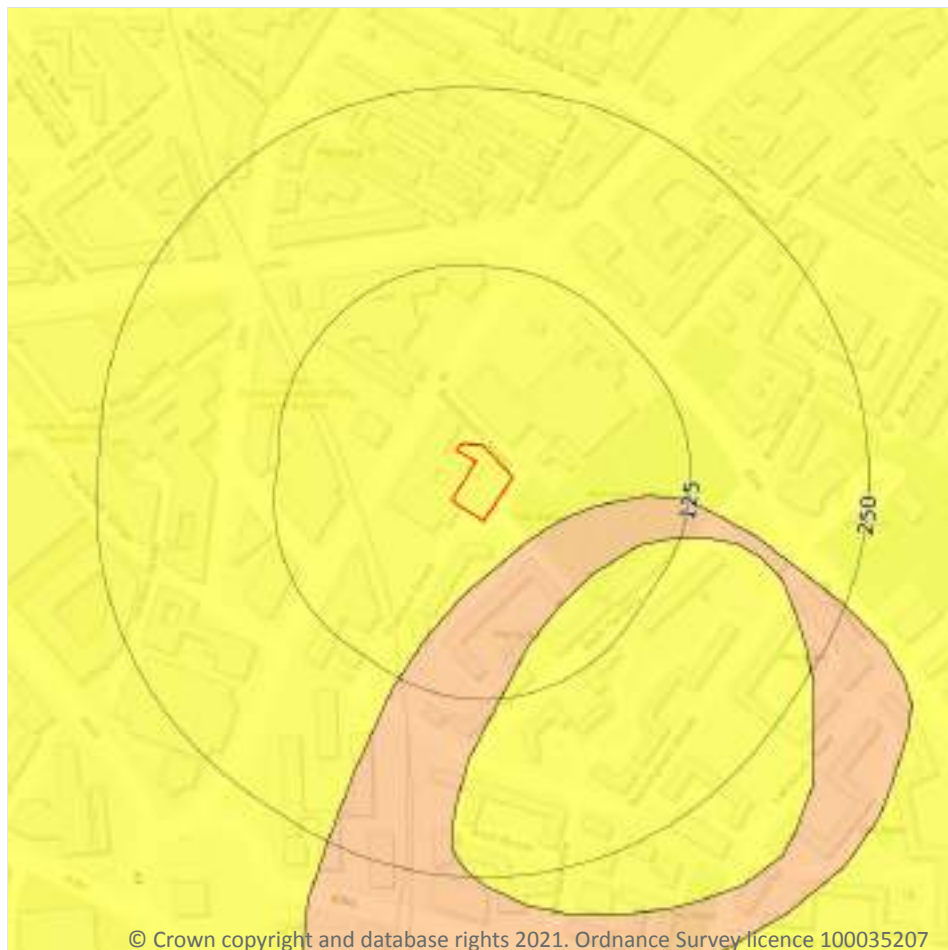
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 148**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
31m SE	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

2

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 149**

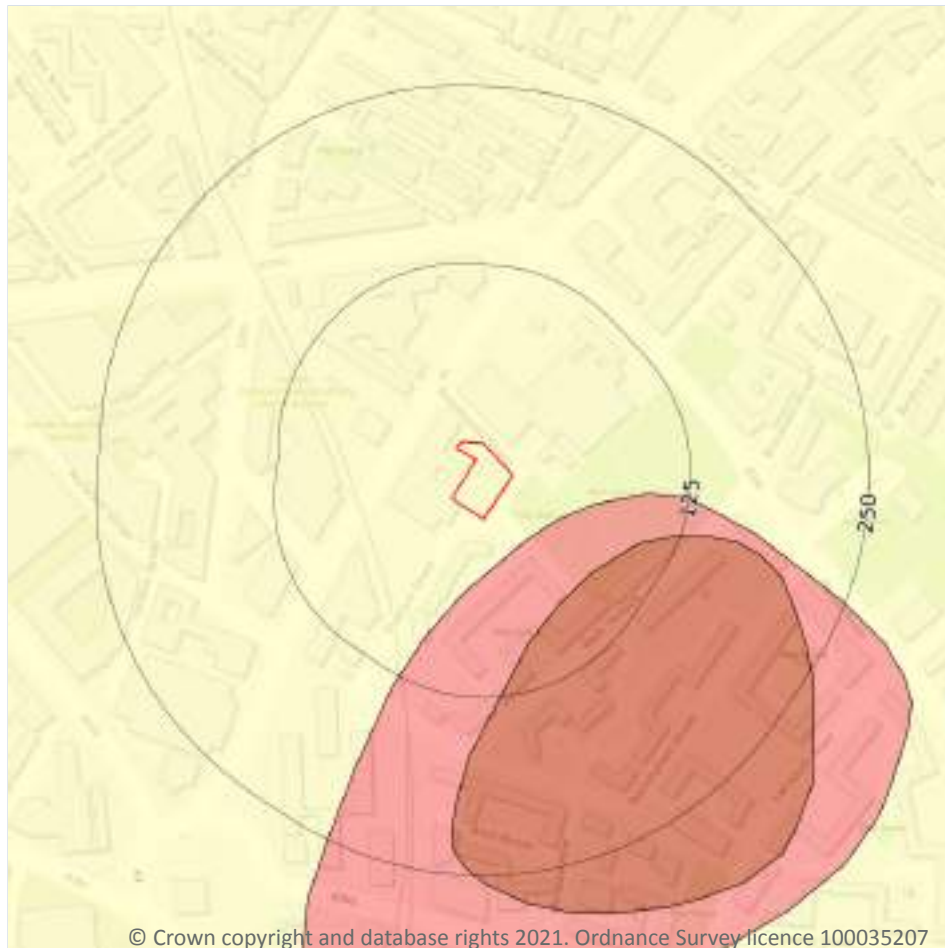
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

Location	Hazard rating	Details
31m SE	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

2

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

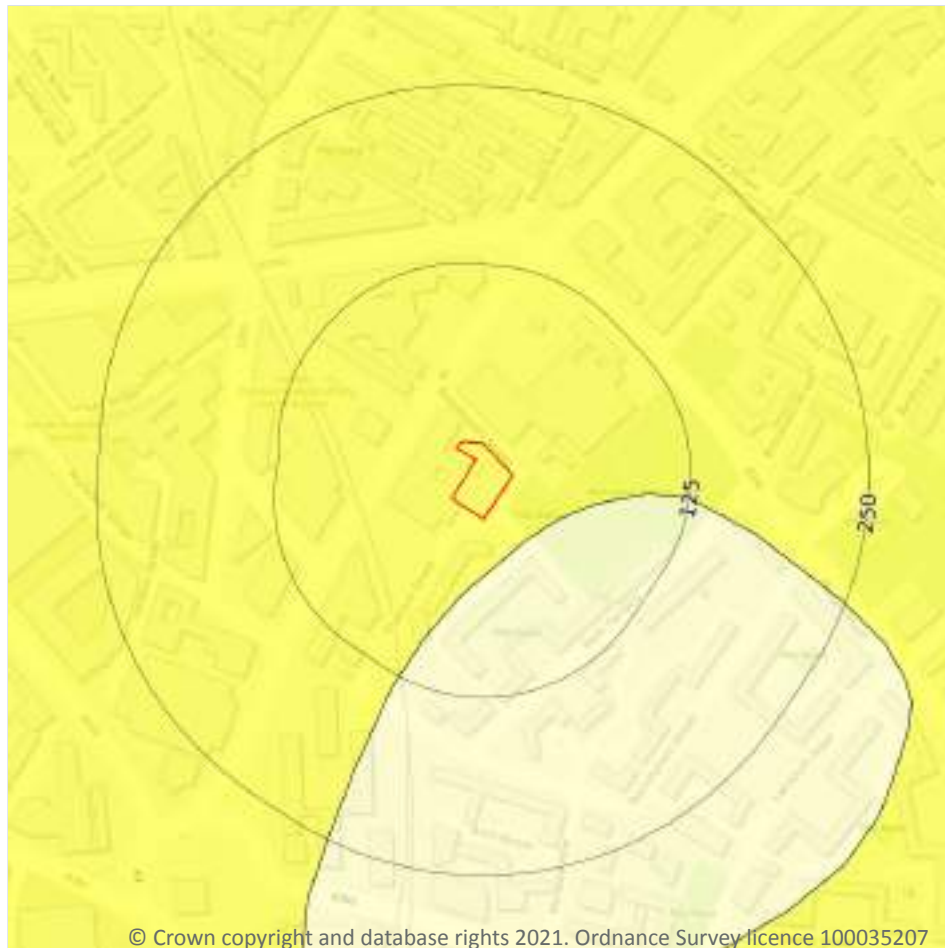
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 151**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
31m SE	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

2

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

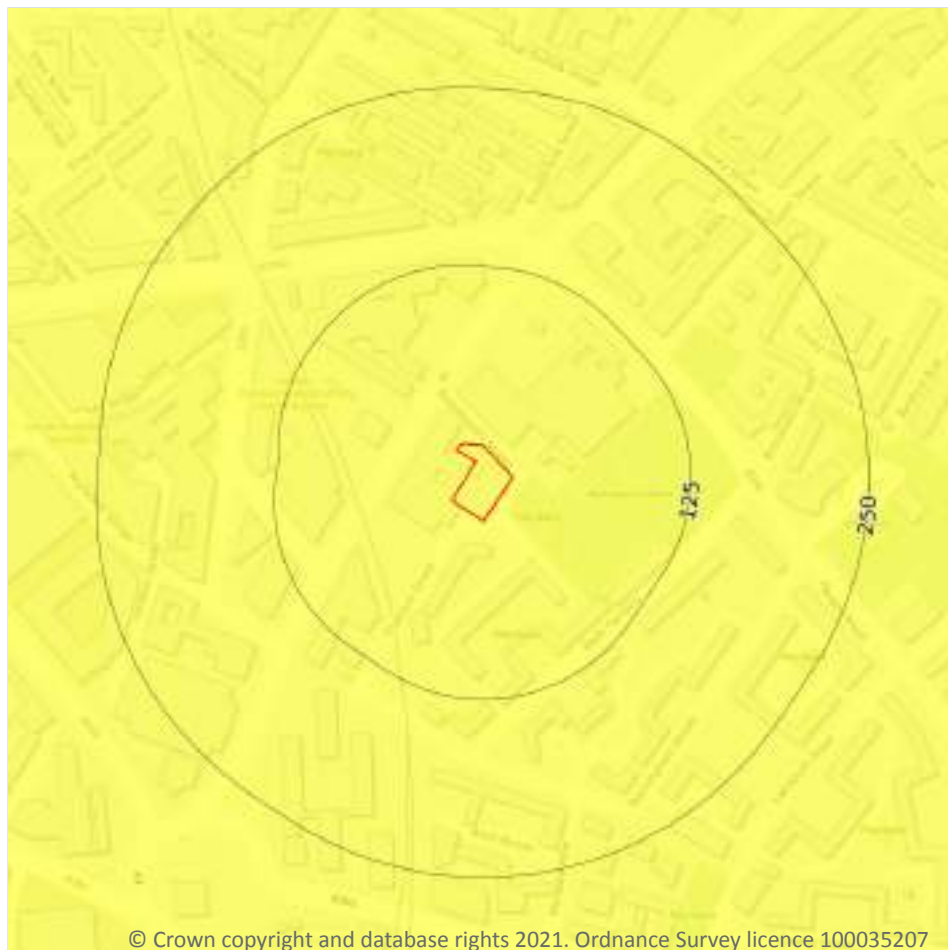
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 153**

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
31m SE	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 154**

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 155**

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
 - Sporadic underground mining of restricted extent possible
 - Localised small scale underground mining possible
 - Small scale mining possible
 - Underground mining known or likely within or in close proximity
 - Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m

1

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

Features are displayed on the Mining, ground workings and natural cavities map on **page 157**

ID	Location	Details	Source
1	230m S	Type: Scour Hollows x 1 Superficial Geology: Alluvium Bedrock Geology: London Clay Formation	Simple Bibliography: Berry. F.G., (1979). Late Quaternary Scour-Hollows and Related Features in Central London. Quarterly Journal of Engineering Geology. Volume 12. pp. 9-29. Full Bibliography: - Confidentiality: Data source can be revealed, data can be used freely

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m	0
----------------------------	----------

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	0
----------------------------	----------

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	0
-----------------------------	----------

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0
----------------------------	----------

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site

0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site

0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.



18.11 Gypsum areas

Records on site	0
-----------------	---

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

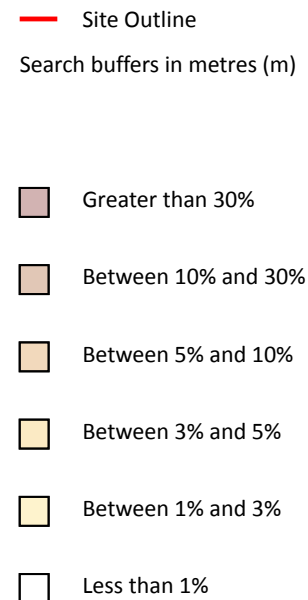
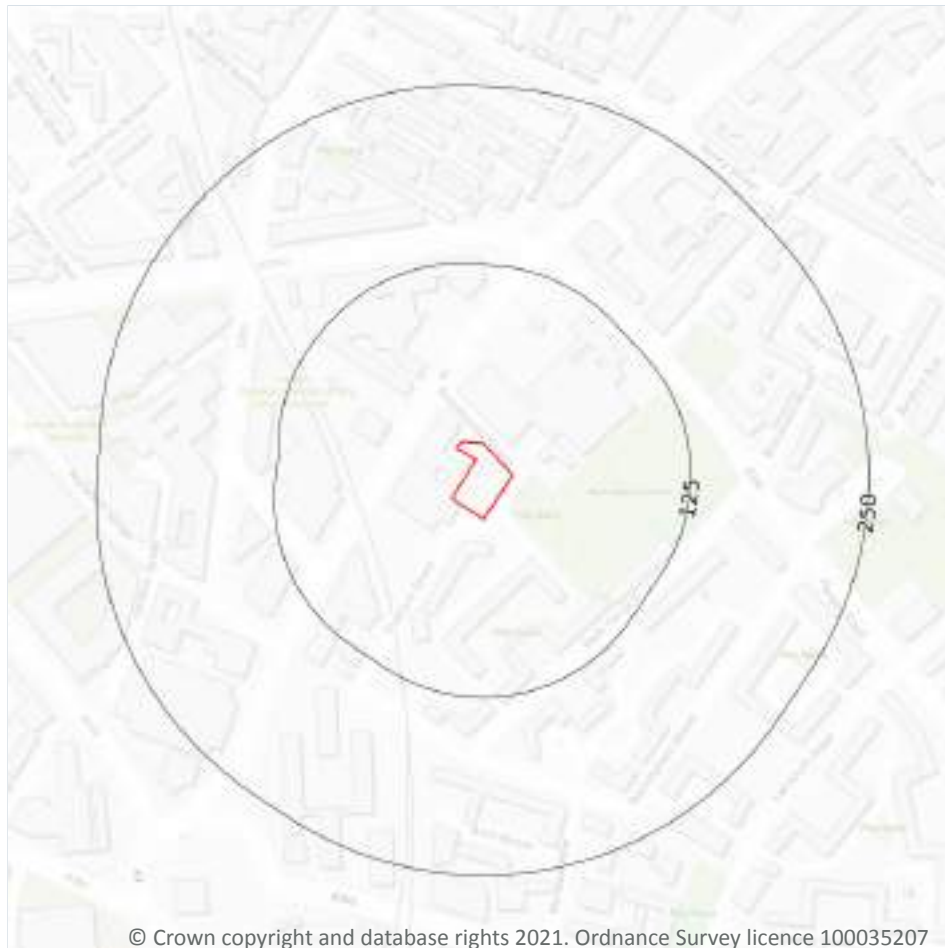
Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).



19 Radon



19.1 Radon

Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 161**

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None**

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	No data	No data	No data	No data	No data	No data	No data
31m S	No data	No data	No data	No data	No data	No data	No data

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

8

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	17	3	381	262	0.8	65	69	26	25
20m N	17	3	395	271	0.8	66	68	26	25
25m S	18	3.2	361	248	0.7	67	68	26	24
27m E	17	3	372	256	0.7	64	67	25	25
30m W	21	3.7	404	278	0.8	71	76	27	27
42m NW	19	3.3	421	289	0.8	70	75	27	28
50m NE	17	3	382	262	0.7	65	66	25	24



Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
50m SW	24	4.2	422	290	0.8	73	86	29	33

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m

1

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

Features are displayed on the Railway infrastructure and projects map on **page 164**

Location	Line Name	Line Section	Track Type	Depth (m bgl)	Operational hours
33m NW	Northern Line	Northern Line - Bank branch	Tunnel	20.88	No 24hr service. Mon-Sat: Early 0512 Late 0113, Sun: Early 0651 Late 0022

This data is sourced from publicly available information by Groundsure.



21.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

20

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on **page 164**

Location	Land Use	Year of mapping	Mapping scale
51m W	Railway	1930	-
52m W	Railway	1896	-
53m W	Railway	1916	-
169m NW	Railway	1879	-
171m S	Railway Sidings	1895	10560
175m S	Railway Sidings	1950	2500
176m S	Railway Sidings	1916	2500
177m S	Railway Sidings	1960	1250
177m S	Railway Sidings	1967	1250
177m S	Railway Sidings	1950	1250
177m S	Railway Sidings	1896	2500
177m S	Railway Sidings	1879	2500

Location	Land Use	Year of mapping	Mapping scale
179m S	Railway Sidings	1938	10560
179m S	Railway Sidings	1920	10560
180m S	Railway Sidings	1895	10560
180m S	Railway Sidings	1898	10560
181m S	Railway Sidings	1872	10560
181m S	Railway Sidings	1948	10560
181m S	Railway Sidings	1968	10560
209m NW	Railway	1896	-

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m

0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m

0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m

19

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on **page 164**

Location	Name	Type
57m W		rail



Location	Name	Type
61m W		rail
63m W	Not given	Multi Track
67m W	Thameslink	rail
69m W		rail
69m W		rail
75m SW	Not given	Multi Track
85m W	Thameslink	rail
85m W		rail
90m SW	Not given	Multi Track
96m W		rail
96m W		rail
118m NW		rail
137m NW		rail
154m S	Not given	Multi Track
154m S	Not given	Multi Track
155m NW		rail
201m S	Not given	Multi Track
249m S	Not given	Multi Track

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m

0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.



21.9 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

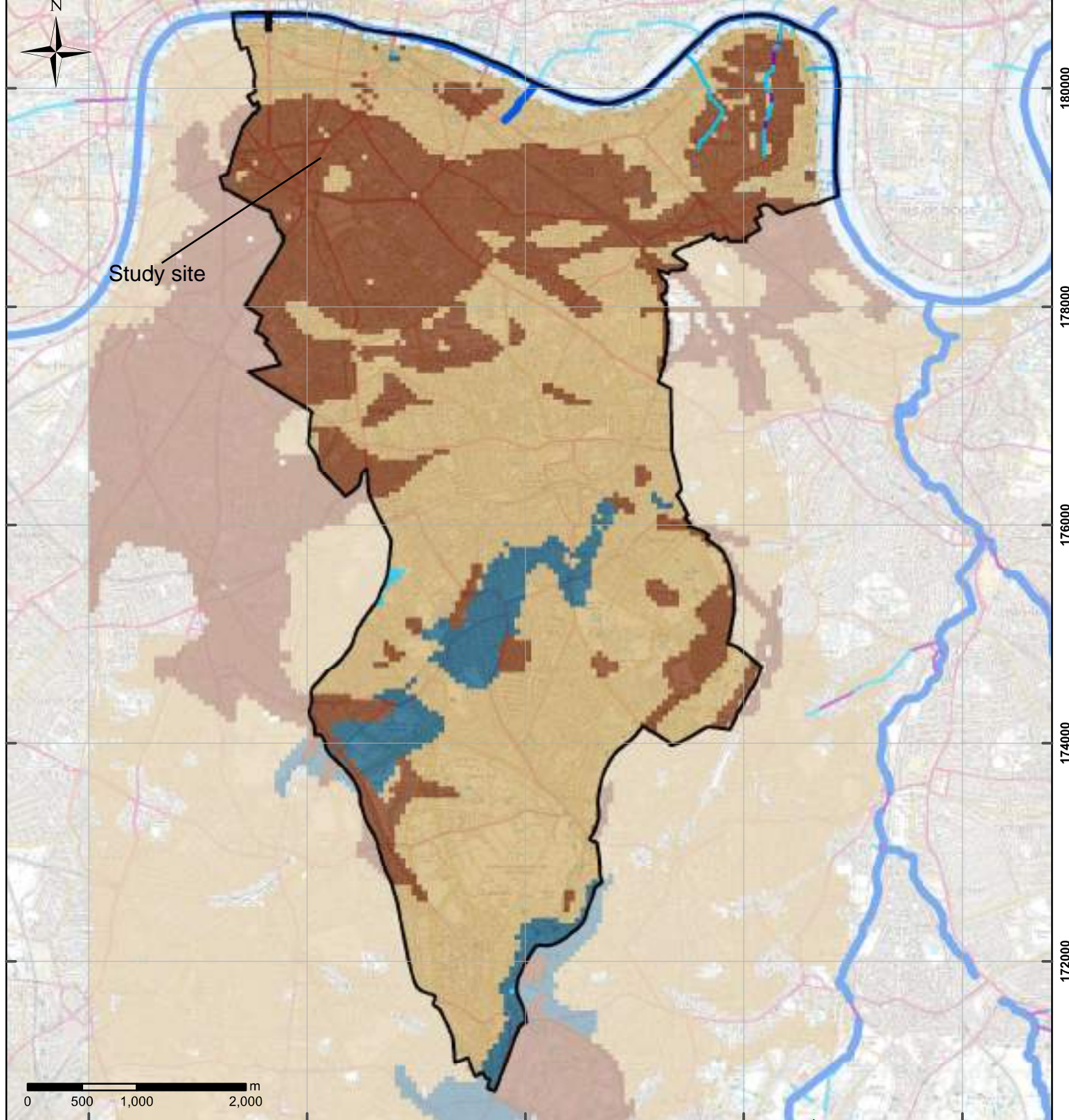
Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference>.

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APPENDIX 3 – STRATEGIC FLOOD RISK ASSESSMENT MAP EXTRACTS



Legend

Southwark Borough Boundary

Main River

Ordinary Watercourse

Culvert

Subsurface Suitability for Infiltration SuDS

Highly Suitable

Probably Suitable

Potentially Suitable for Bespoke Designs

Unlikely to be Suitable

SuDS Infiltration Suitability



Sunley House, 4 Bedford Park
Croydon, Surrey, CR0 2AP
Tel: +44 (0) 208 639 3500
www.aecom.com

GIS:

KLD

Checked:

AD

Approved:

GP

Scale at A4:

1:48,000

Scale at A3:

1:35,000

Scale at A1:

1:17,000

Date:

05/12/2016

MAP A11

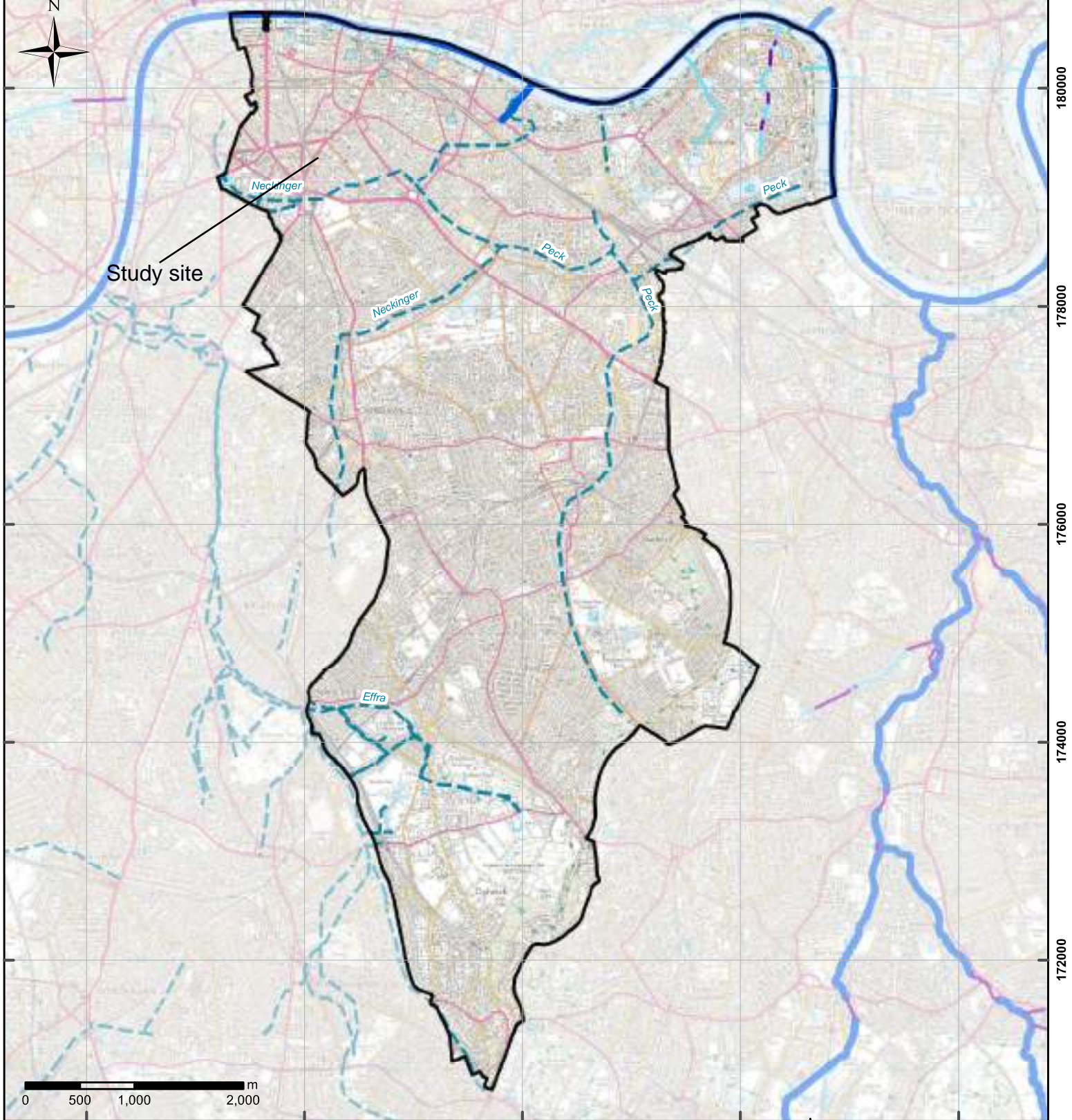
London Borough of
Southwark



Strategic Flood
Risk Assessment

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Contains British Geological



Legend

- Southwark Borough Boundary
- Main River
- Ordinary Watercourse
- Culvert
- Hidden / Lost Watercourse

River Network



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GIS: AD	Checked: SB	Approved: GP
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Scale at A4: 1:48,000	Date: 15/09/2016
Scale at A3: 1:35,000	
Scale at A1: 1:17,000	

MAP A1

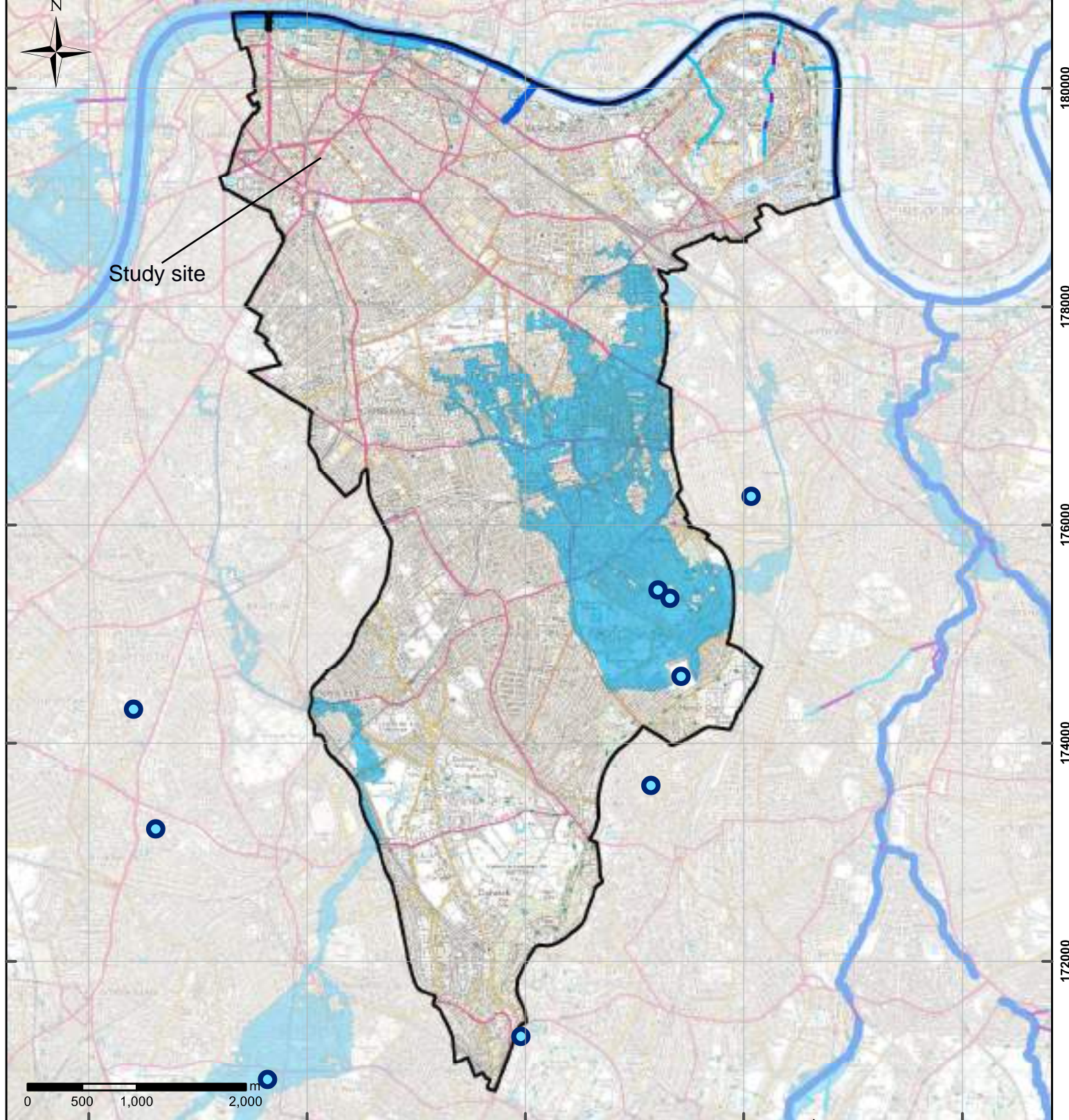
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Southwark



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Legend

- Southwark Borough Boundary
- Reservoir
- Main River
- Ordinary Watercourse
- Culvert
- Risk of Flooding from Reservoirs

Flood Risk from Reservoirs



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Risk Assessment

GIS: AD	Checked: SB	Approved: GP
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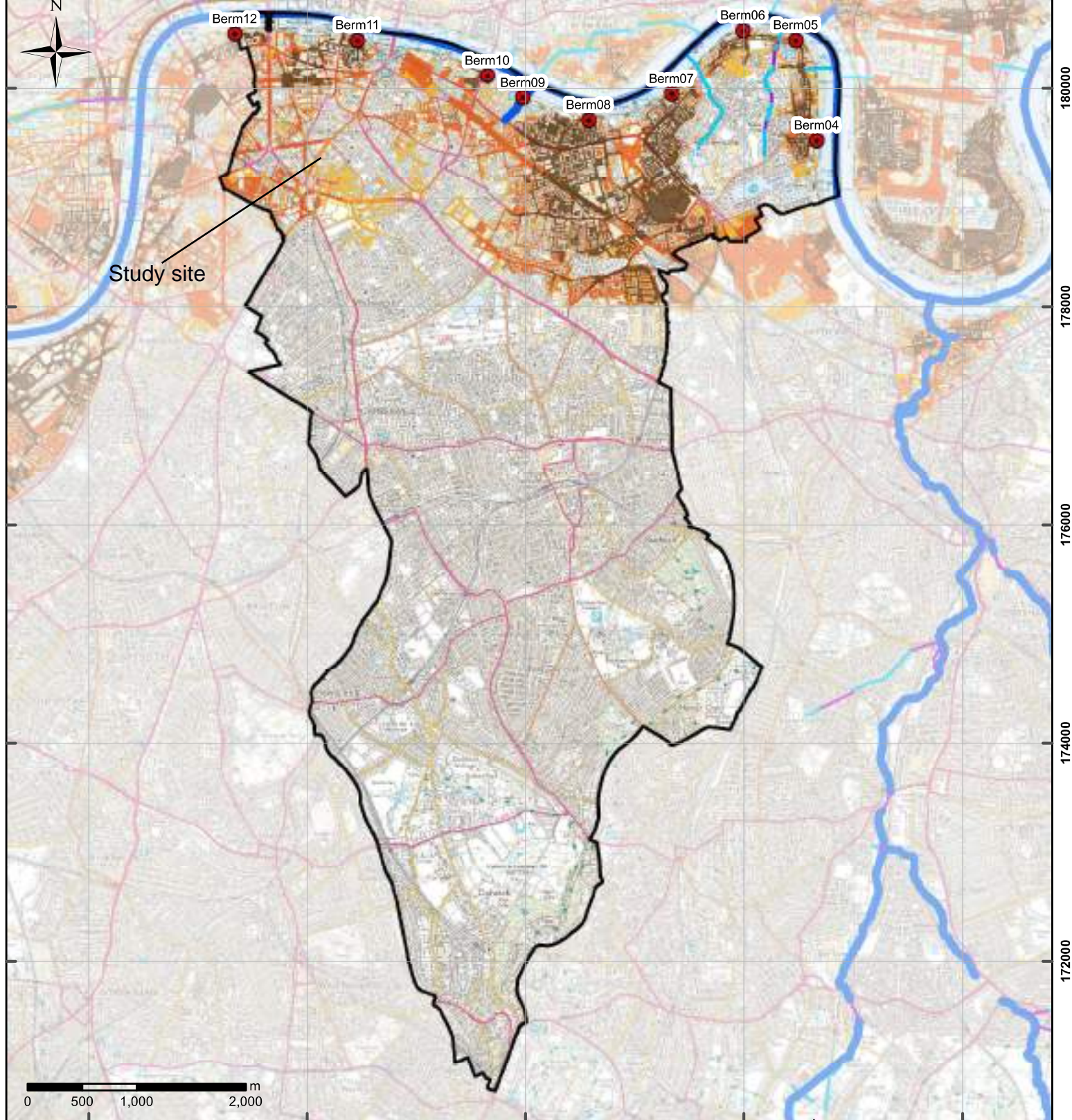
Scale at A4: 1:48,000	Date: 07/09/2016
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Scale at A3: 1:35,000	MAP A6
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Scale at A1: 1:17,000

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Legend

Southwark Borough Boundary

Main River

Ordinary Watercourse

Culvert

Breach Location

Maximum Predicted Flood Extent - Year

2014

2065

2100

Breach Assessment Maximum Predicted Flood Extents



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GIS: AD	Checked: SB	Approved: GP
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Scale at A3: 1:35,000	
Scale at A1: 1:17,000	

MAP A8.1

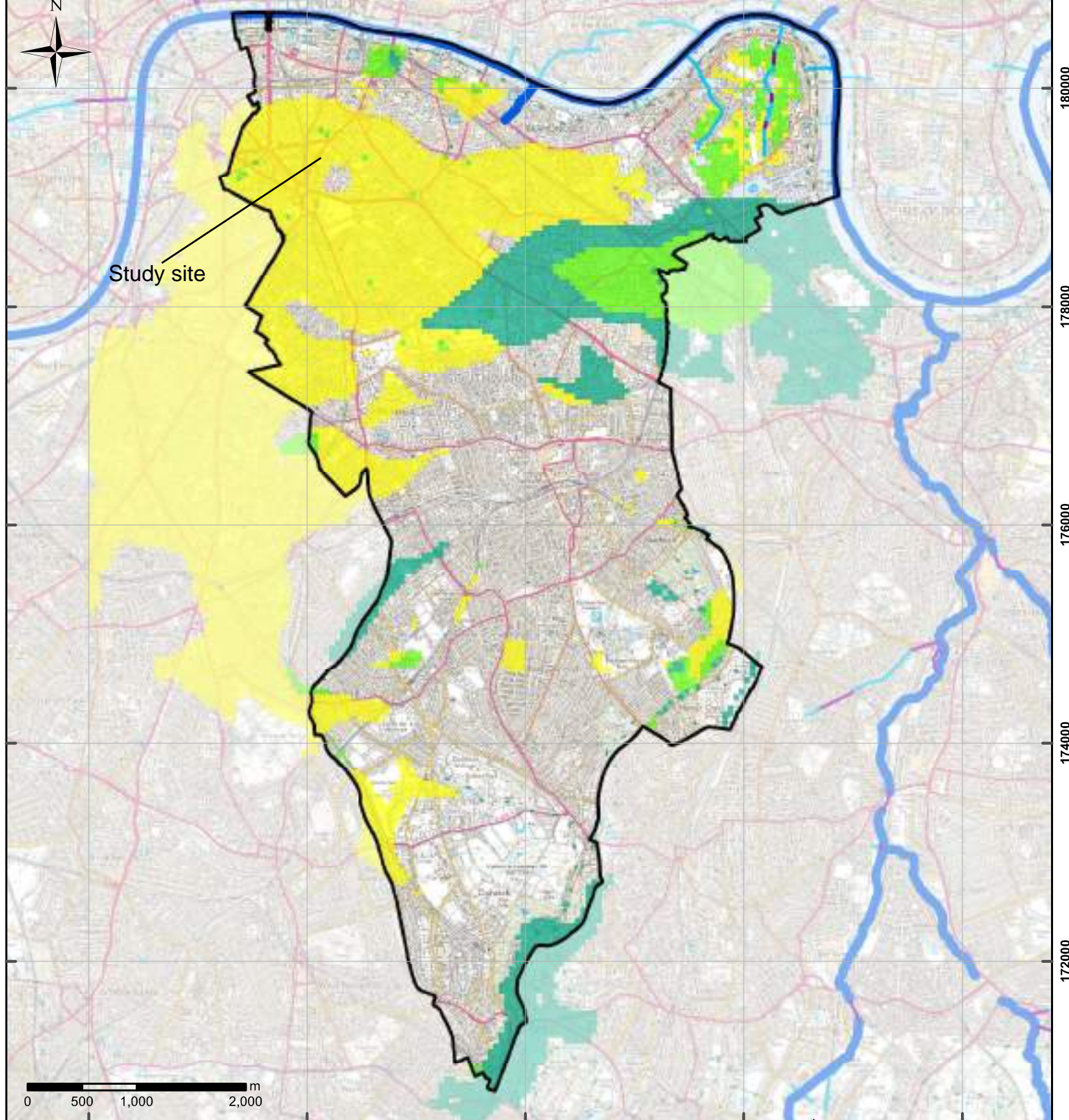
London Borough of
Southwark



Strategic Flood
Risk Assessment

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Legend

- Southwark Borough Boundary
- Main River
- Ordinary Watercourse
- Culvert
- Limited potential for groundwater flooding to occur
- Potential for groundwater flooding of property situated below ground level
- Potential for groundwater flooding to occur at surface

Areas at Risk of Flooding from Groundwater



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London Borough of
Southwark



Strategic Flood
Risk Assessment

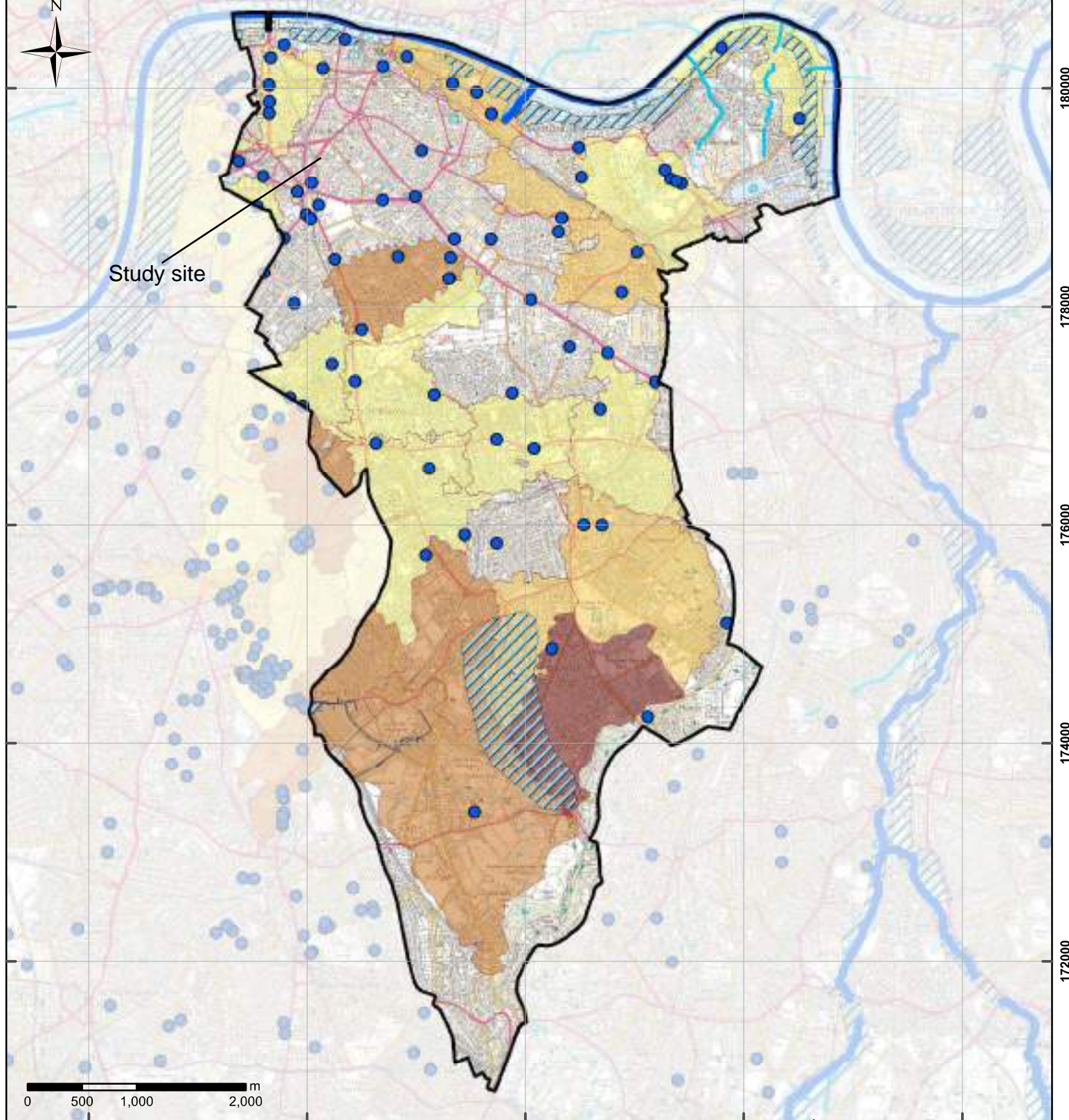
GIS: AD	Checked: SB	Approved: GP
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Scale at A4: 1:48,000	Date: 15/09/2016
Scale at A3: 1:35,000	
Scale at A1: 1:17,000	

MAP A5

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Legend

- Southwark Borough Boundary
- Main River
- Ordinary Watercourse
- Culvert
- Localised Flood Incident
- Historic Flood Outline

Total Properties Flooded by Overloaded Sewers by Postcode Area

- 1 - 2
- 3 - 6
- 7 - 11
- 12 - 25

Flooding History



Sunley House, 4 Bedford Park
Croydon, Surrey, CR0 2AP
Tel: +44 (0) 208 639 3500
www.aecom.com

GIS:	KLD	Checked:	AD	Approved:	GP
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Scale at A4:	1:48,000	Date:	07/12/2016
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Scale at A3:	1:35,000		
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Scale at A1:	1:17,000		
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MAP A2

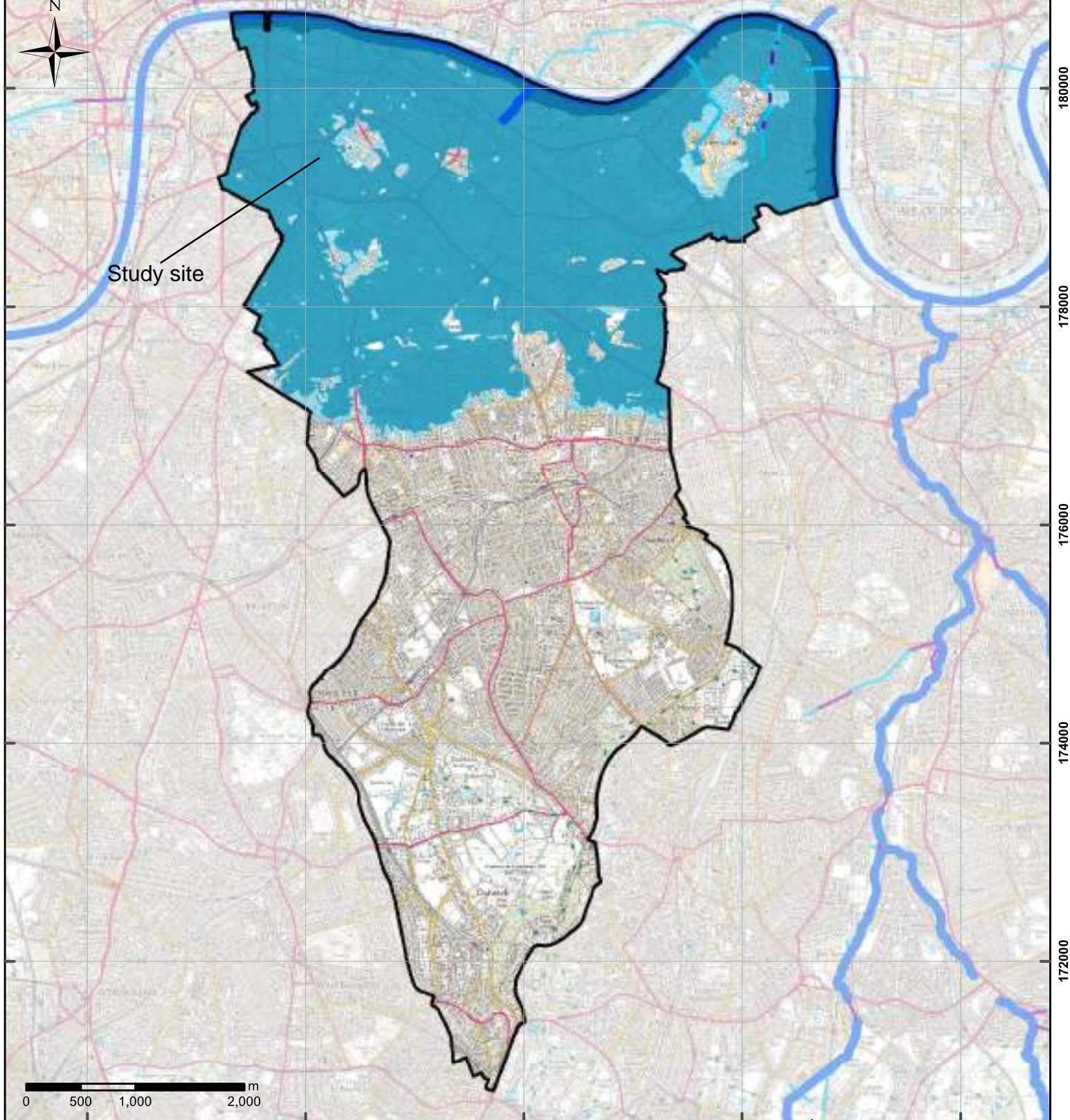
London Borough of
Southwark



Strategic Flood
Risk Assessment

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Legend

- Southwark Borough Boundary
- Main River
- Ordinary Watercourse
- Culvert
- Flood Zone 3a
- Flood Zone 3b
- Flood Zone 2

Flood Risk from Rivers and Seas



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Croydon, Surrey, CR0 2AP
Tel: +44 (0) 208 639 3500
www.aecom.com

London Borough of
Southwark



Strategic Flood
Risk Assessment

GIS: AD	Checked: SB	Approved: GP
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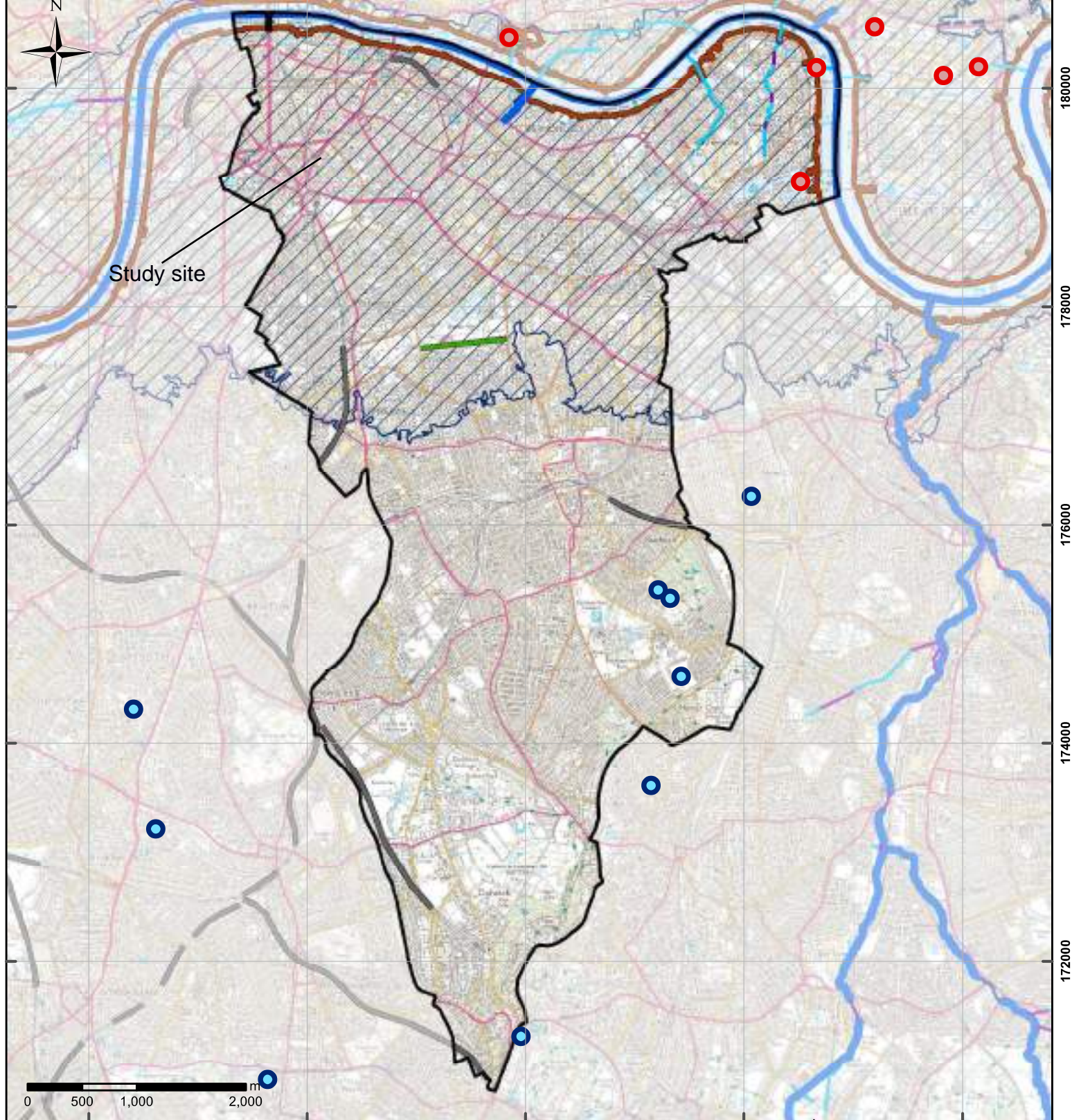
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Scale at A1: 1:17,000	MAP A3
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Legend

- Southwark Borough Boundary
- Main River
- Ordinary Watercourse
- Culvert
- Flood Defence
- Earth Embankment
- Railway Embankment
- Areas Benefiting from Flood Defences
- Reservoir
- Dock

Flood Risk Management Infrastructure



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London Borough of
Southwark



Strategic Flood
Risk Assessment

GIS: AD	Checked: SB	Approved: GP
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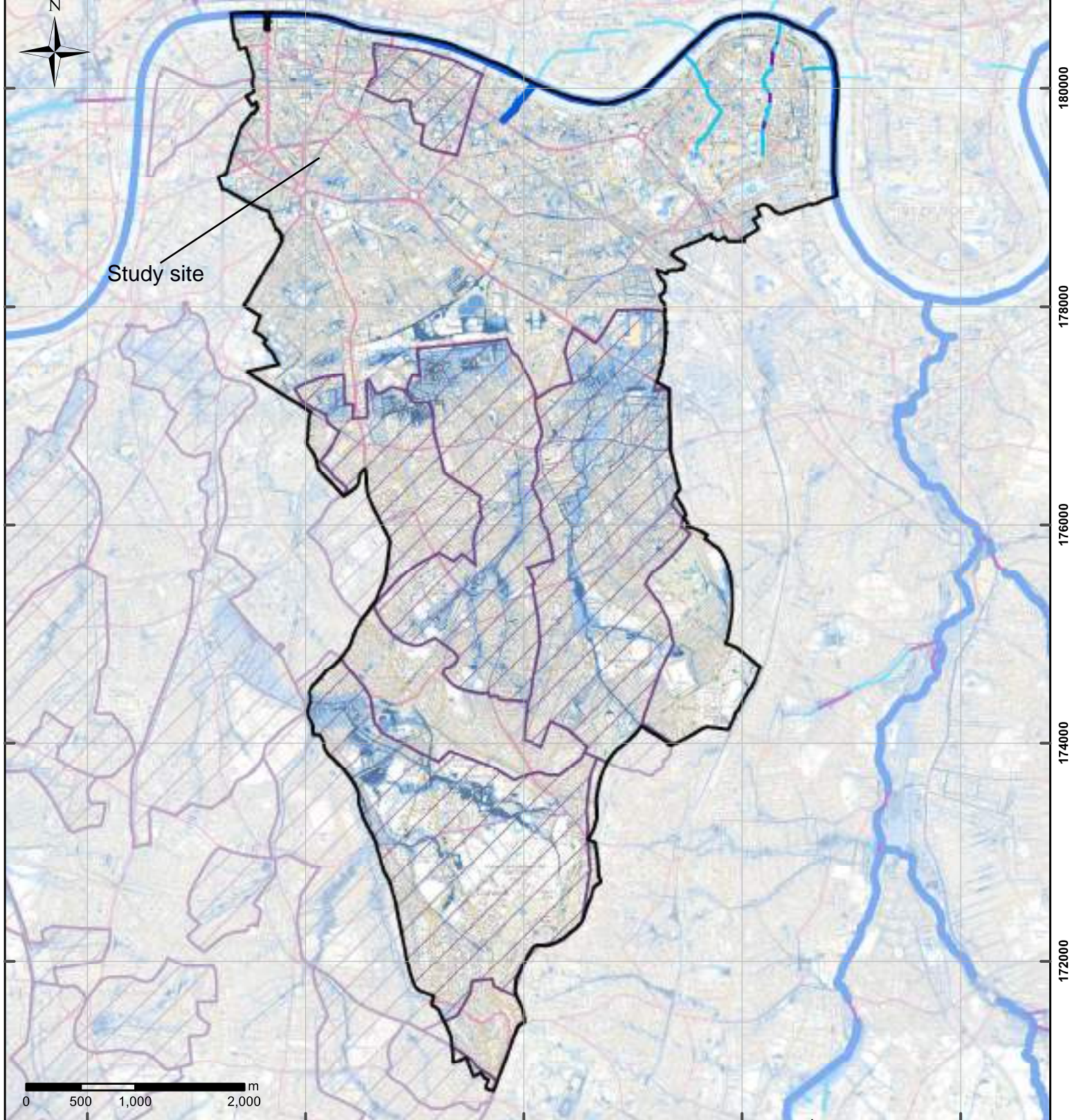
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
Scale at A1: 1:17,000	MAP A7
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Legend

-  Southwark Borough Boundary
-  Main River
-  Ordinary Watercourse
-  Culvert
-  Critical Drainage Area
-  High Risk of Flooding (1 in 30 years)
-  Medium Risk of Flooding (1 in 100 years)
-  Low Risk of Flooding (1 in 1000 years)

Flood Map for Surface Water



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GIS: AD	Checked: SB	Approved: GP
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Scale at A4: 1:48,000	Date: 07/09/2016
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Scale at A3: 1:35,000	
Scale at A1: 1:17,000	MAP A1

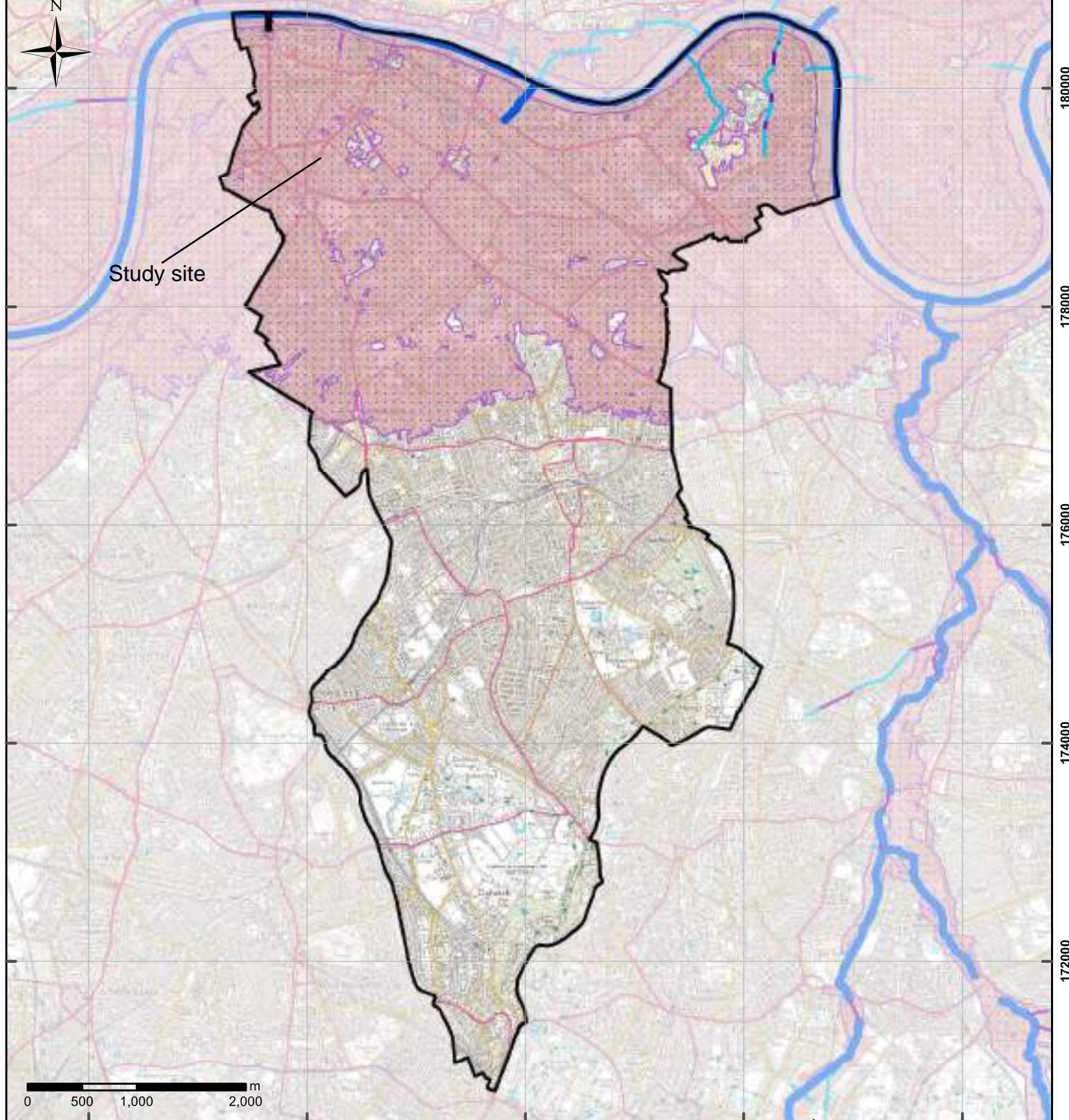
London Borough of
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Strategic Flood
Risk Assessment

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Legend

-  Southwark Borough Boundary
-  Main River
-  Ordinary Watercourse
-  Culvert
-  Flood Warning Area
-  Flood Alert Area

Emergency Flood Planning



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London Borough of
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Strategic Flood
Risk Assessment

GIS: AD	Checked: SB	Approved: GP
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Scale at A4: 1:48,000	Date: 15/09/2016
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Scale at A3: 1:35,000

Scale at A1: 1:17,000

MAP A9

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APPENDIX 4 - OS HISTORICAL MAPS

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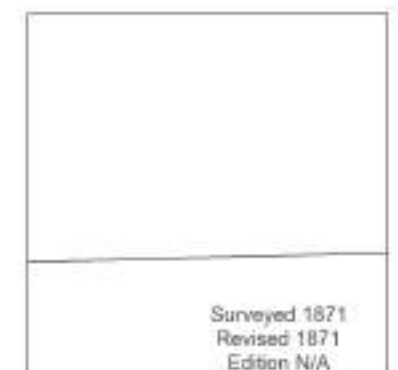
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Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1871

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1871
Revised 1871
Edition N/A
Copyright N/A
Levelled N/A



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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1872

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1863
Revised N/A
Edition 1872
Copyright N/A
Levelled N/A

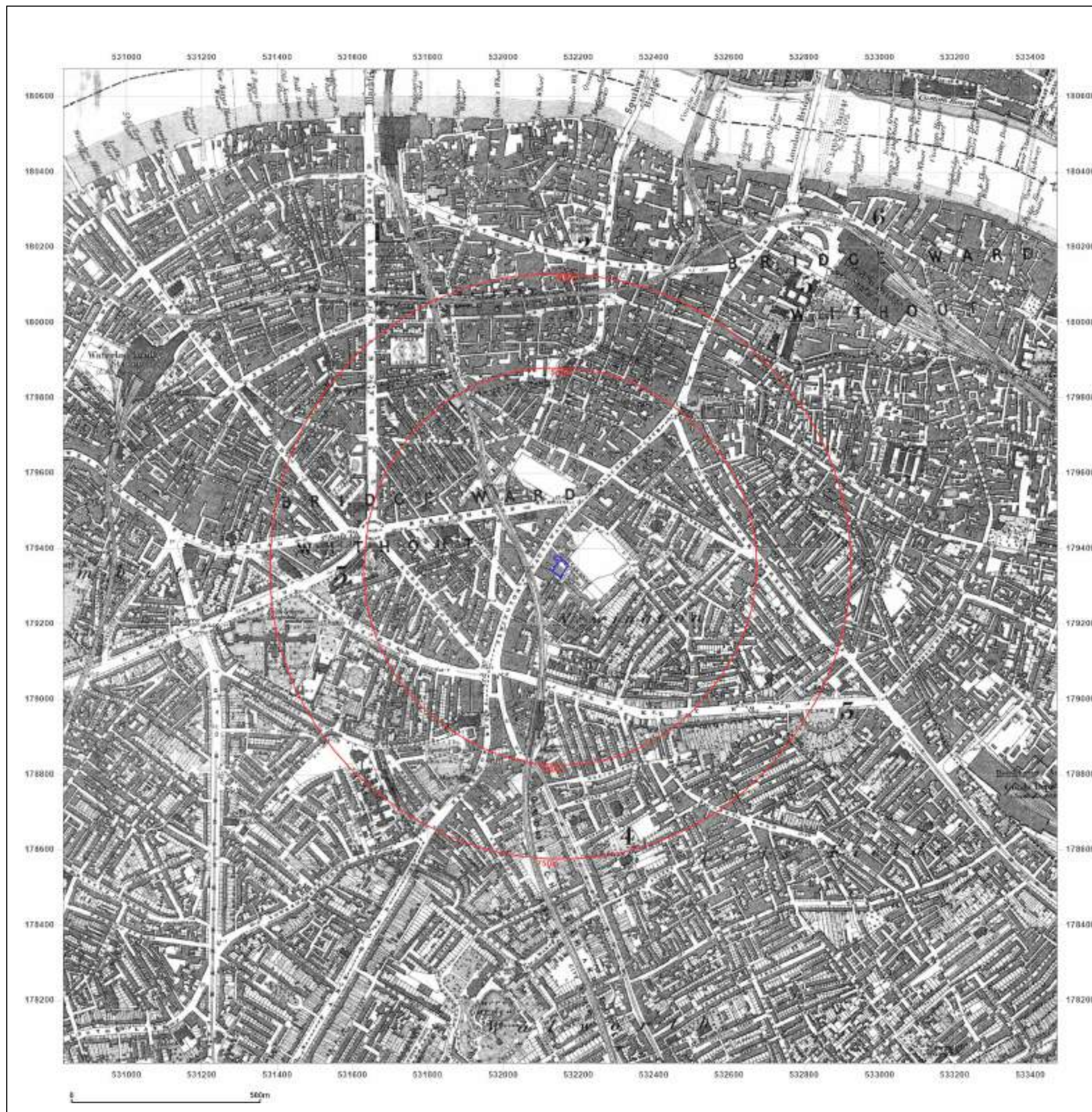


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1873

Scale: 1:10,560

Printed at: 1:10,560

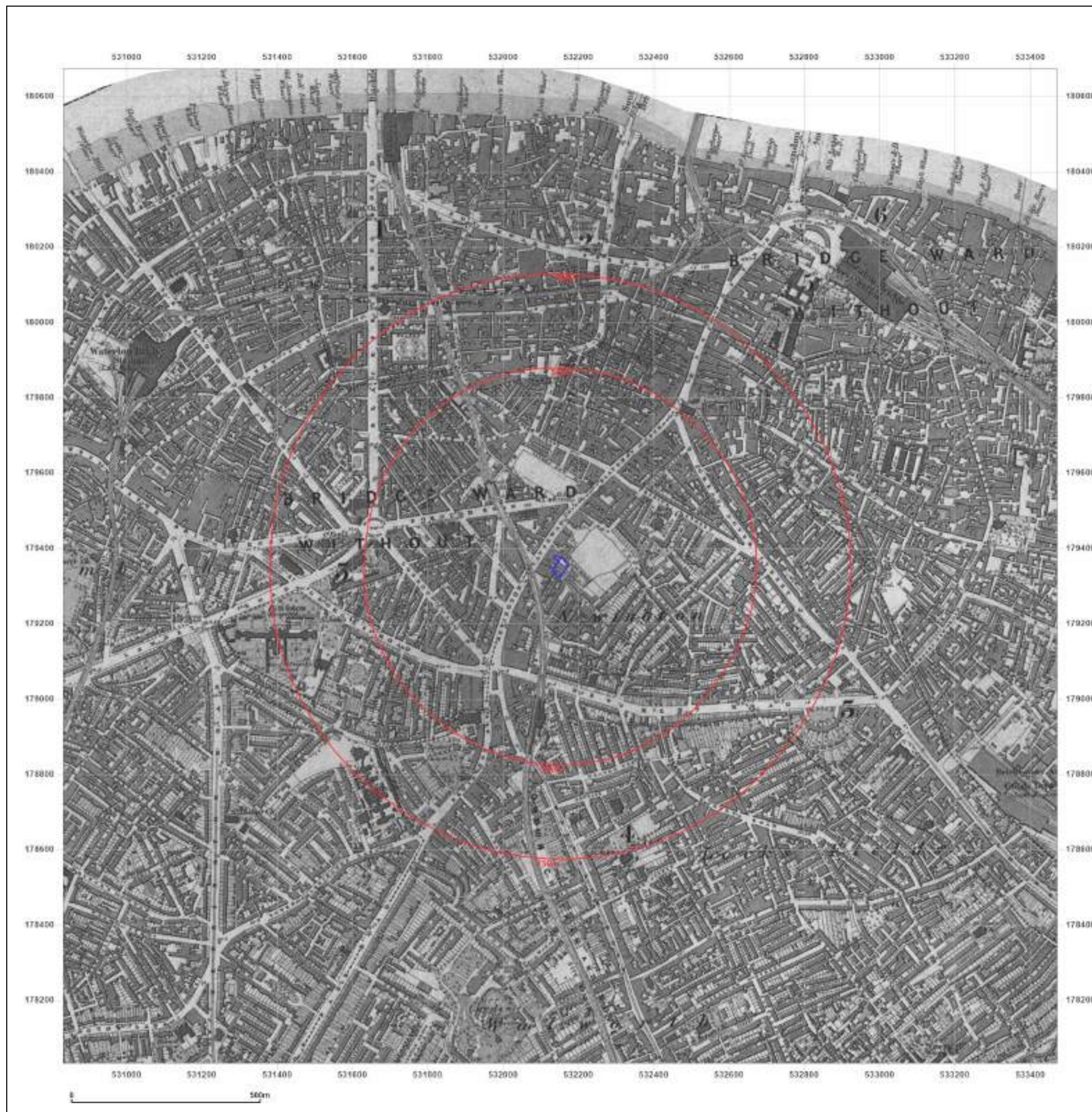


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

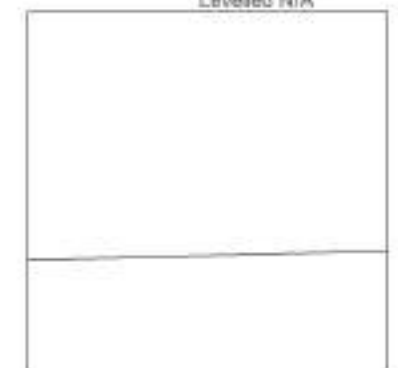
Map date: 1882

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1873
Revised 1873
Edition 1882
Copyright N/A
Levelled N/A

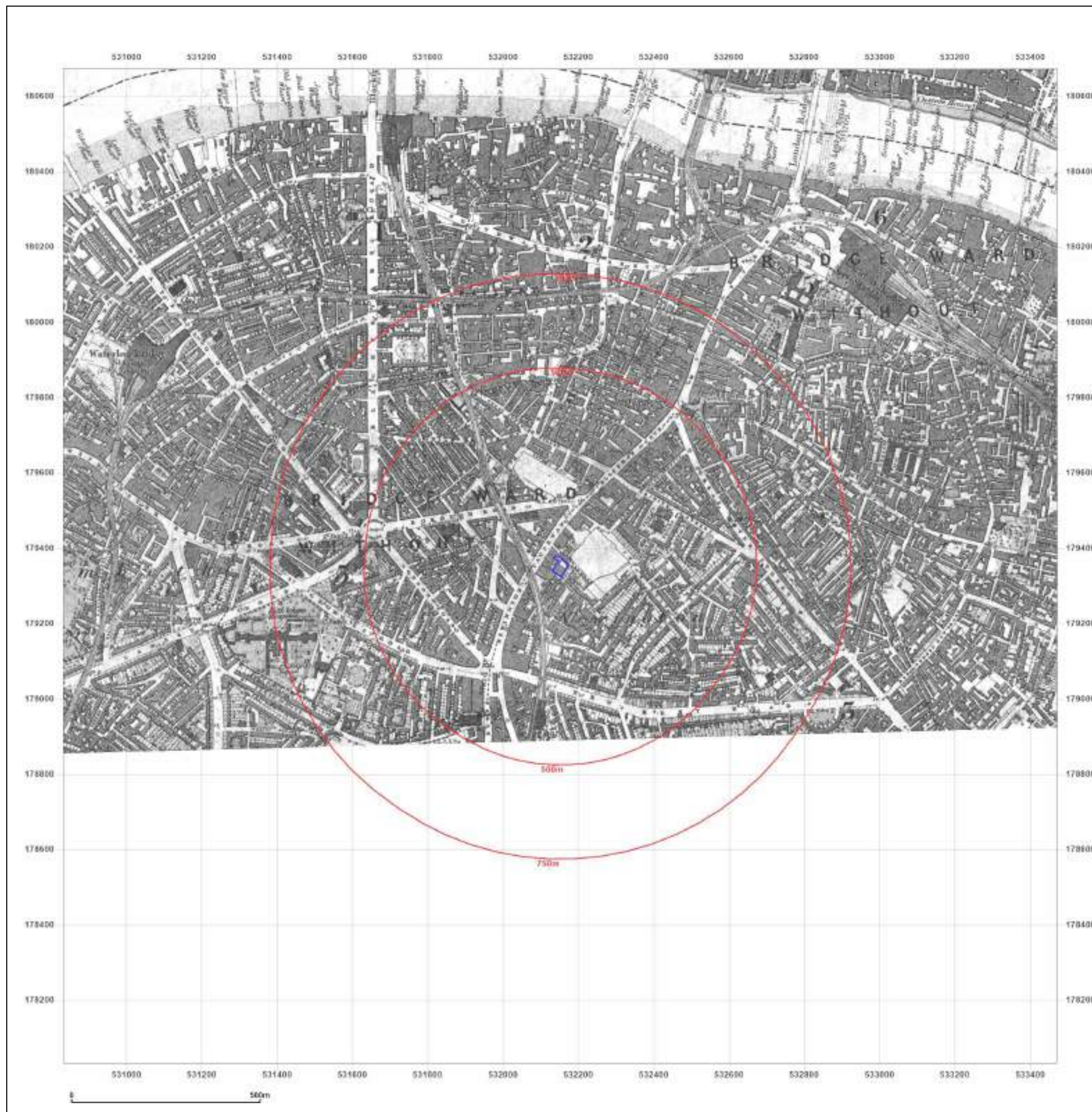


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1894-1895

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1895
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1894
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1894
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1894
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

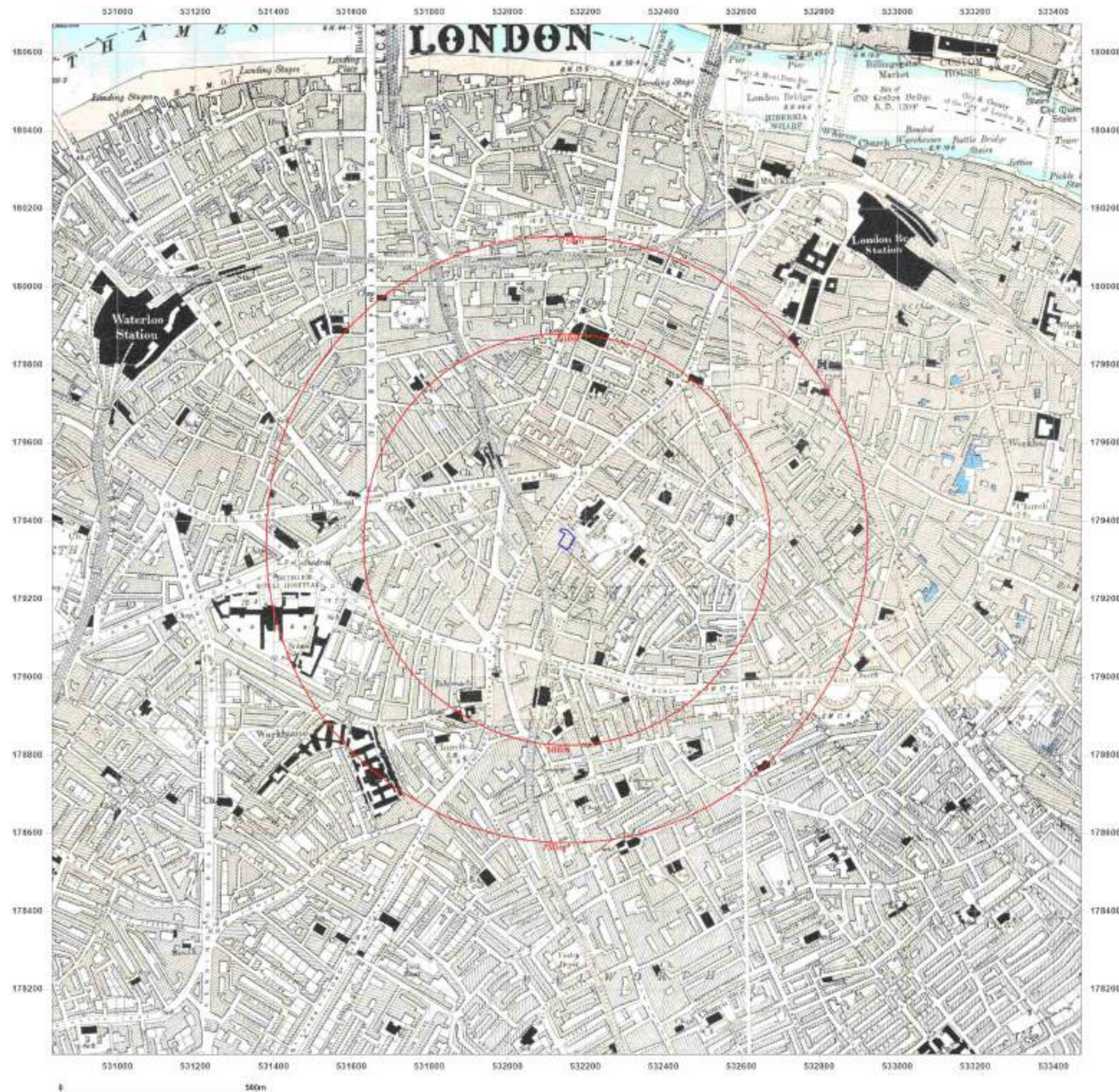


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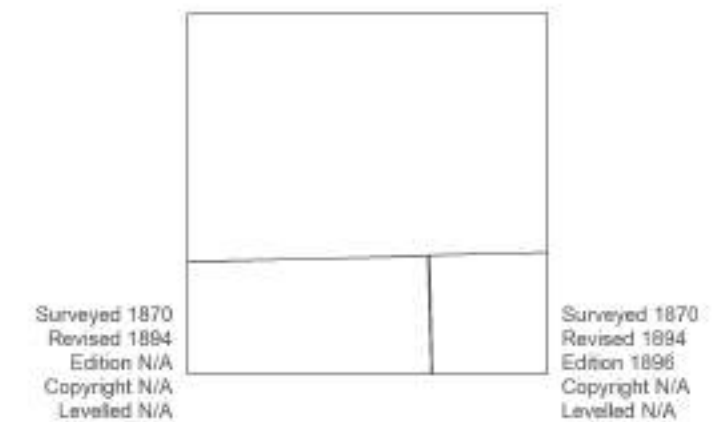
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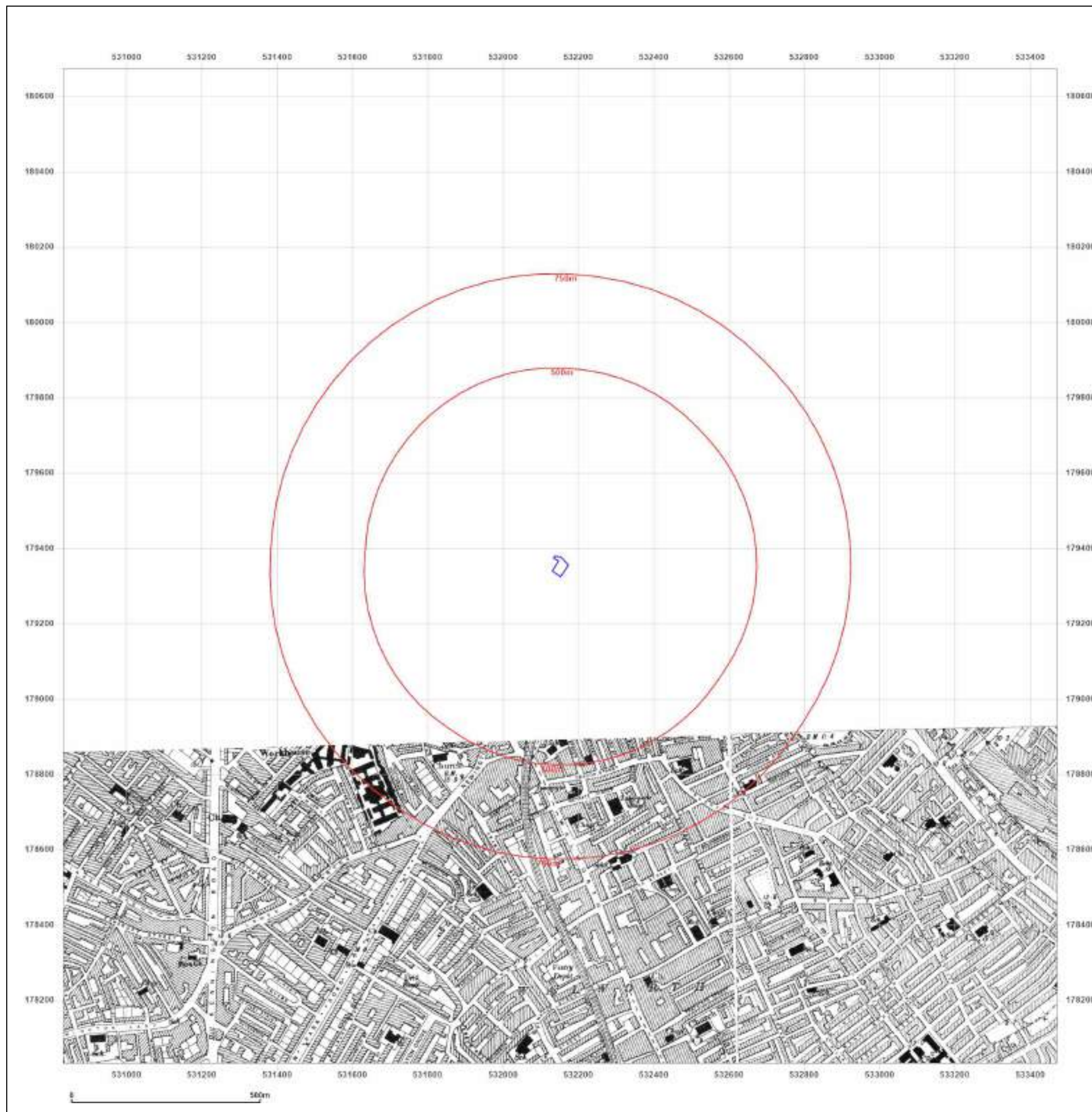


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1895-1898

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1873
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

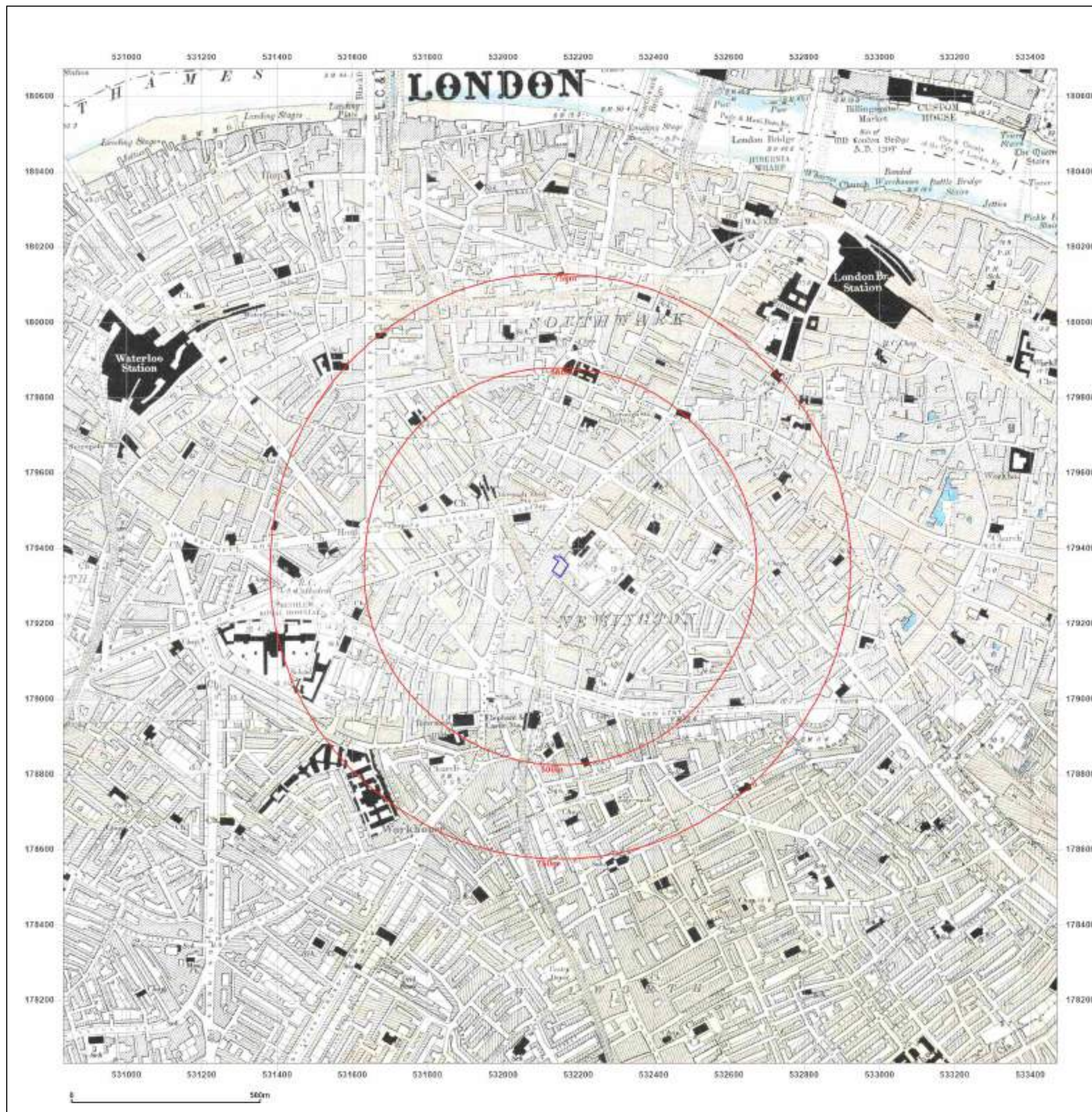


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1920

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1872
Revised 1919
Edition 1920
Copyright N/A
Levelled N/A

Surveyed 1870
Revised 1914
Edition 1920
Copyright N/A
Levelled N/A

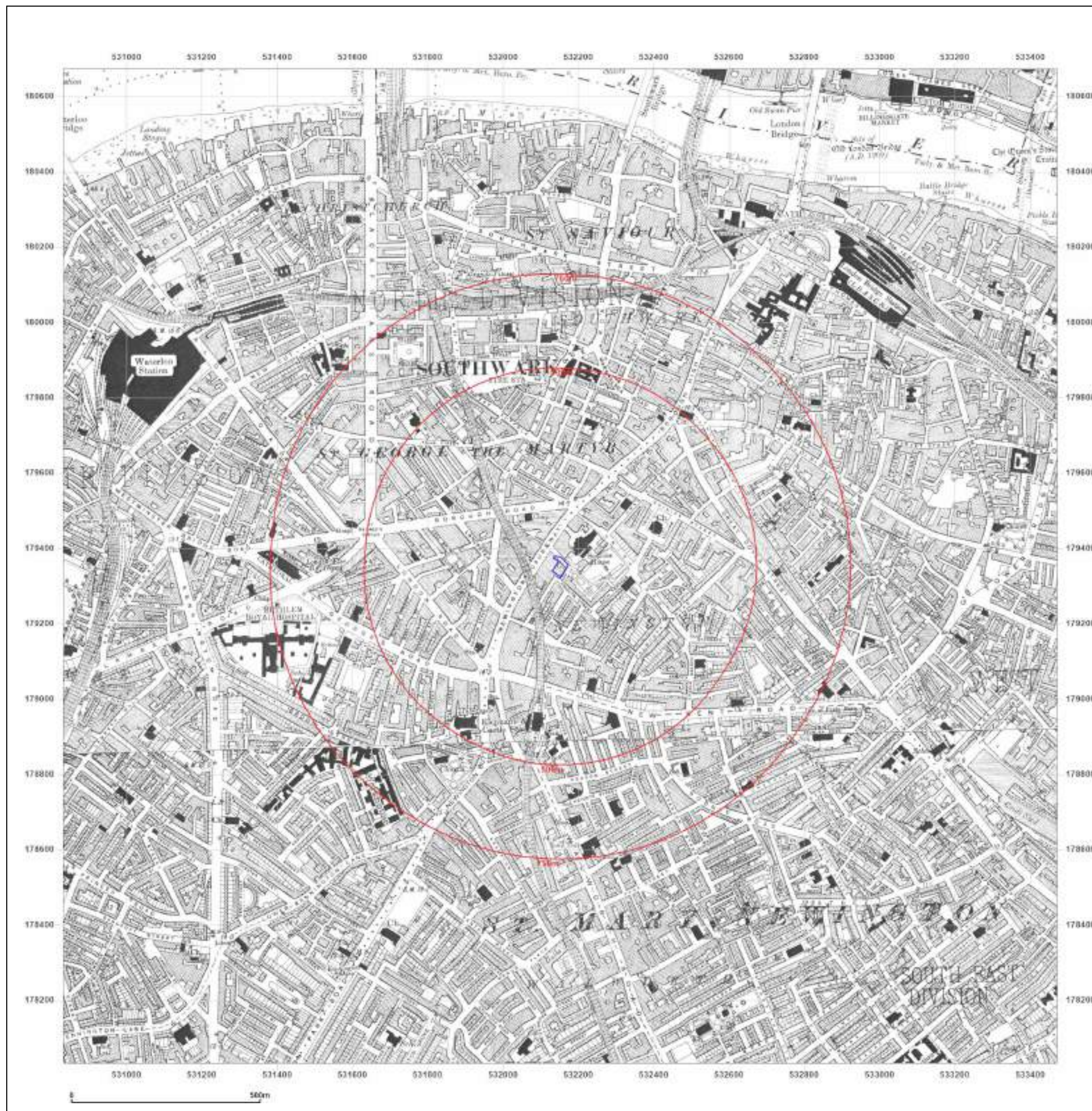


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1872
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1870
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

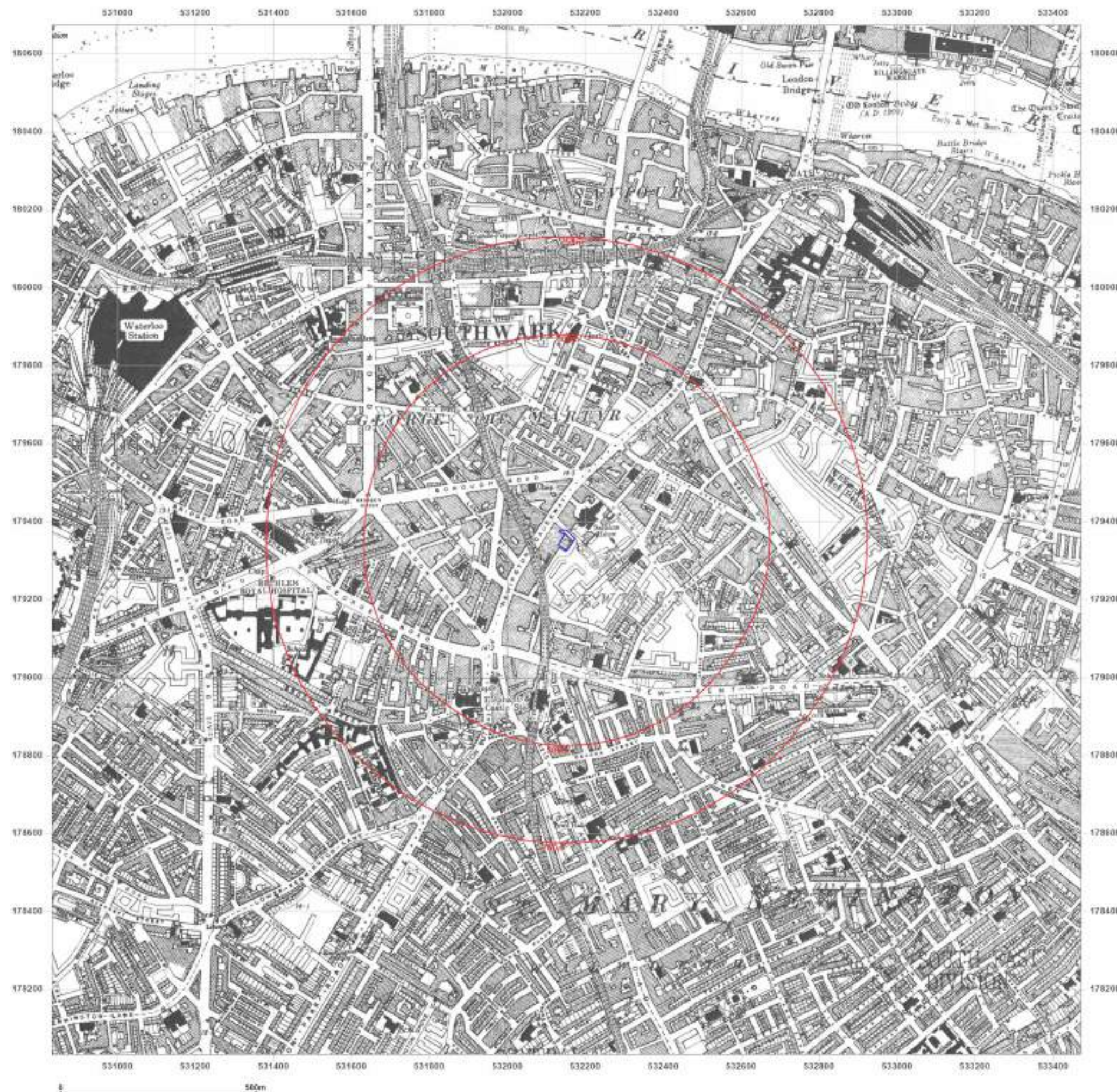


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: Provisional

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1940
Revised 1948
Edition N/A
Copyright N/A
Levelled 1934

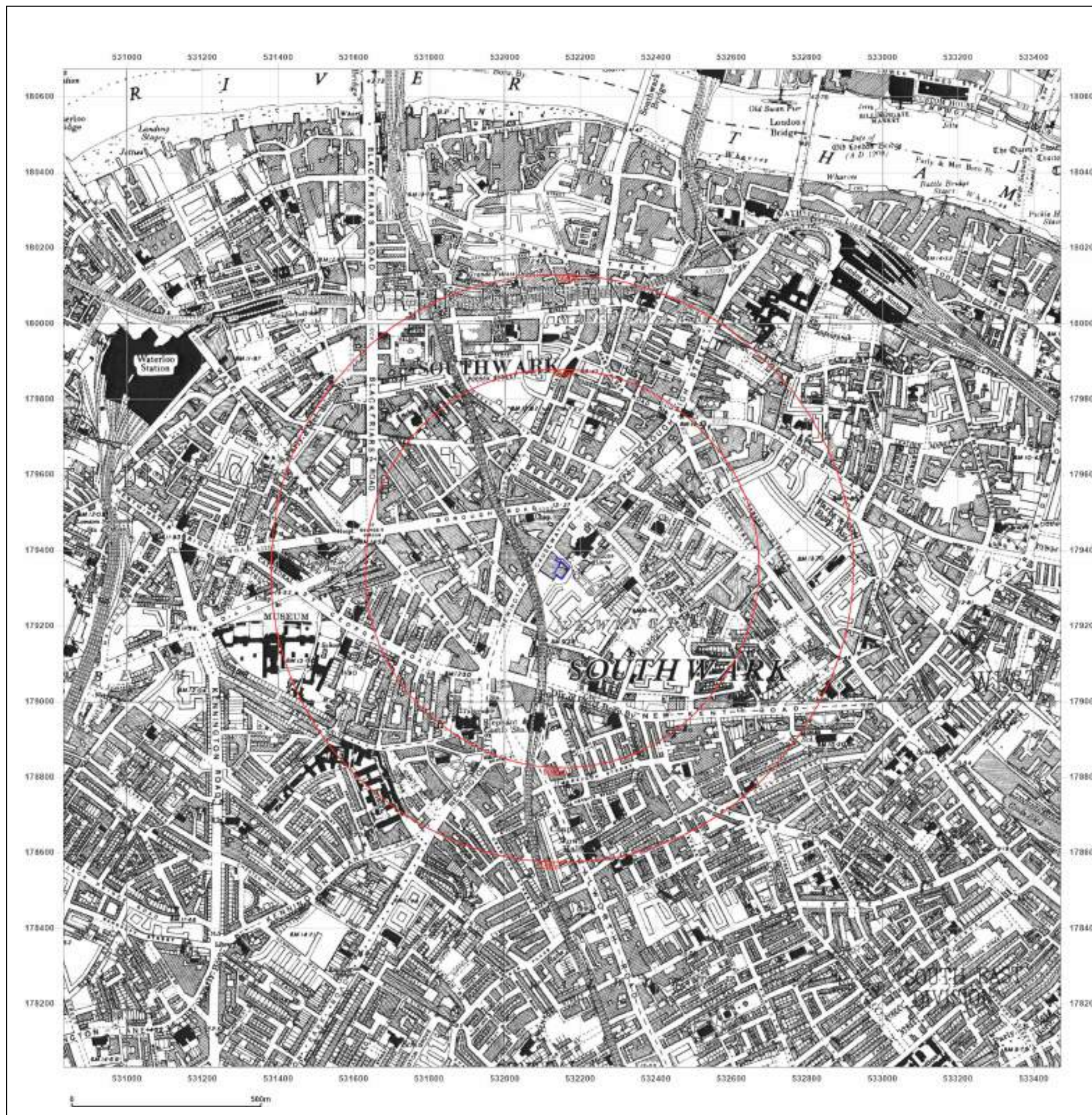


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: Provisional

Map date: 1954-1957

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1955
Revised 1956
Edition N/A
Copyright 1957
Levelled N/A

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled N/A

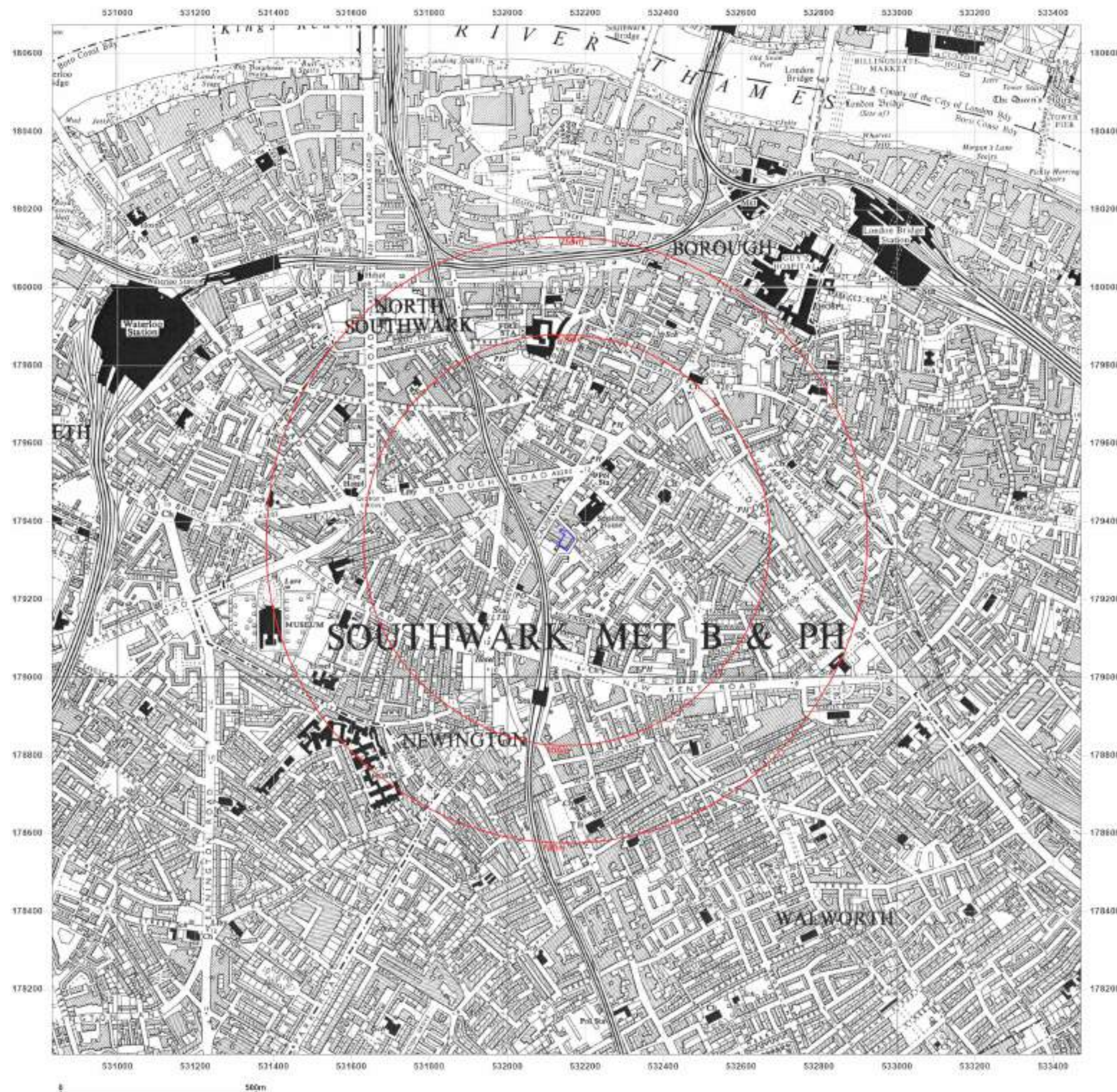


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: Provisional

Map date: 1962-1966

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1963
Revised 1965
Edition N/A
Copyright 1966
Levelled N/A

Surveyed 1962
Revised 1962
Edition N/A
Copyright N/A
Levelled N/A

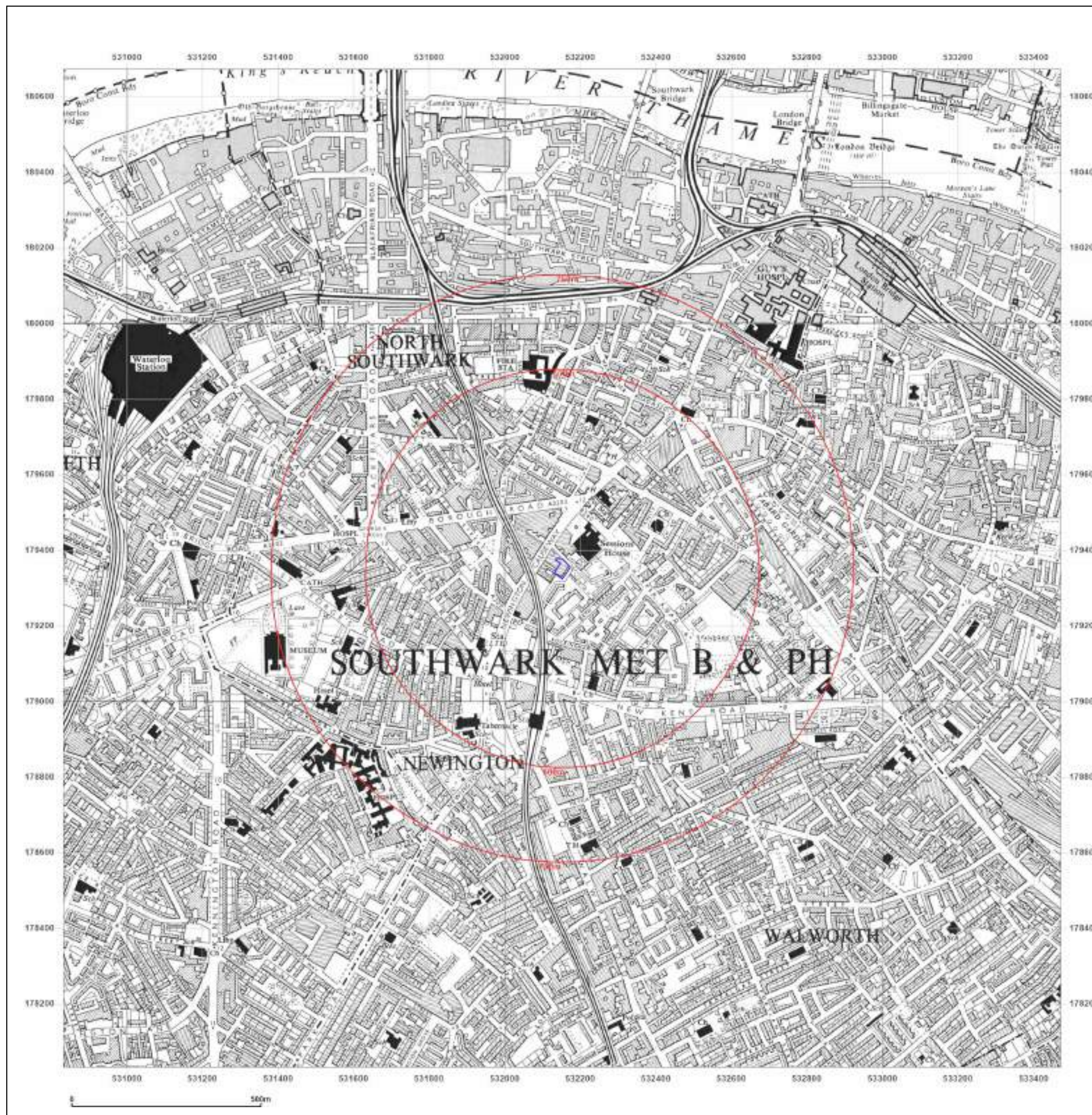


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1965
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

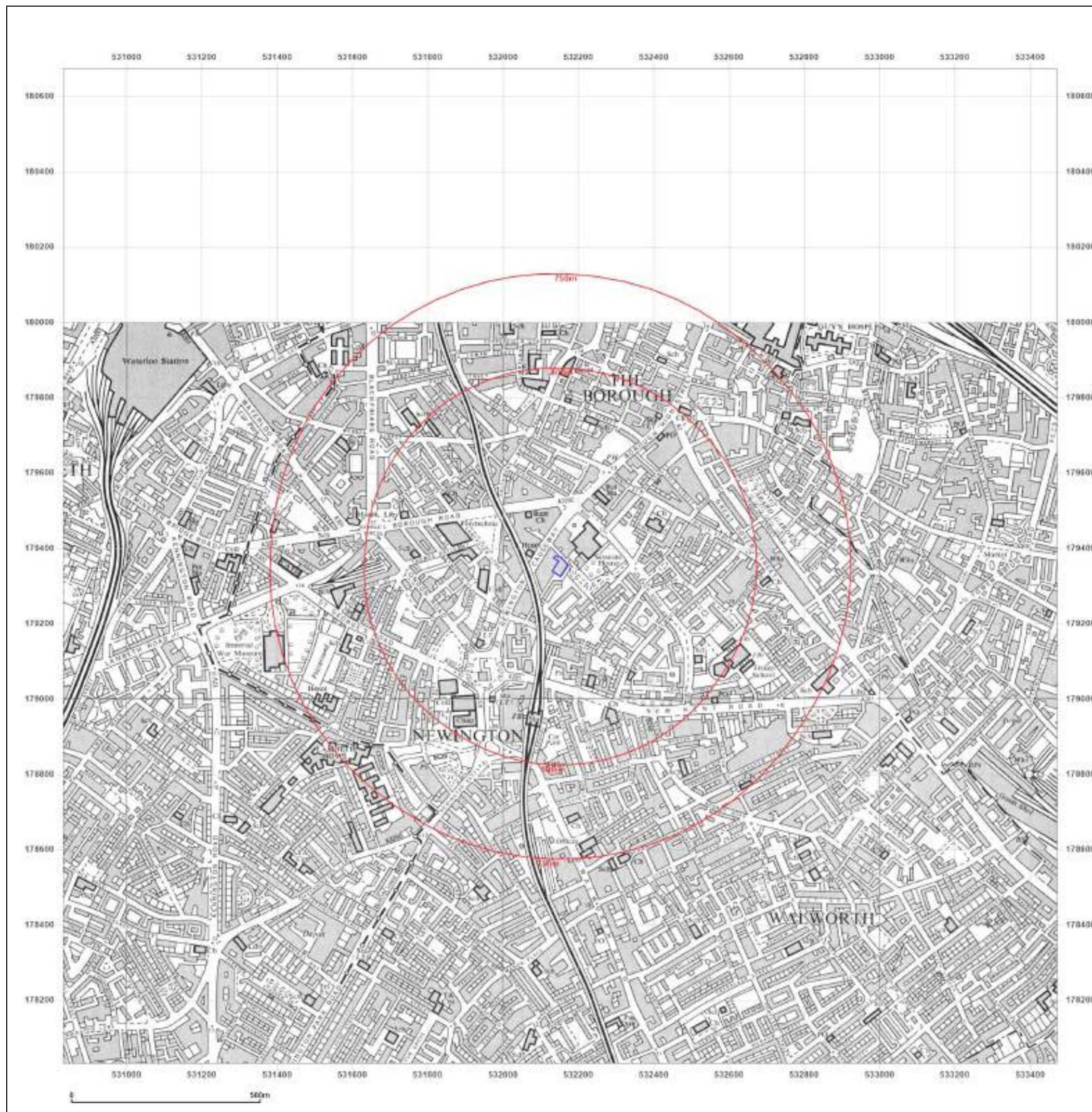


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1971-1973

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1971
Revised 1971
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

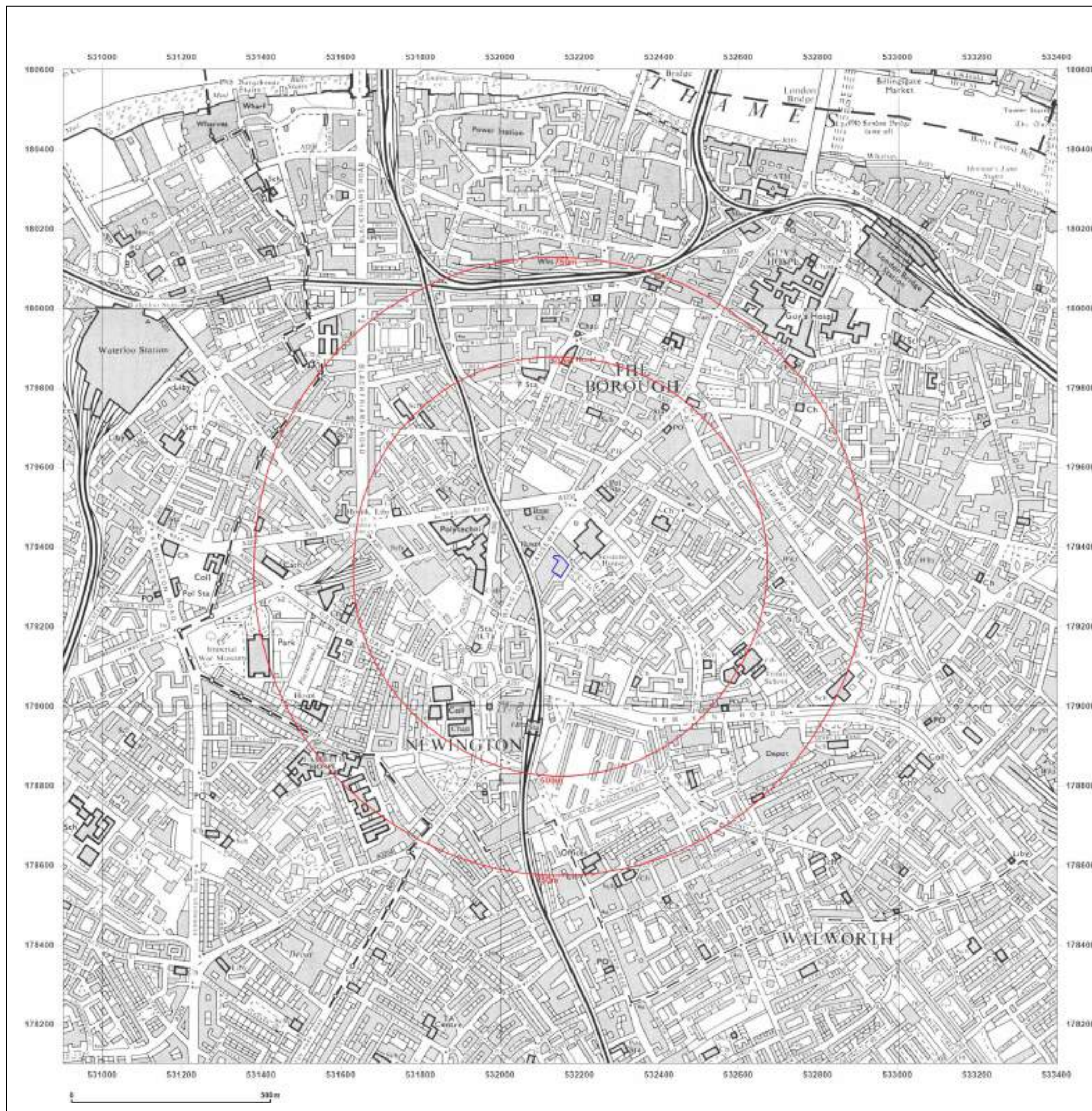


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1976-1979

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1974
Revised 1976
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1978
Revised 1979
Edition N/A
Copyright N/A
Levelled N/A

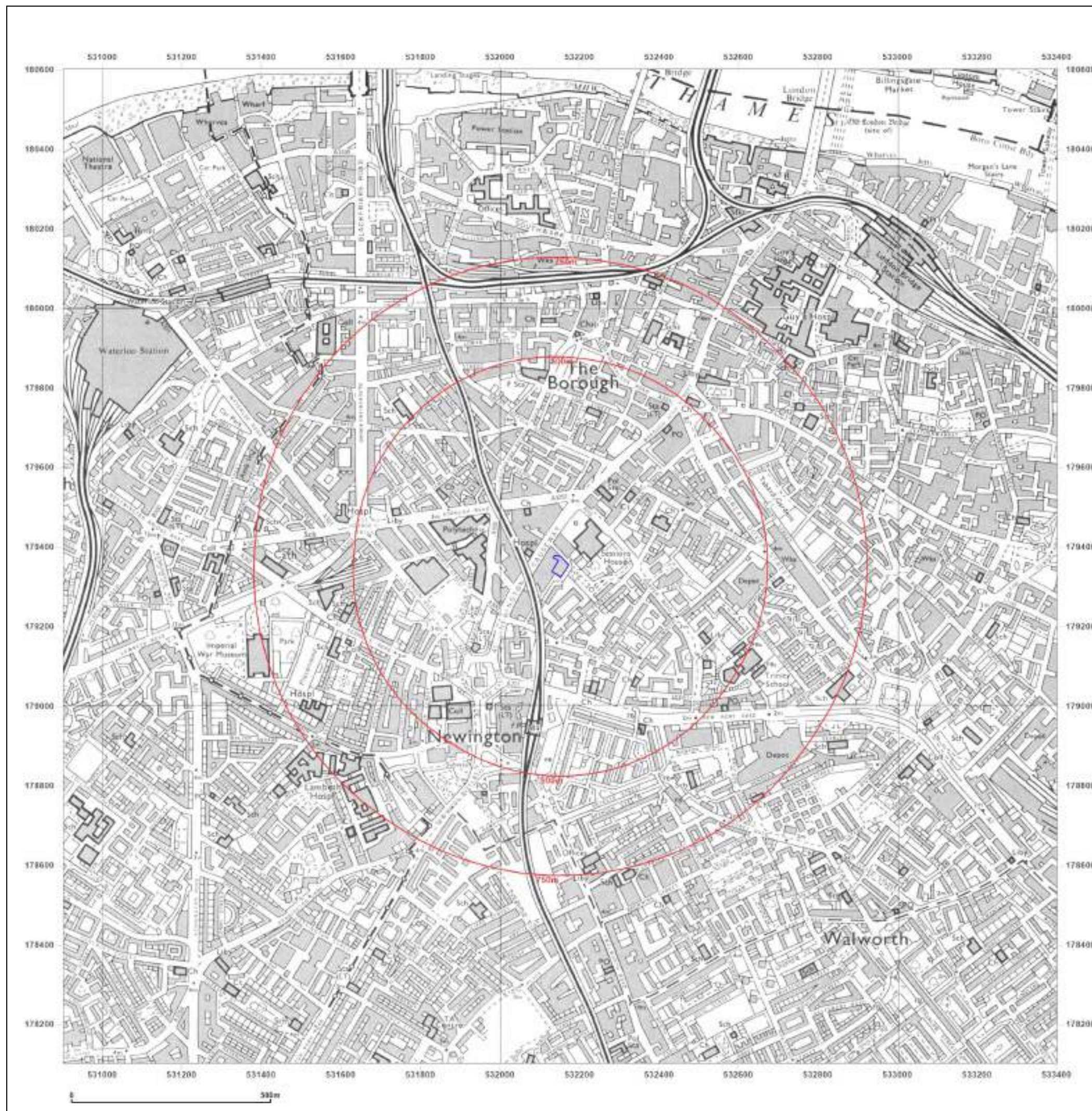


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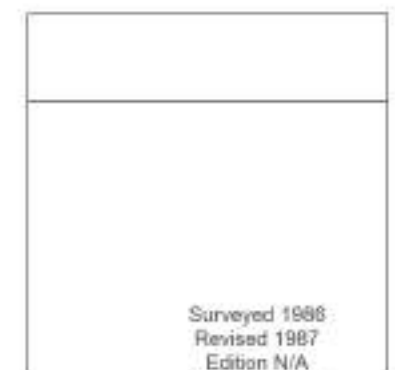
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Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1987

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1988
Revised 1987
Edition N/A
Copyright N/A
Levelled N/A

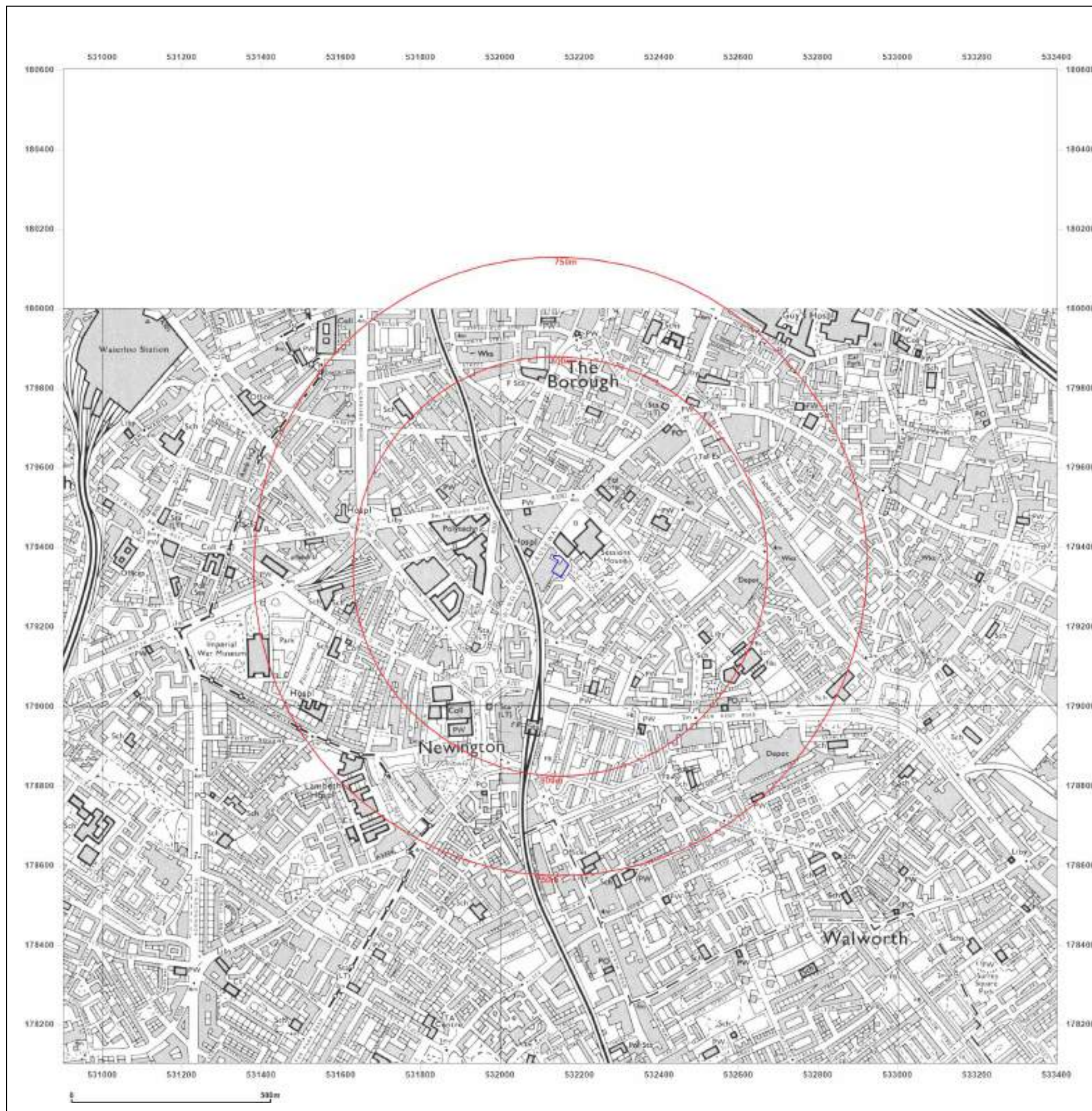


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1993-1994

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1984
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1988
Revised 1993
Edition N/A
Copyright N/A
Levelled N/A

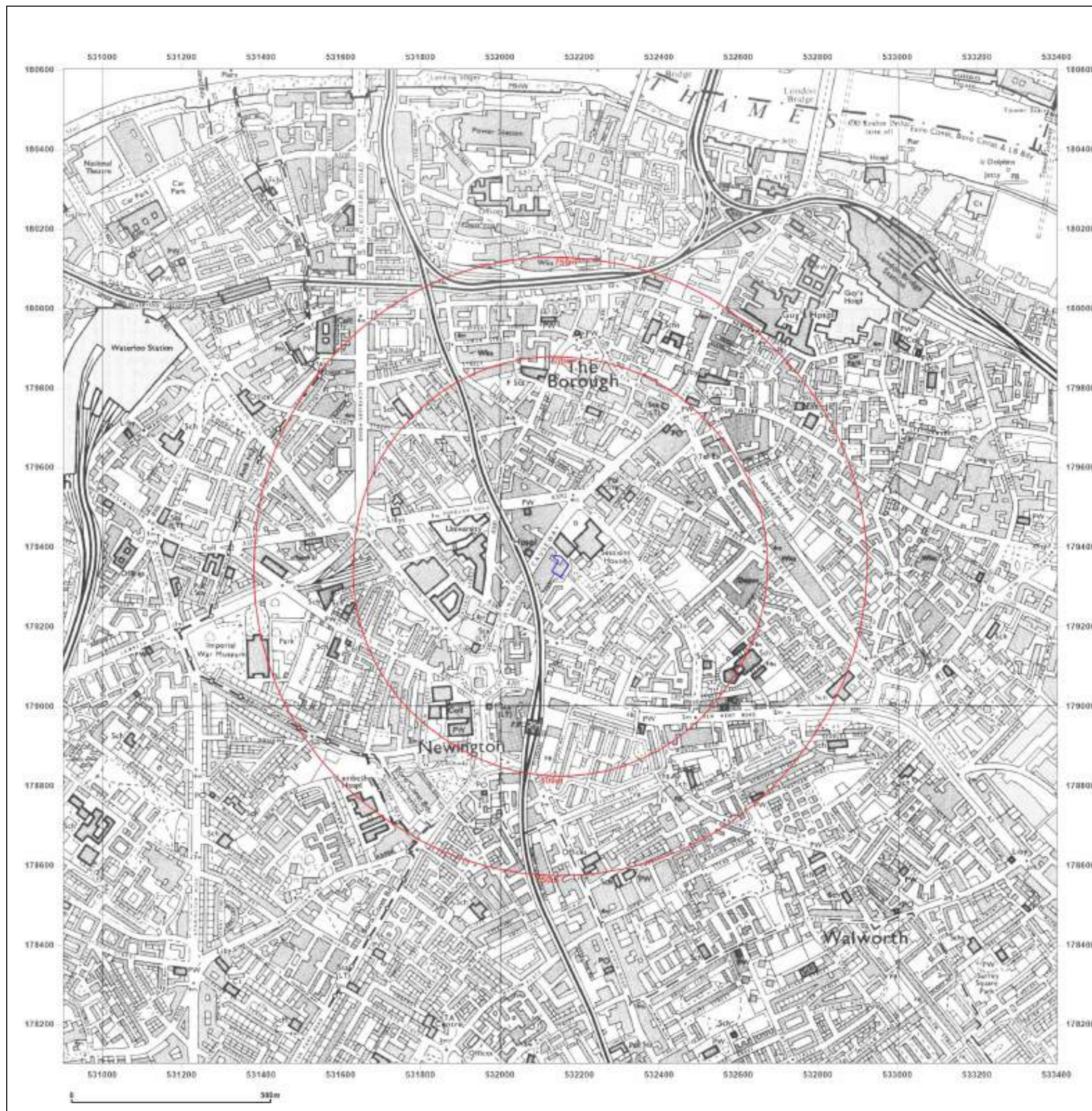


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

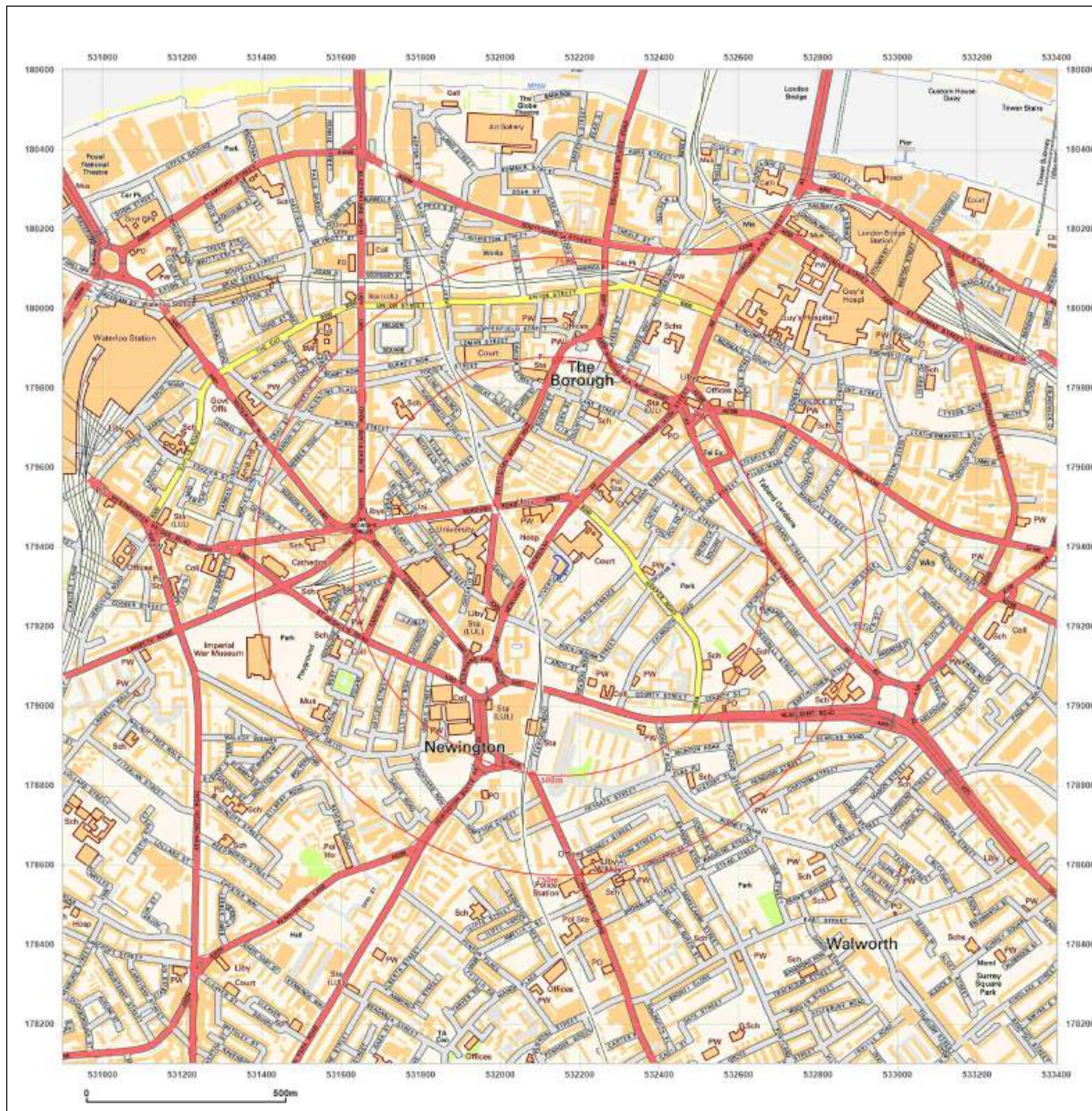


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 2021

Scale: 1:10,000

Printed at: 1:10,000

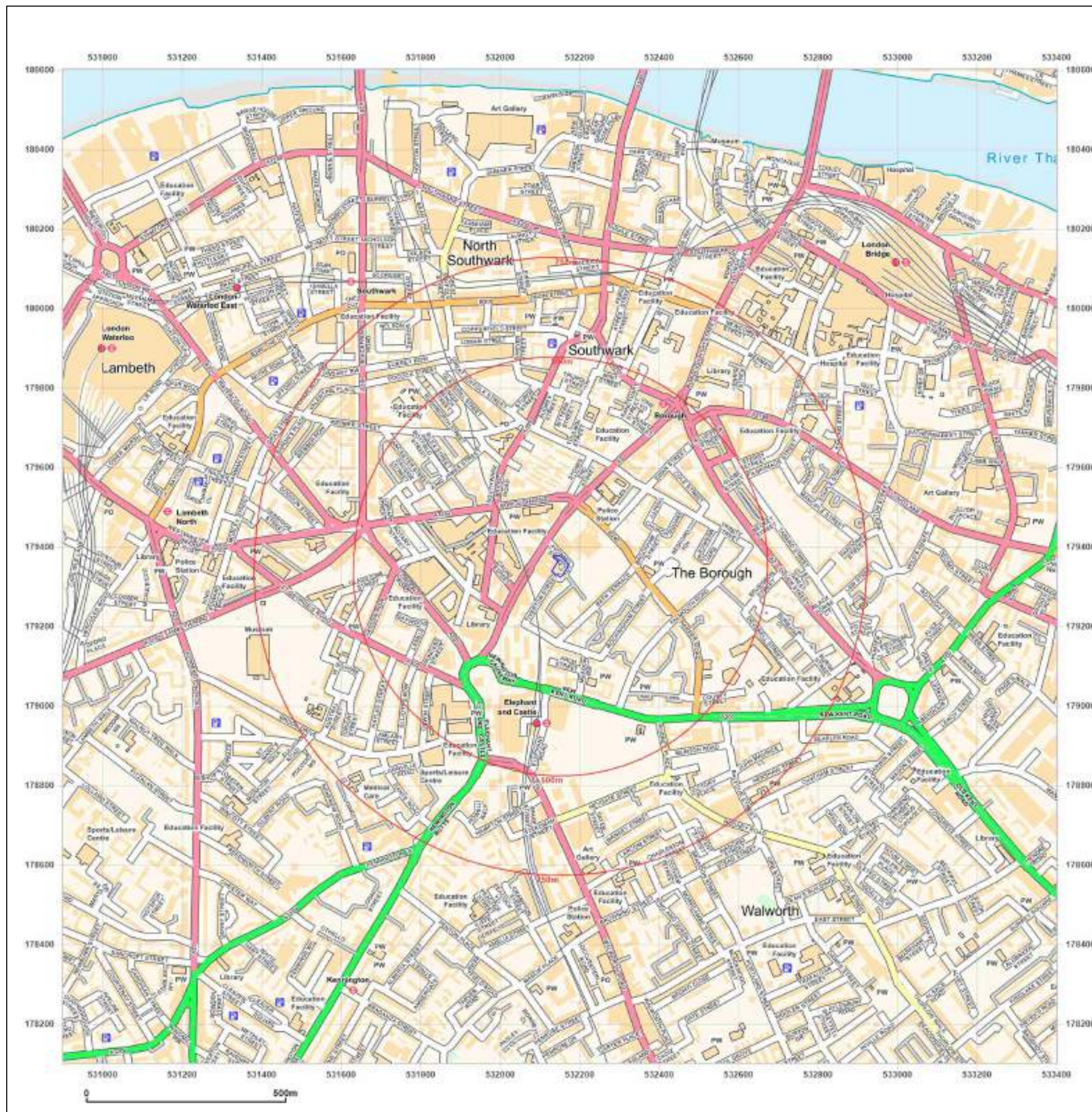


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Site Details:

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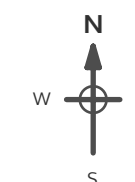
Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: 1056 Scale Town Plan

Map date: 1872

Scale: 1:1,056

Printed at: 1:1,056



Surveyed 1872
Revised N/A
Edition 1876
Copyright N/A
Levelled N/A

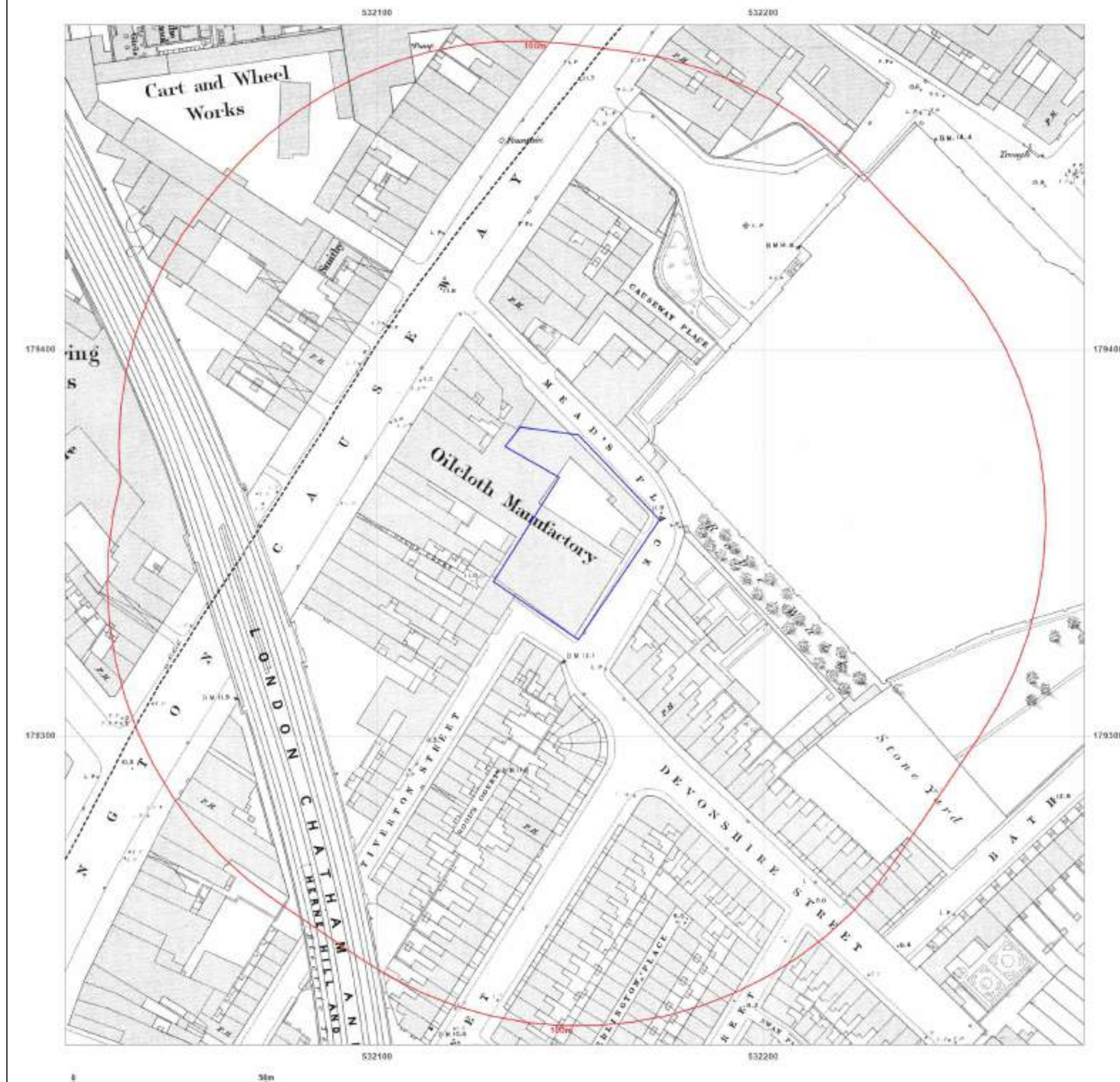


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: 1056 Scale Town Plan

Map date: 1876

Scale: 1:1,056

Printed at: 1:1,056



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

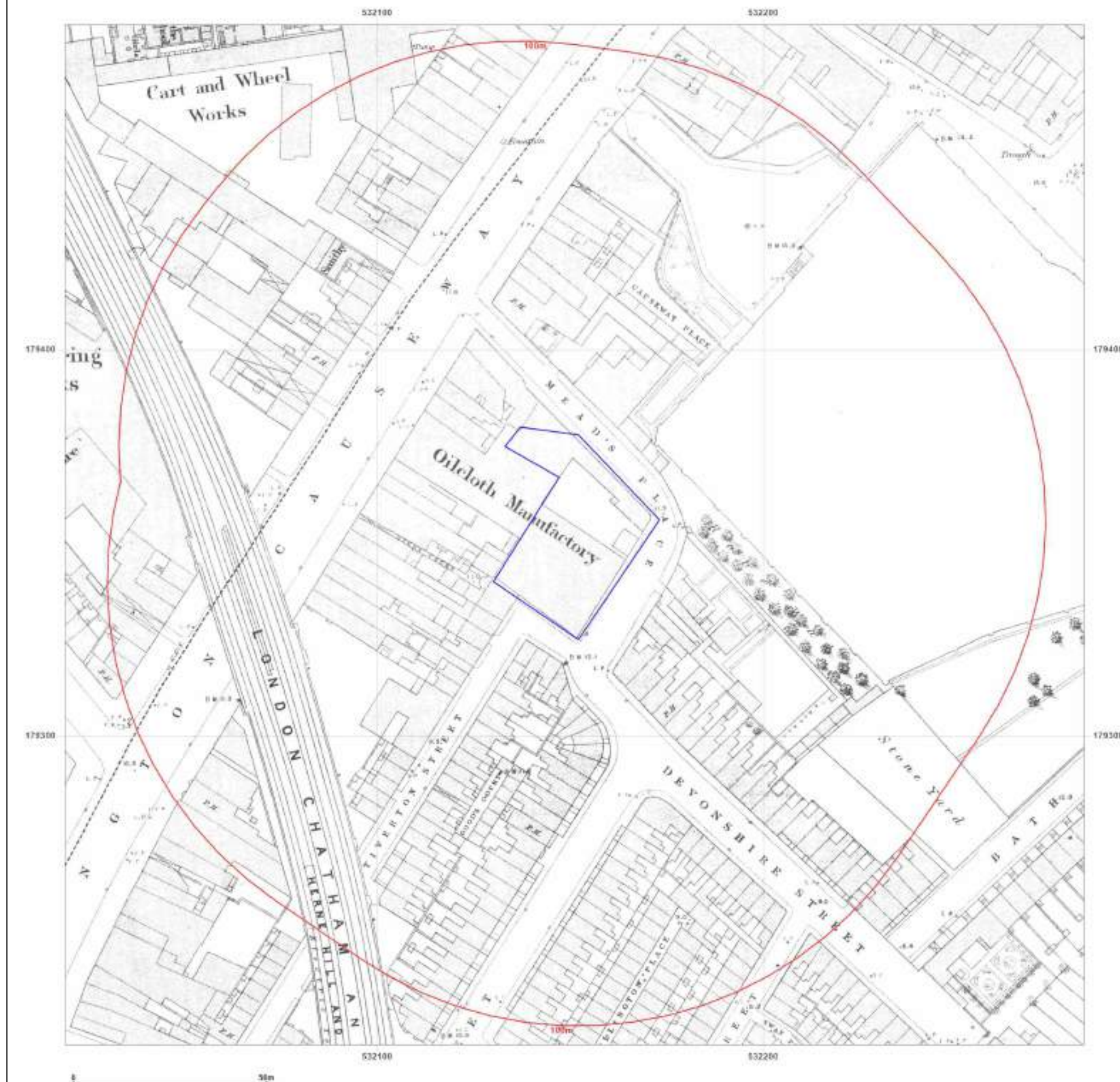


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1879

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1872
Revised N/A
Edition N/A
Copyright 1879
Levelled N/A

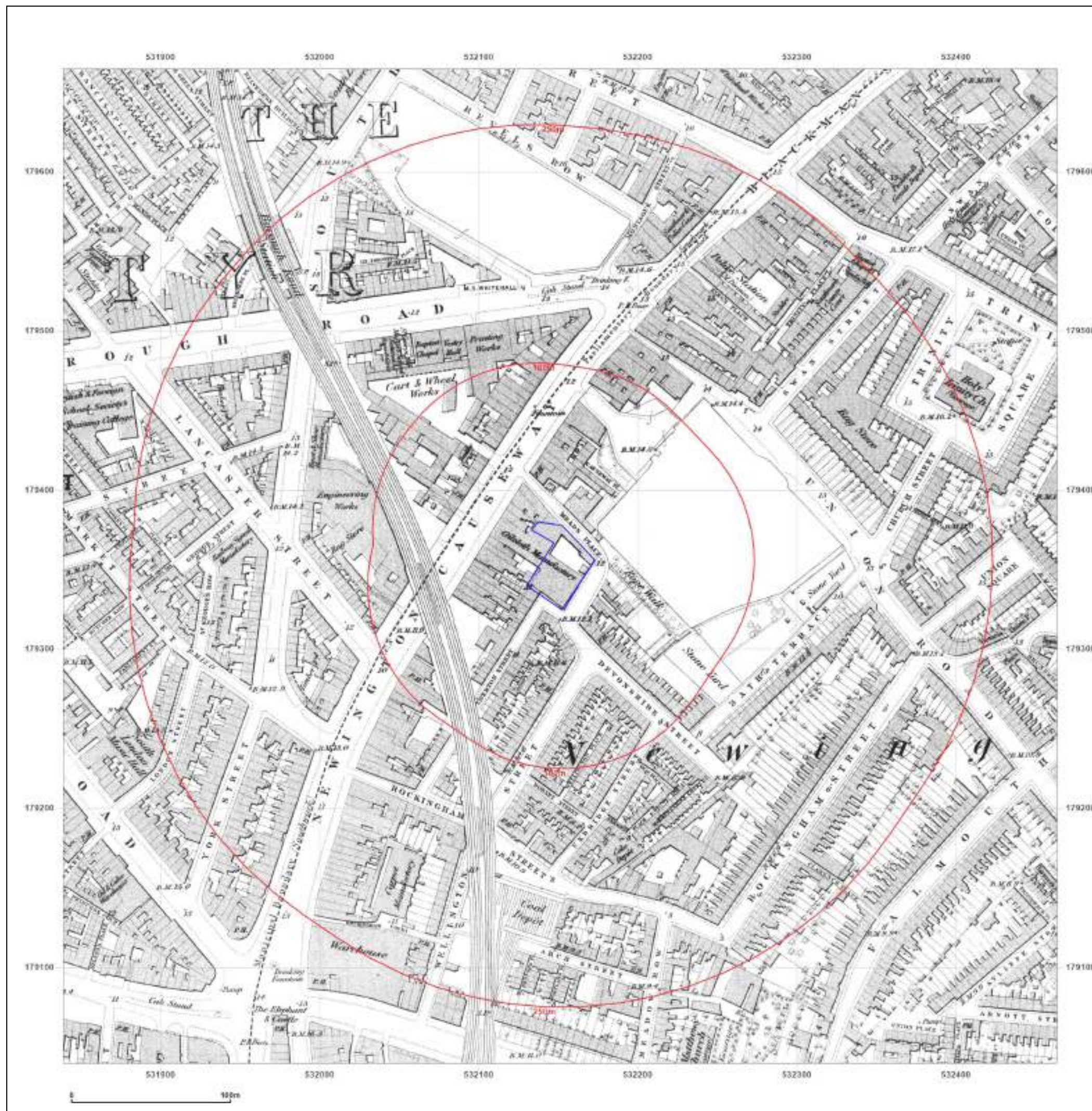


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: 1056 Scale Town Plan

Map date: 1896

Scale: 1:1,056

Printed at: 1:1,056



Surveyed 1893
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Edition 1895
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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

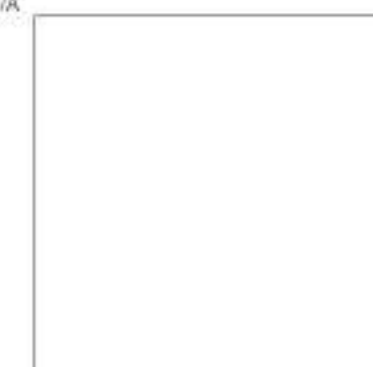
Map date: 1896

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1896
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A



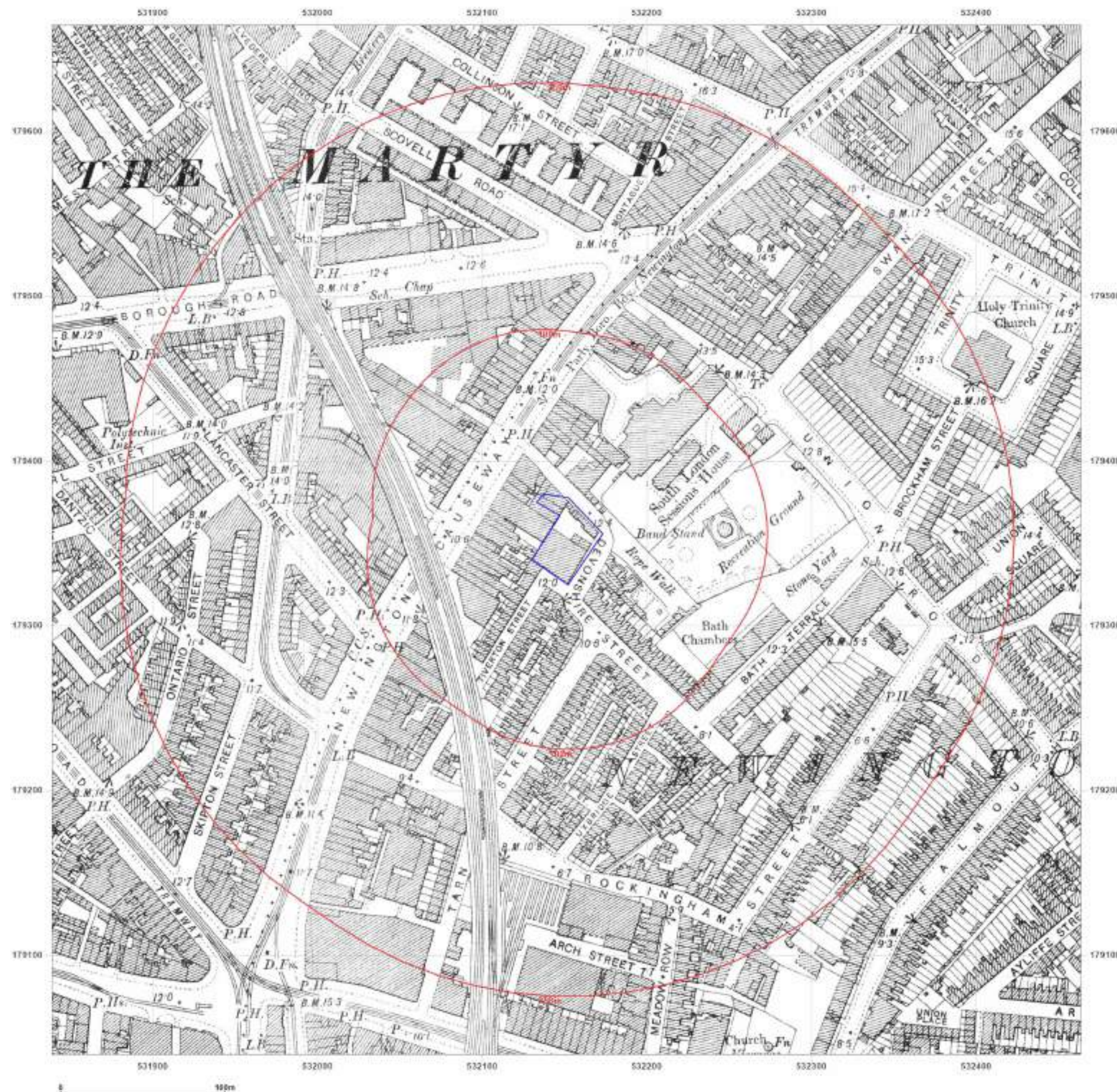
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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: County Series

Map date: 1916

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1916
Revised 1916
Edition N/A
Copyright N/A
Levelled N/A

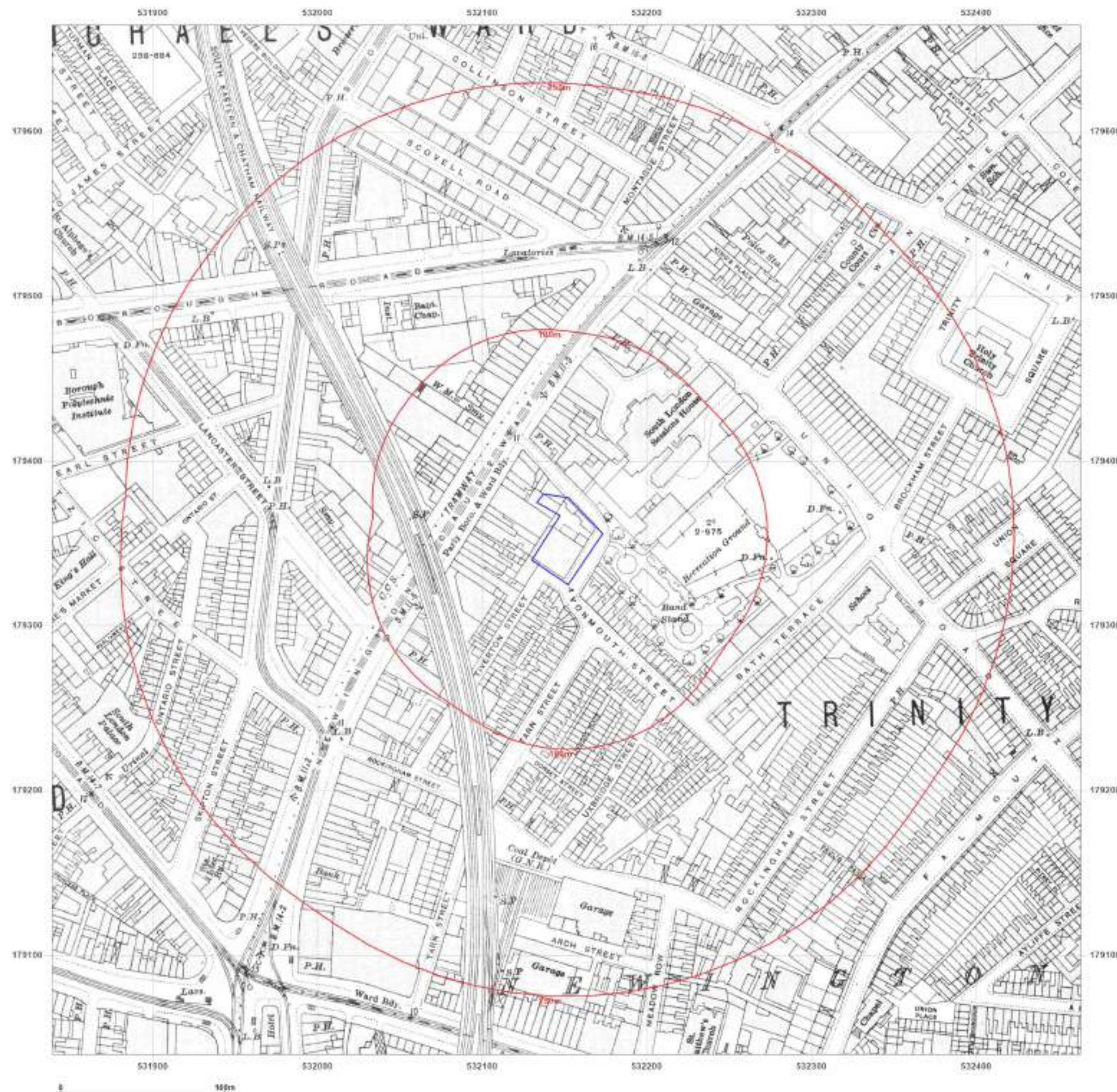


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1950

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled 1932

Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled 1932

Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled 1932

Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled 1932

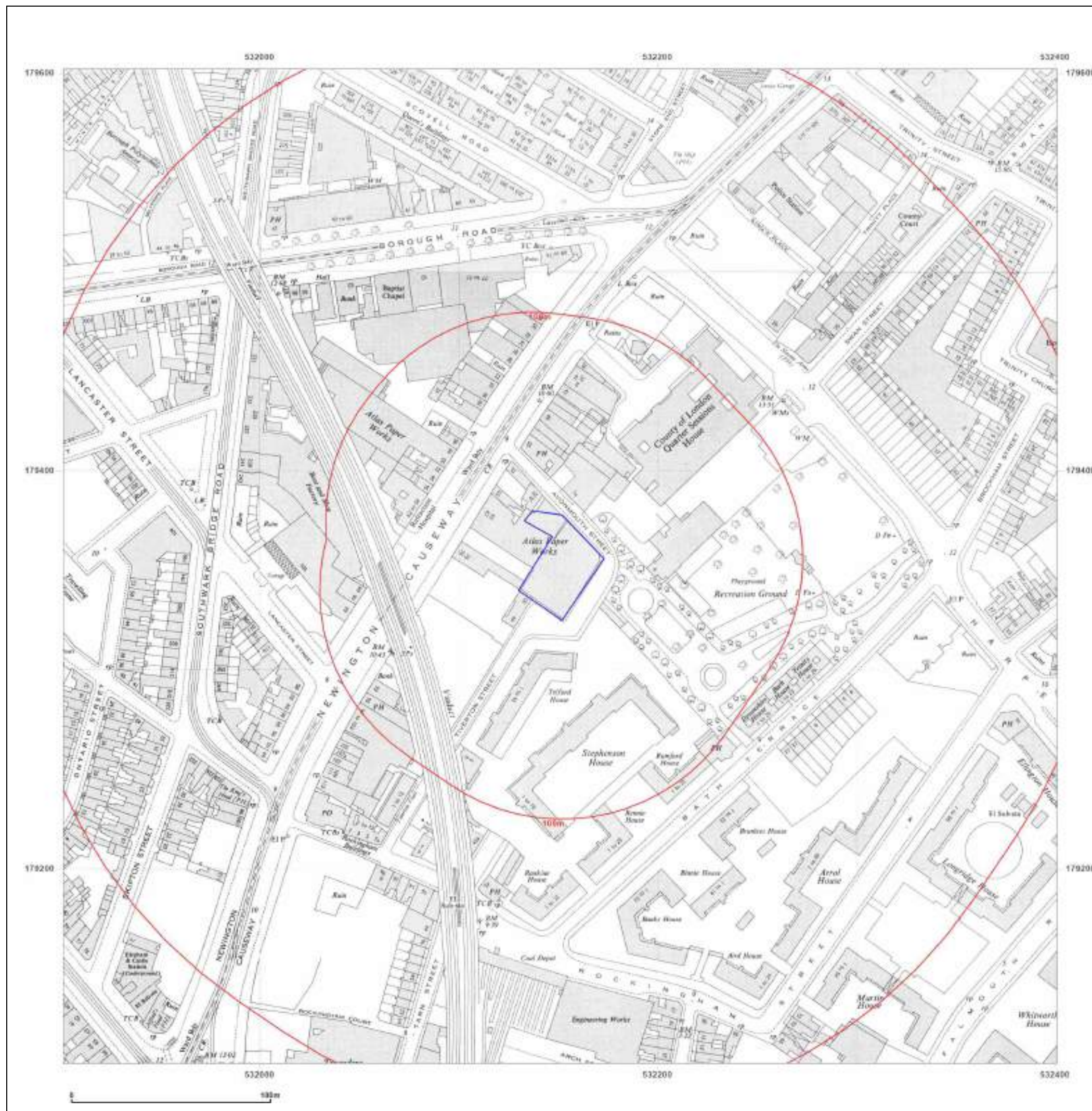


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1951-1952

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
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Revised N/A
Edition N/A
Copyright N/A
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Revised N/A
Edition N/A
Copyright N/A
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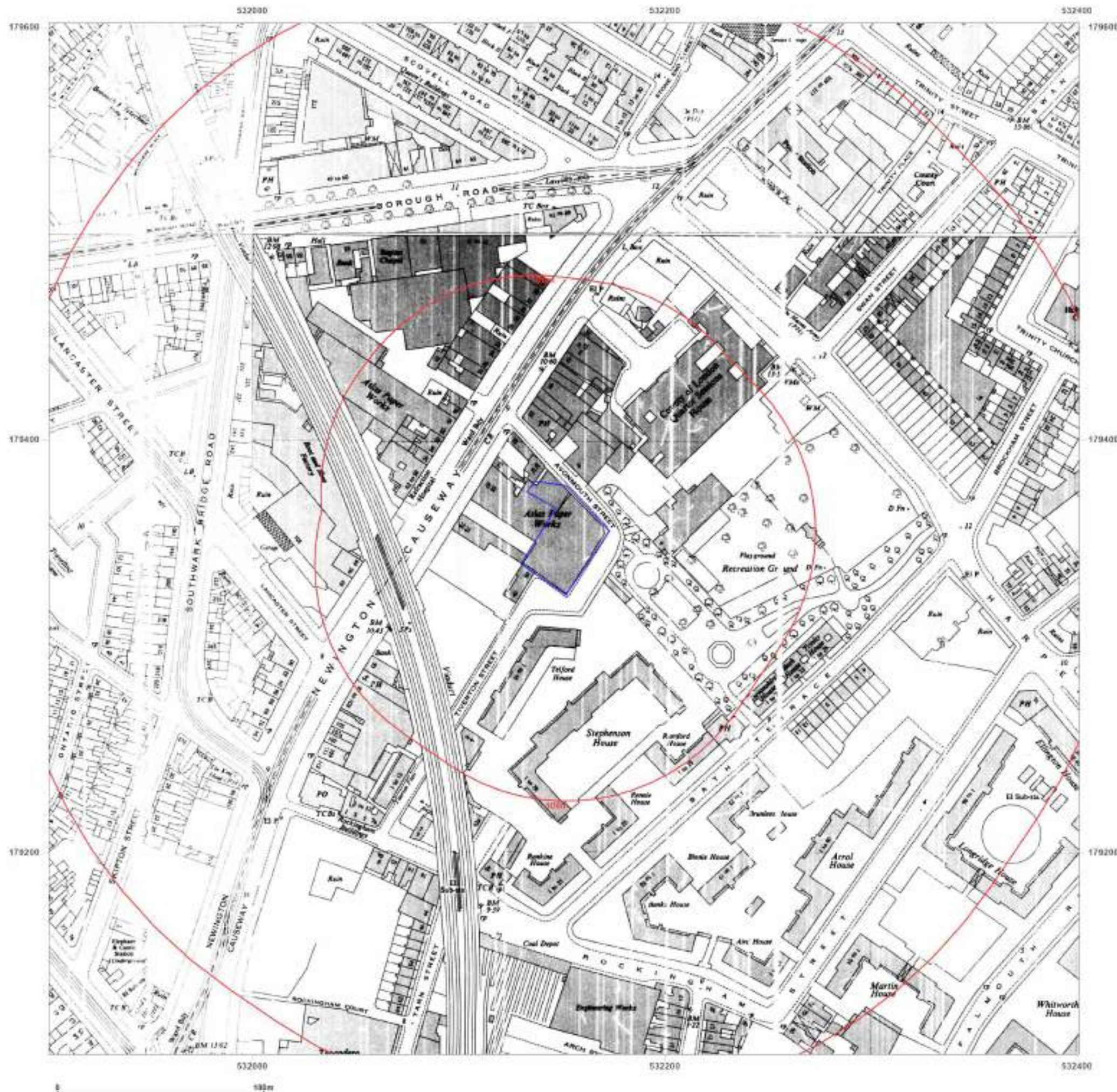


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1957-1960

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1950
Revised 1957
Edition N/A
Copyright N/A
Levelled 1954

Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled 1953

Surveyed 1950
Revised 1960
Edition N/A
Copyright 1960
Levelled 1953

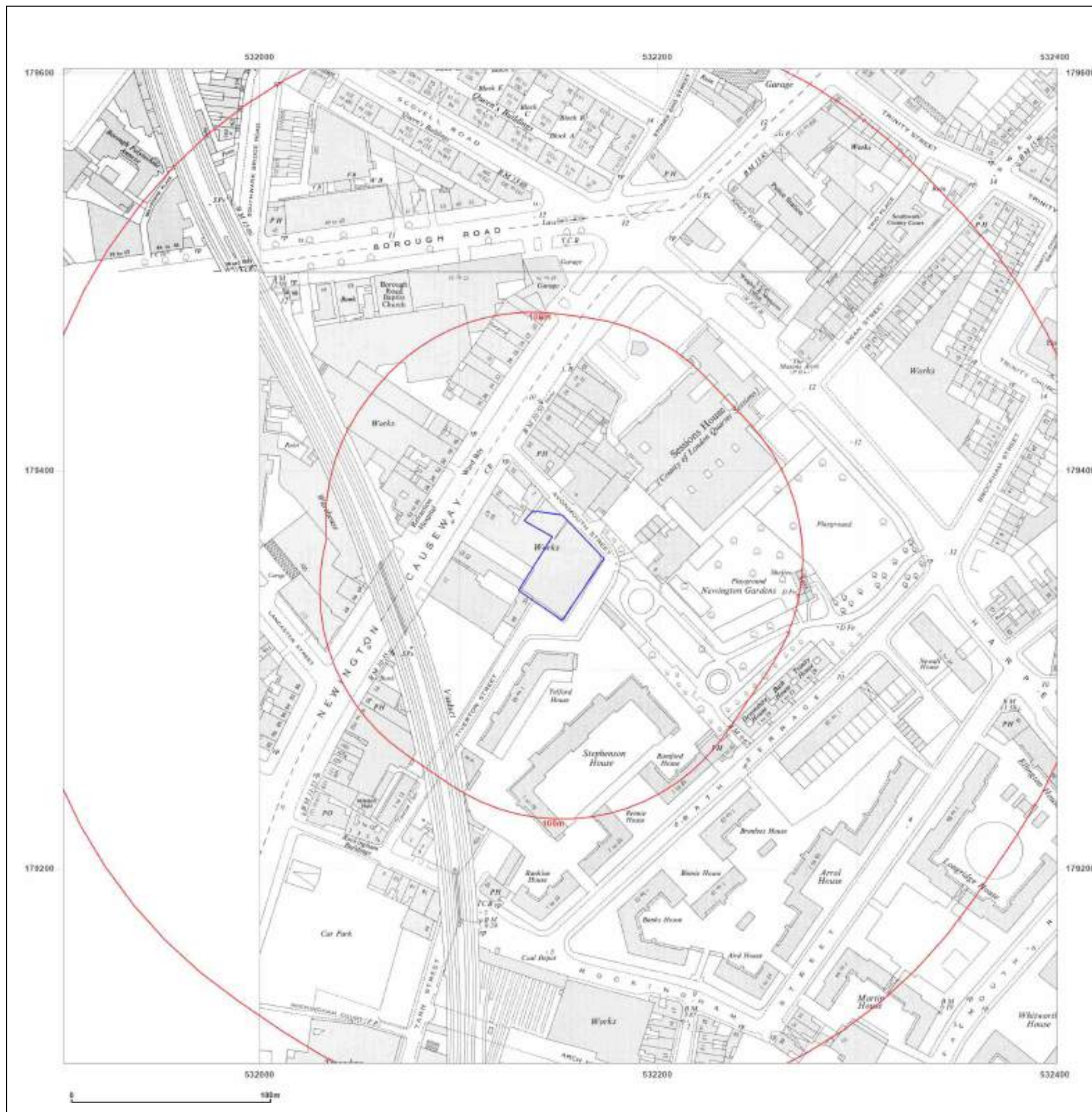


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

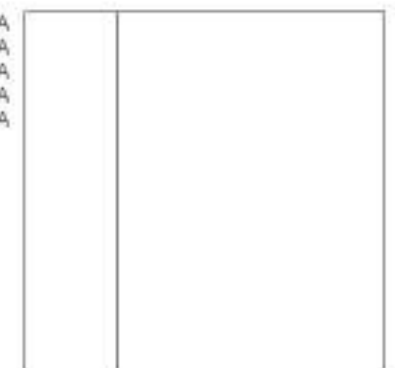
Map date: 1964

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

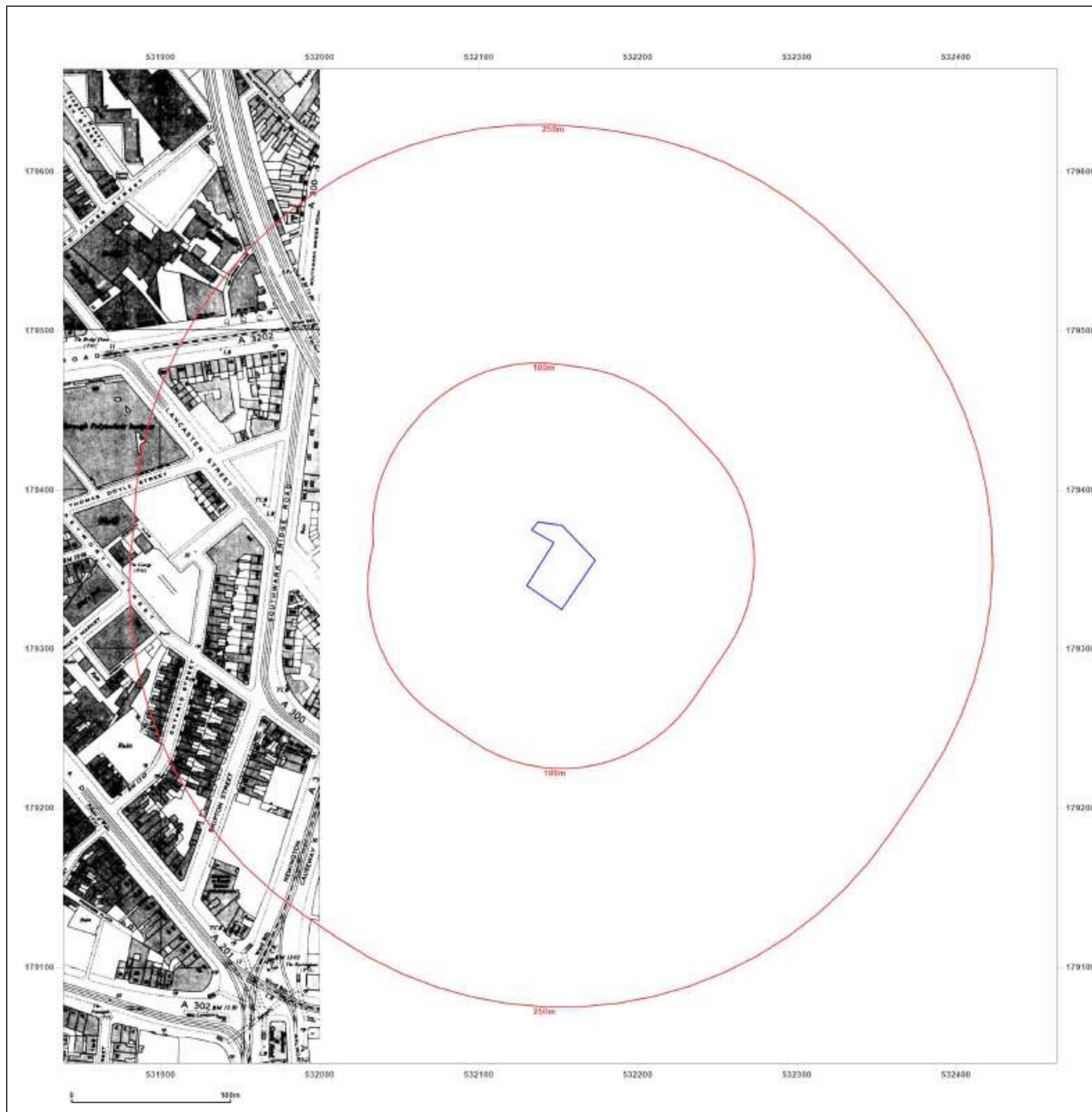


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

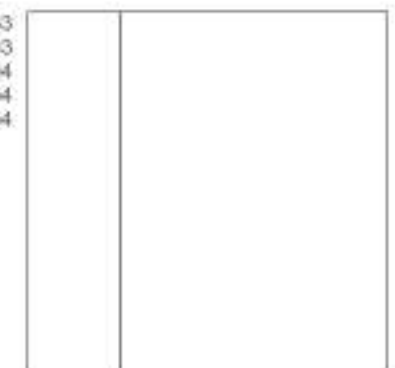
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Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1963
Revised 1963
Edition 1964
Copyright 1964
Levelled 1954

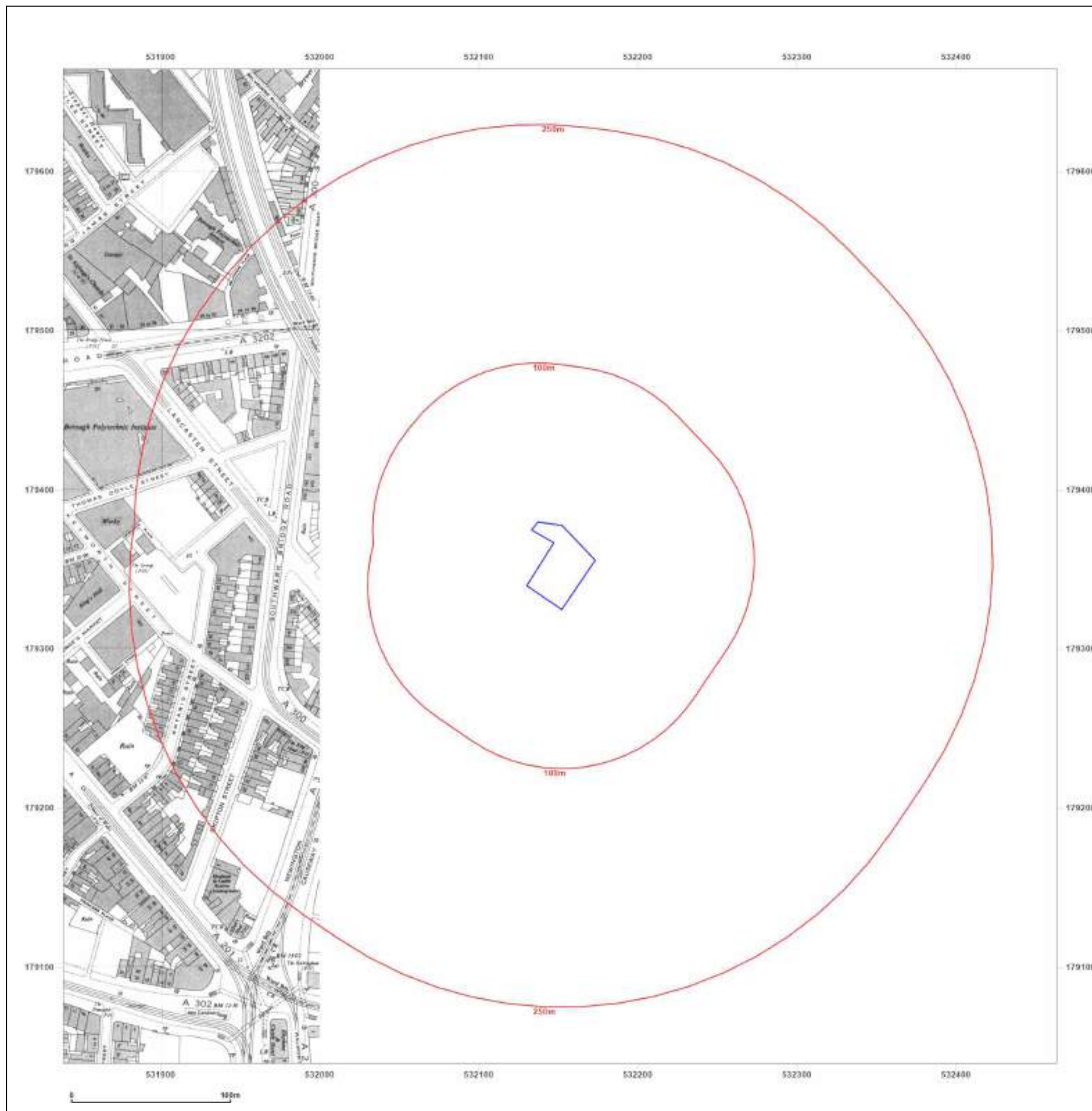


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1963-1968

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1958
Revised 1958
Edition 1964
Copyright 1964
Levelled 1954

Surveyed 1968
Revised 1968
Edition N/A
Copyright 1970
Levelled 1957

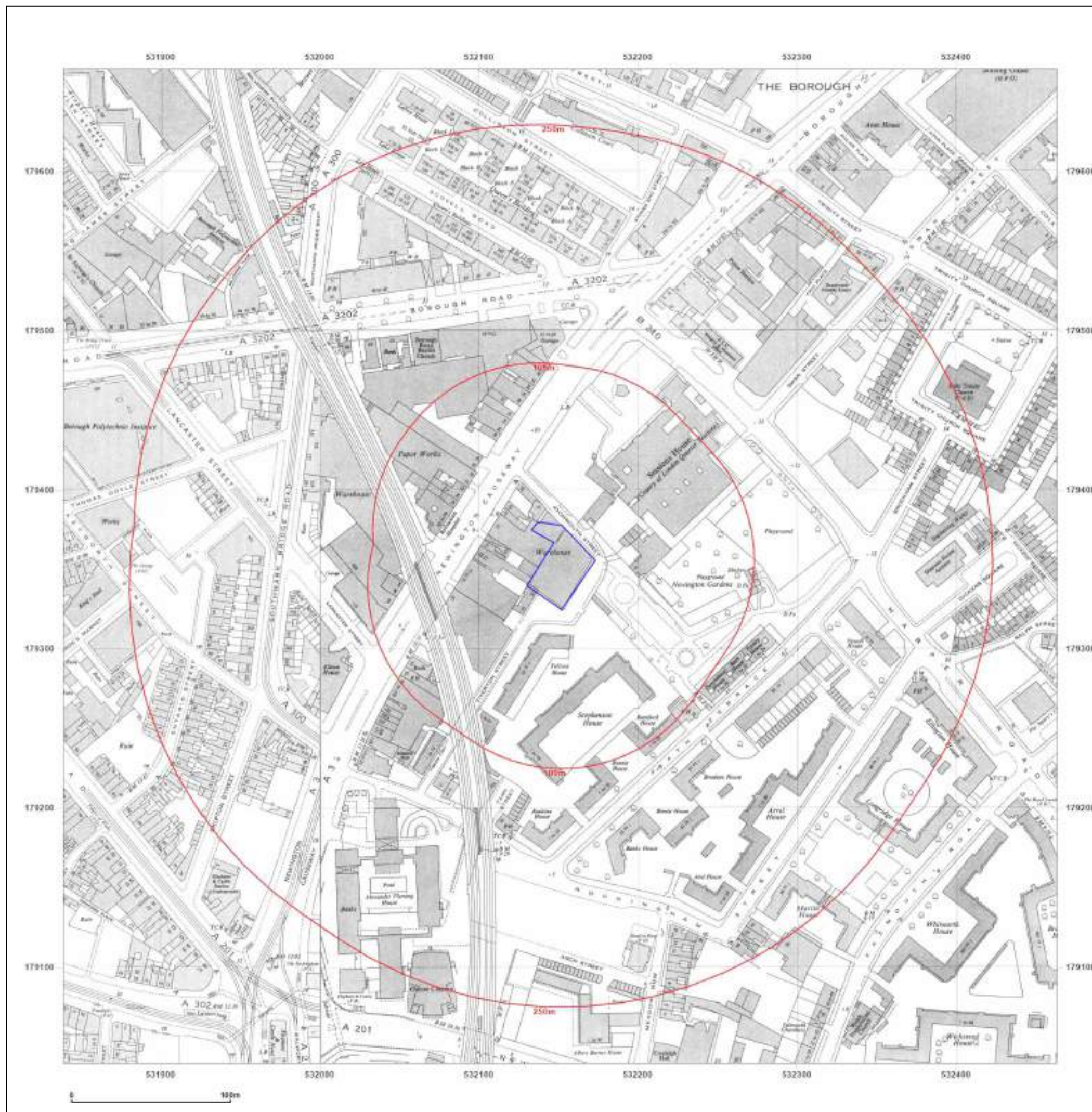


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1967-1969

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1966
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Edition N/A
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Levelled 1957

Surveyed 1950
Revised 1966
Edition N/A
Copyright 1969
Levelled 1957

Surveyed 1950
Revised 1966
Edition N/A
Copyright 1967
Levelled 1957

Surveyed 1950
Revised 1966
Edition N/A
Copyright 1967
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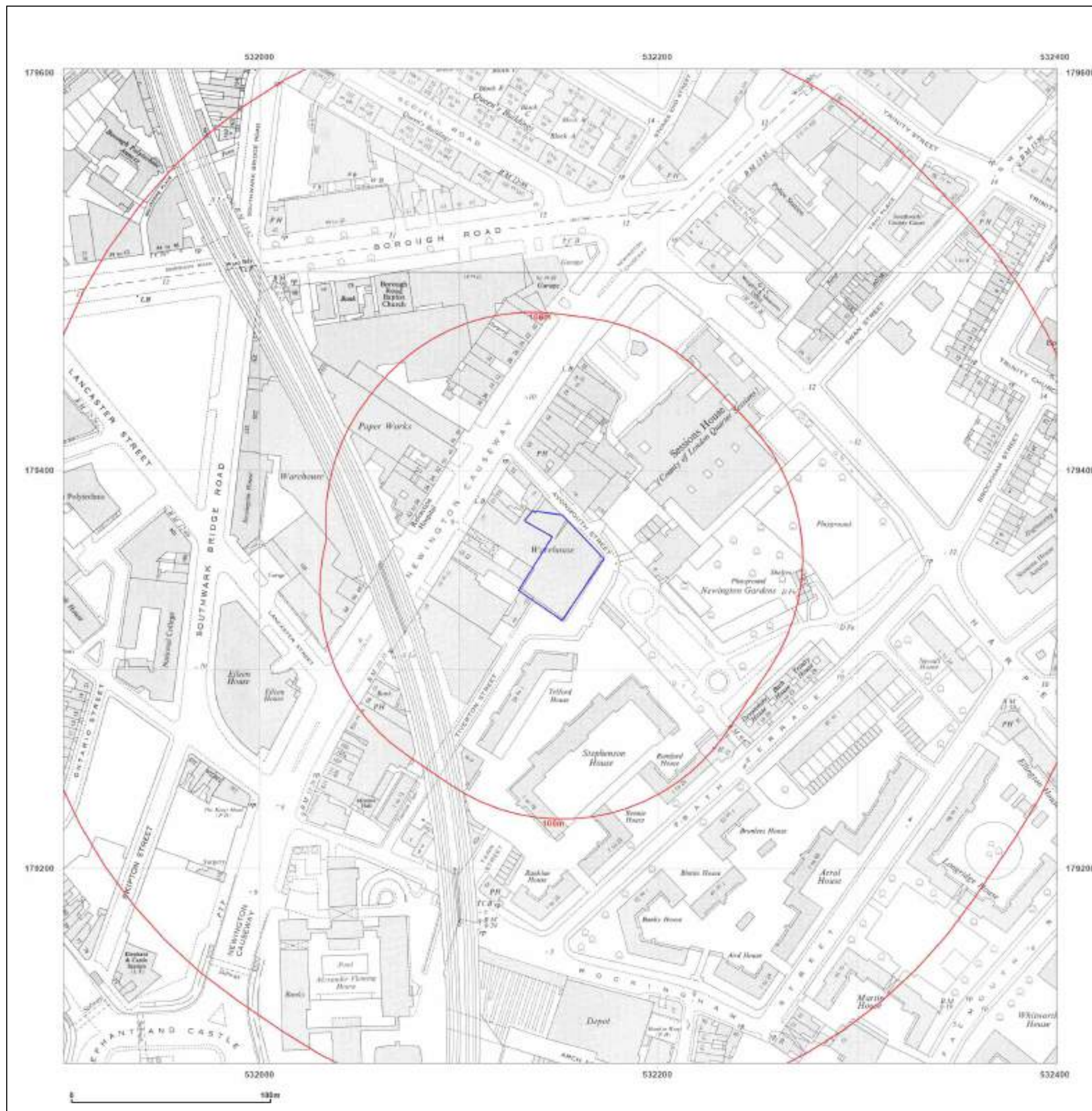


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1965-1970

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised 1965
Edition 1964
Copyright 1964
Levelled 1954

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

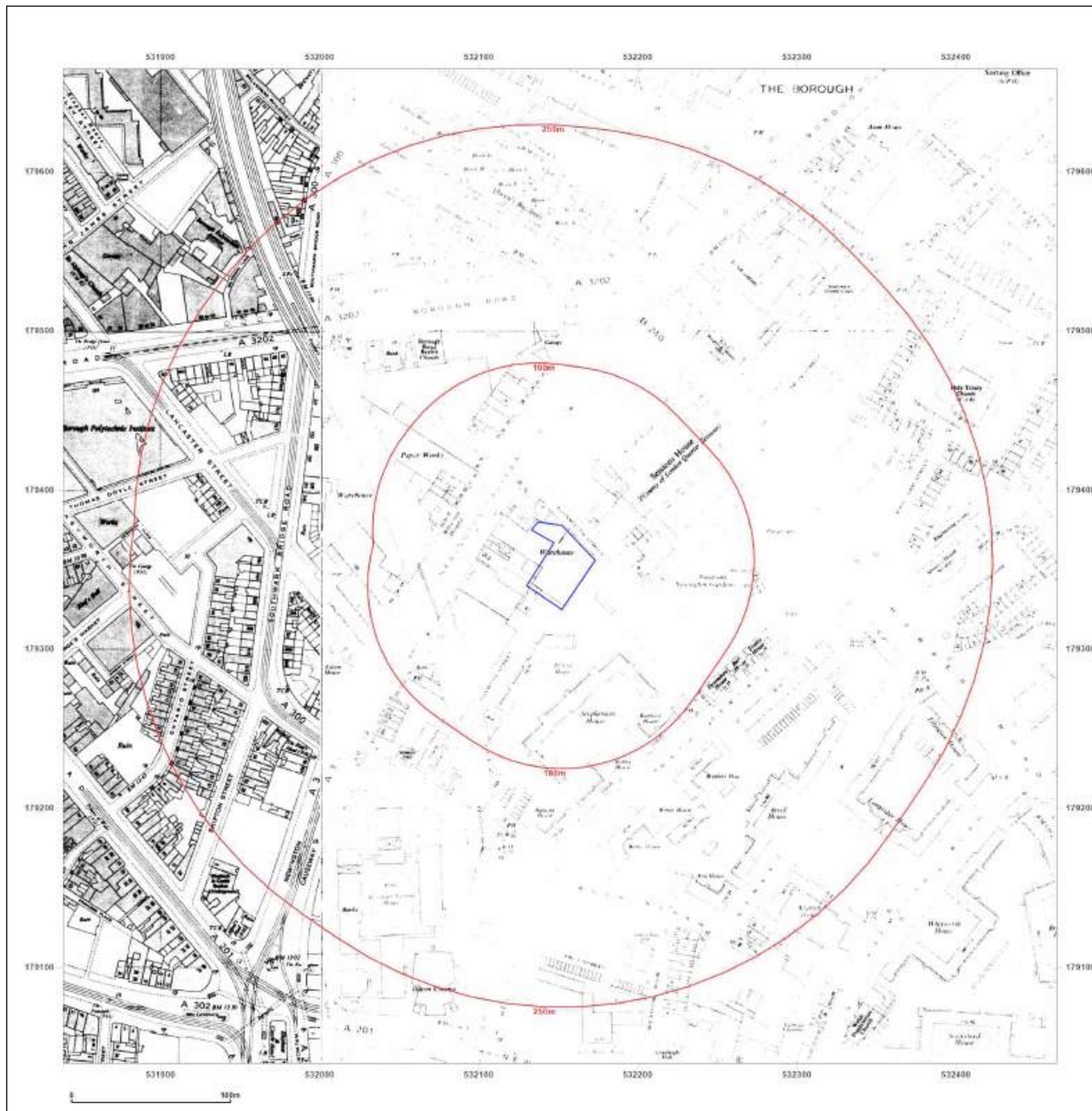


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1973

Scale: 1:1,250

Printed at: 1:2,000



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Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1973 Levelled N/A

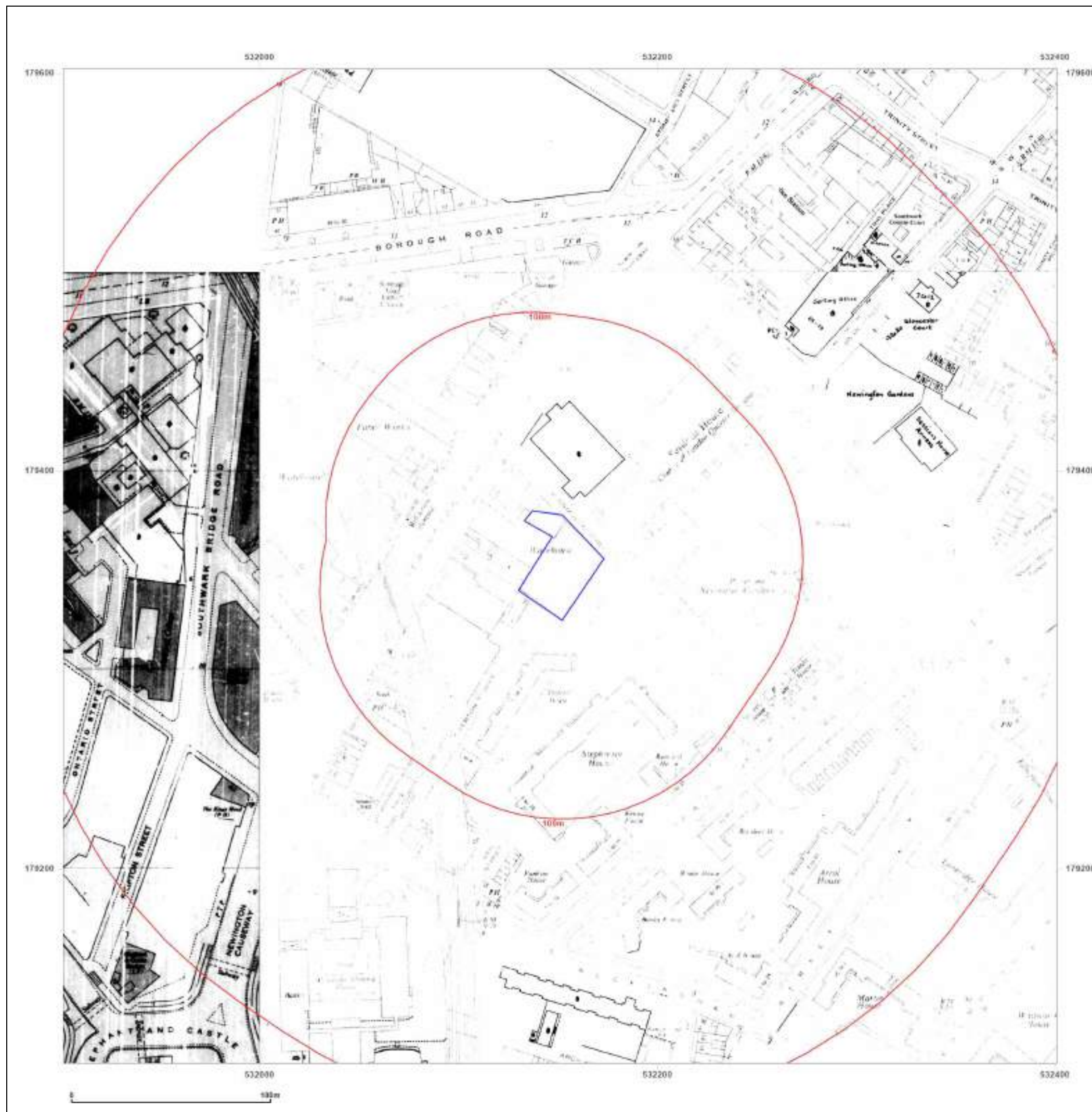


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1983-1987

Scale: 1:1,250

Printed at: 1:2,000



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Revised N/A
Edition N/A
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Surveyed 1973
Revised 1987
Edition N/A
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Edition N/A
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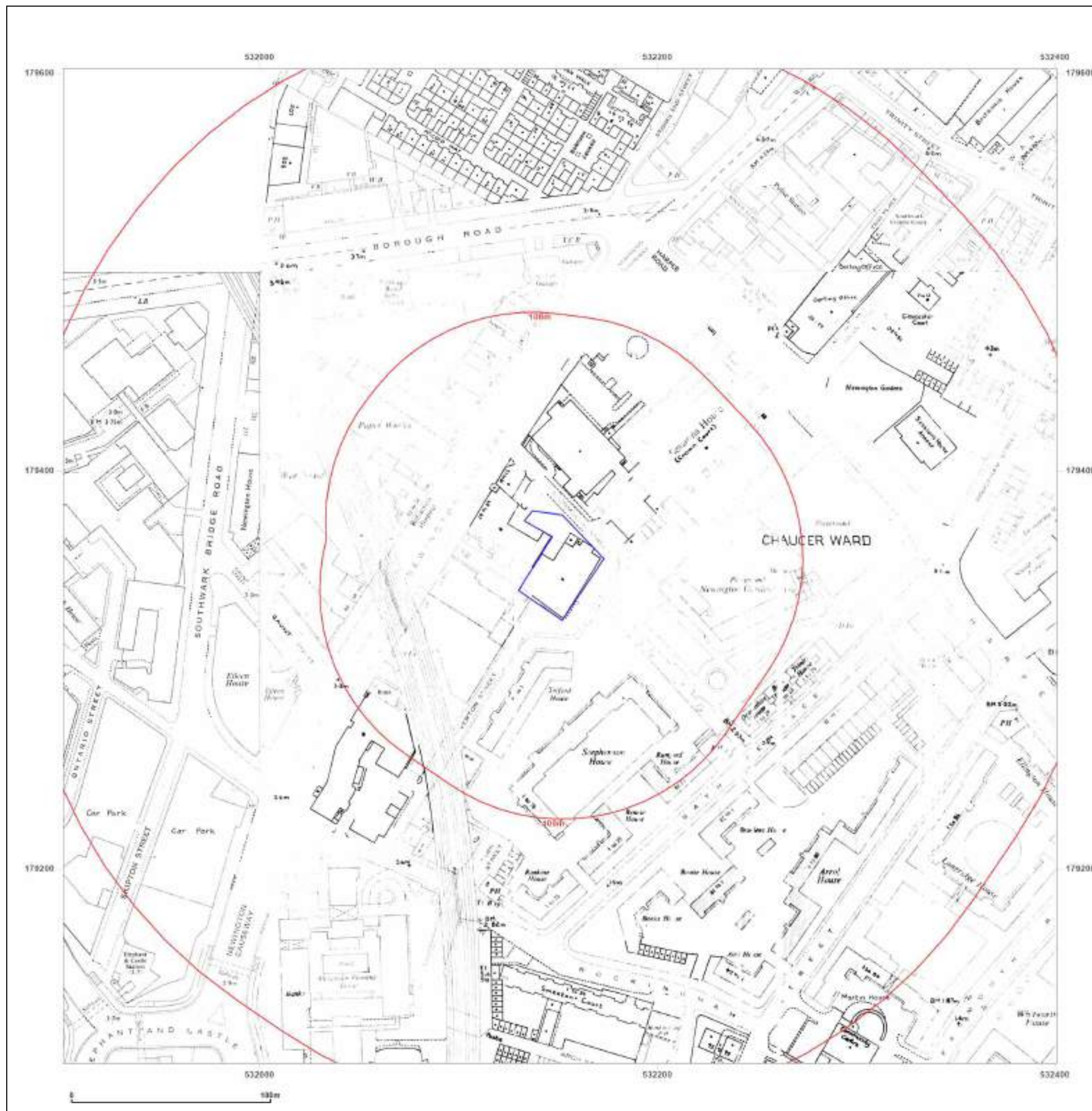


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1991

Scale: 1:1,250

Printed at: 1:2,000



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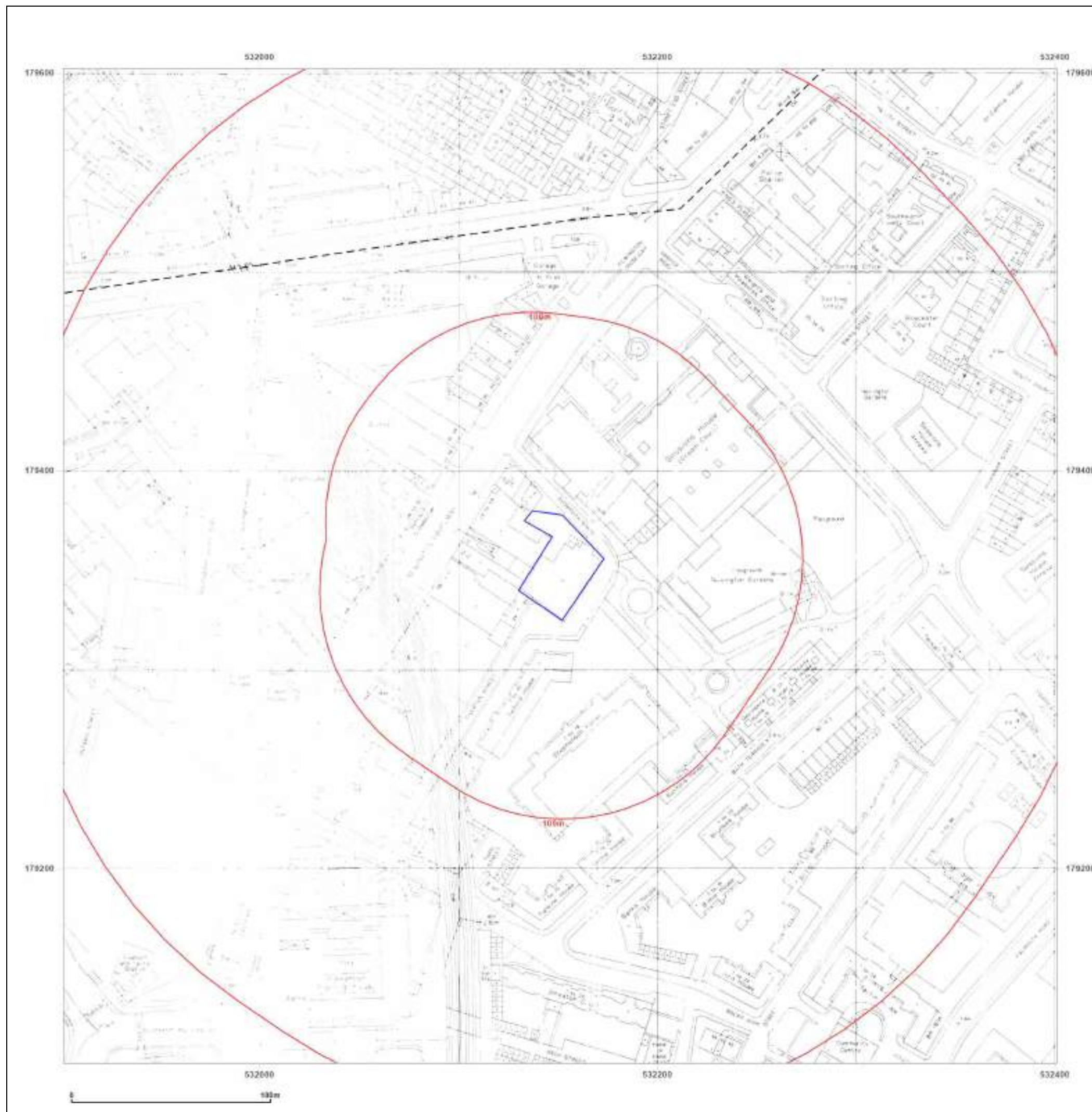


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Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1991

Scale: 1:1,250

Printed at: 1:2,000



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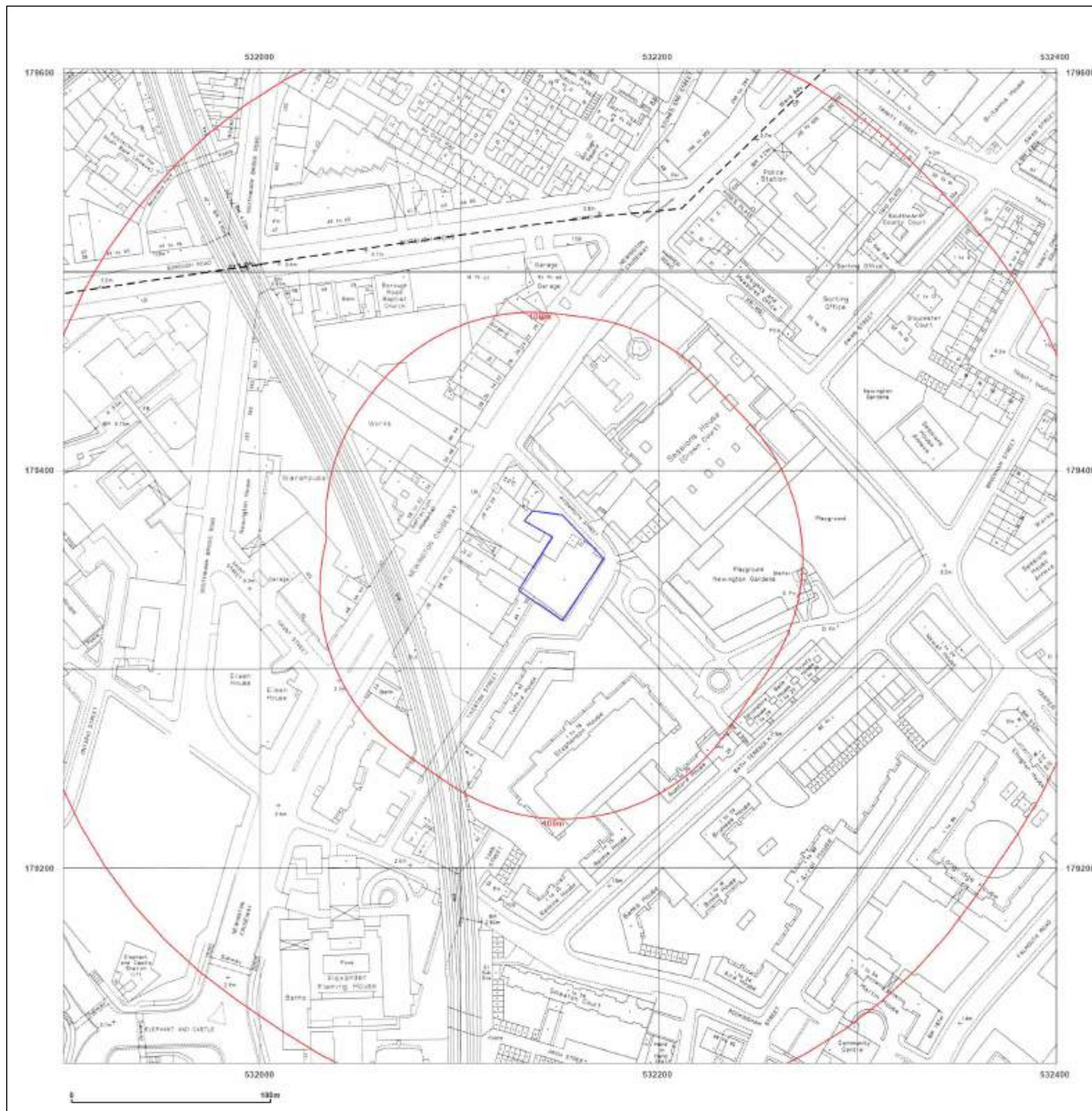


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1992-1993

Scale: 1:1,250

Printed at: 1:2,000



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Revised N/A
Edition N/A
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
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Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1992
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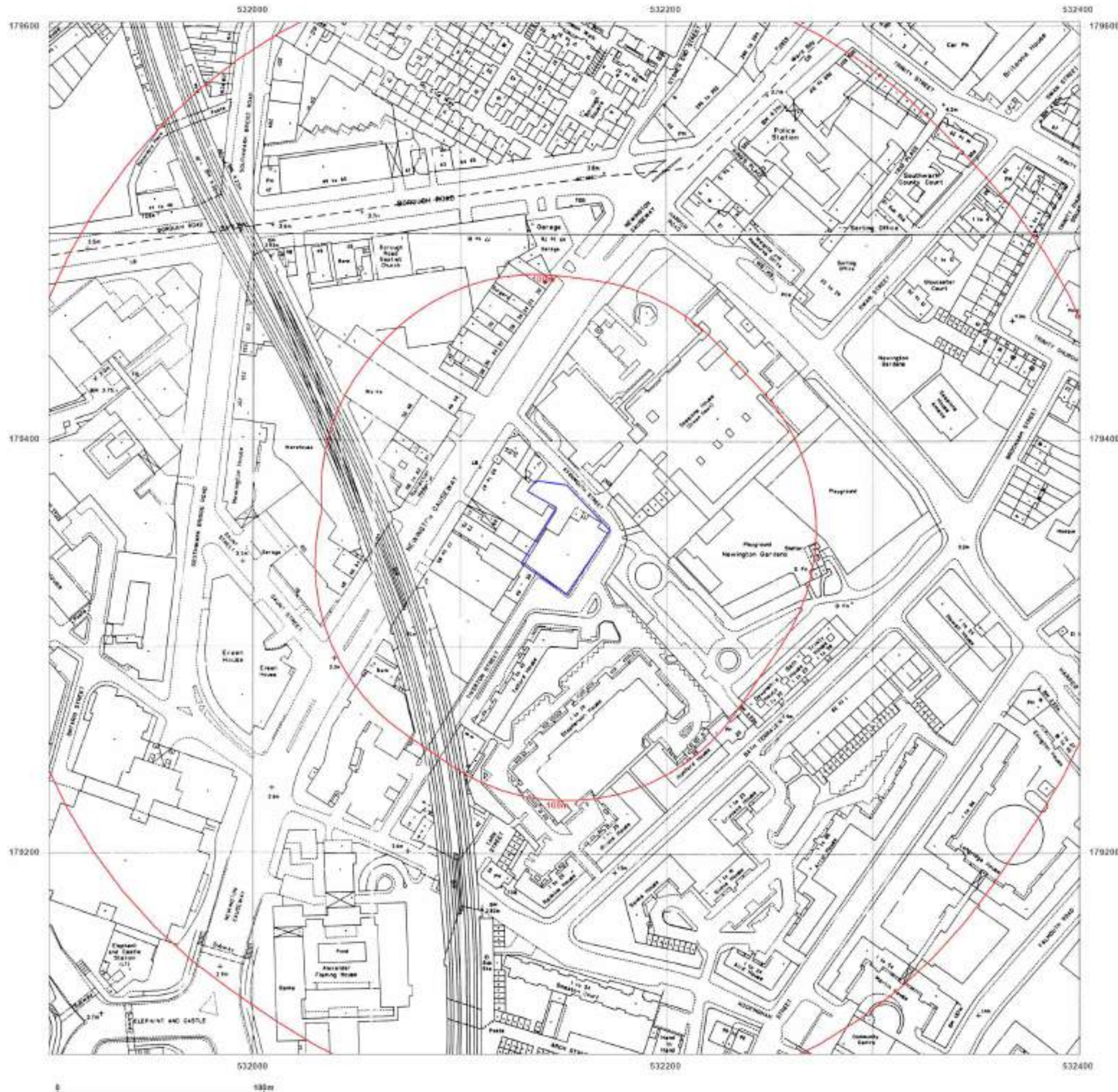


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1992-1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1992
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

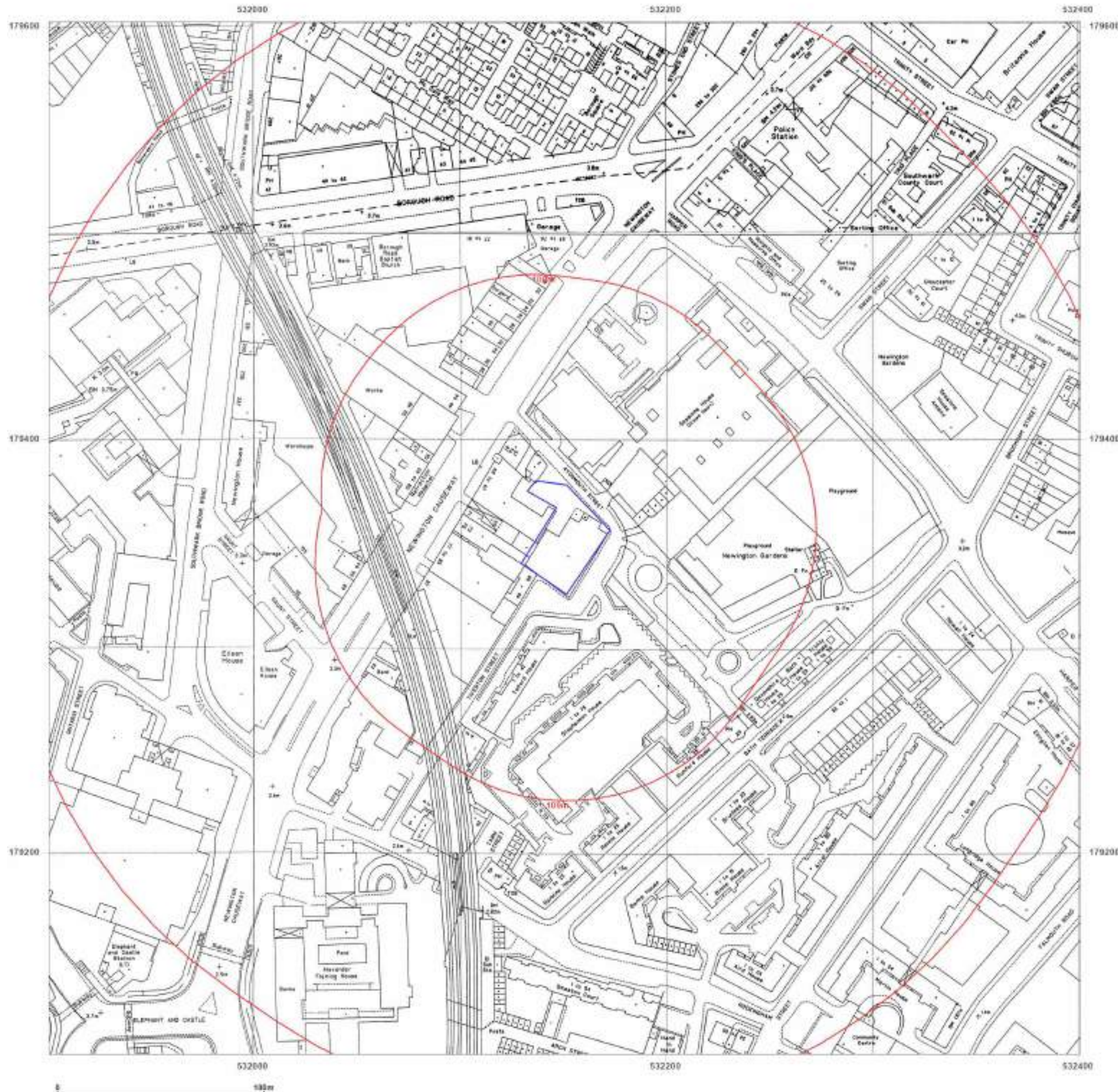


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1993-1995

Scale: 1:1,250

Printed at: 1:2,000



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Revised N/A
Edition N/A
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Revised N/A
Edition N/A
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Surveyed N/A
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Edition N/A
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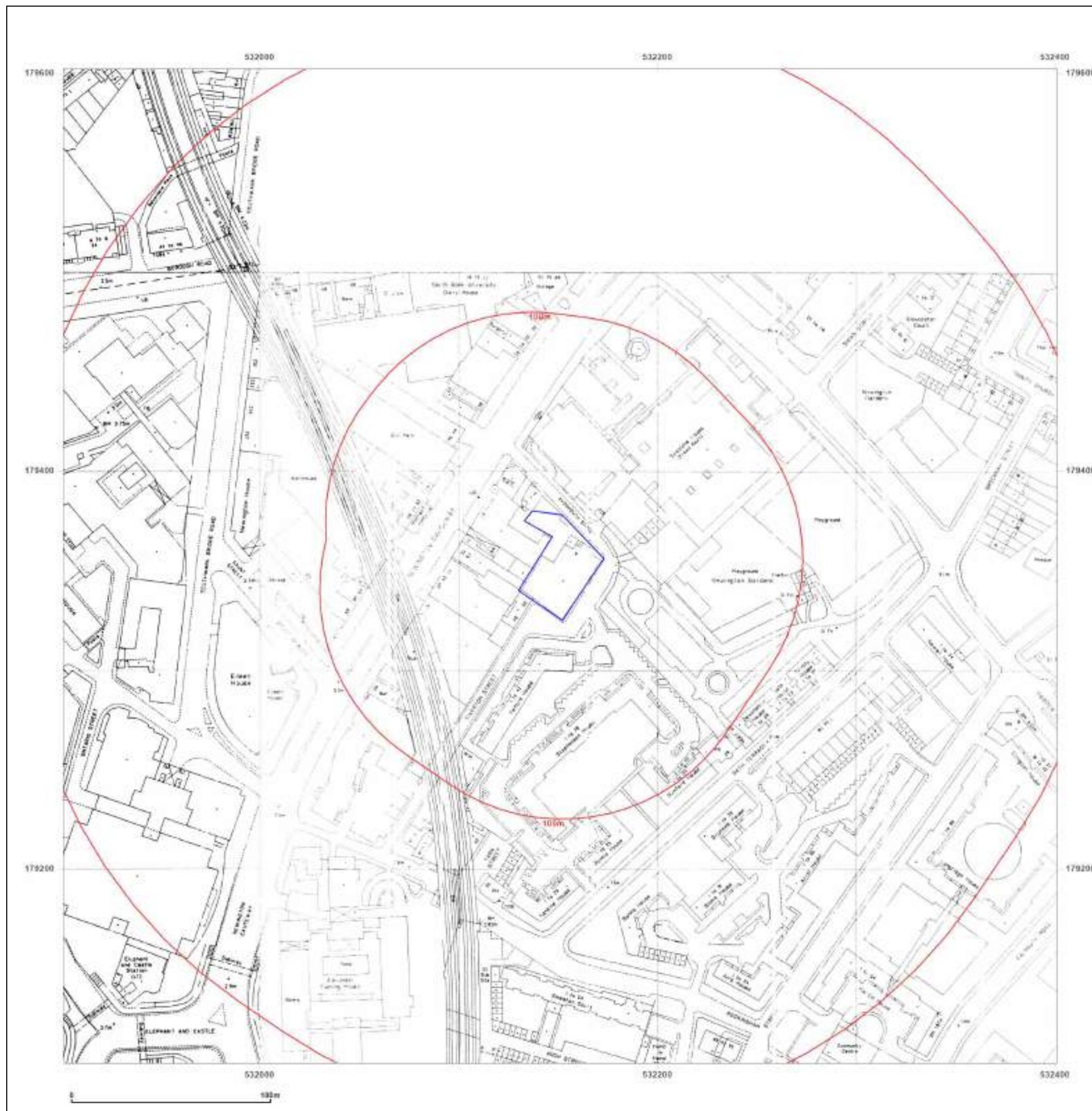


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Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: National Grid

Map date: 1993-1995

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Revised N/A
Edition N/A
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Revised 1990
Edition N/A
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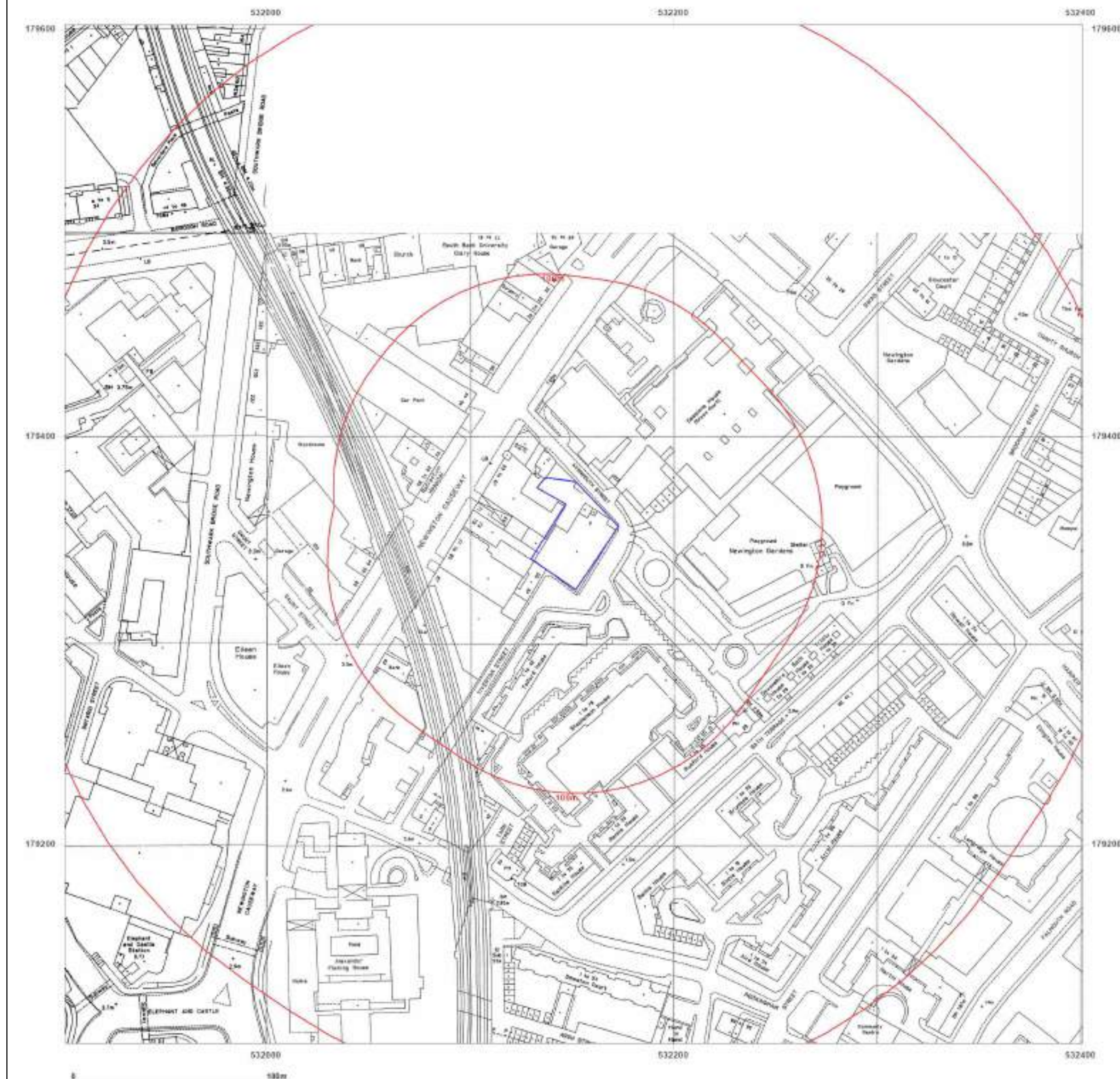


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Production date: 05 May 2021

Map legend available at:
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Site Details:

Avonmouth House 6,
AVONMOUTH STREET,
LONDON, SE1 6NX

Client Ref: P3637JJ2281-1
Report Ref: HMD-377-7823011
Grid Ref: 532151, 179352

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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APPENDIX 5 – QUALITATIVE RISK ASSESSMENT METHODOLOGY

QUALITATIVE RISK ASSESSMENT METHODOLOGY

The following Contaminated Land Risk Assessment methodology is based on CIRIA C552 (2001) *Contaminated Land Risk Assessment – A Guide to Good Practice*, in order to quantify potential risk via **risk estimation** and **risk evaluation**, which can be adopted at the Phase I stage. This will then determine an overall risk category which can be used to identify likely actions. This methodology uses qualitative descriptors and therefore is a qualitative approach.

The methodology requires the classification of:

- the magnitude of the **consequence** (severity) of a risk occurring, and
- the magnitude of the **probability** (likelihood) of a risk occurring.

The potential consequences of contamination risks occurring at this site are classified in accordance with Table A4.1 below, which is adapted from the CIRIA guidance.

Table A4.1: Classification of Consequence

Classification	Definition of Consequence
Severe	<ul style="list-style-type: none">• Short-term (acute) risks to human health.• Short-term risk of pollution of sensitive water resource or ecosystem.• Catastrophic damage to crops/buildings/property/infrastructure, including off-site soils.
Medium	<ul style="list-style-type: none">• Medium/long-term (chronic) risks to human health.• Medium/long-term risk of pollution of sensitive water resource or ecosystem.• Significant damage to crops/buildings/property/infrastructure (on or off-site).• Contamination of off-site soils.
Mild	<ul style="list-style-type: none">• Easily preventable, permanent health effects on humans.• Pollution of non-sensitive water resources.• Localised damage to crops/buildings/property/infrastructure (on or off-site).
Minor	<ul style="list-style-type: none">• Easily preventable, non-permanent health effects on humans, or no effects.• Minor, low-level and localised contamination of on-site soils.• Easily repairable damage to crops/buildings/property/infrastructure.

The probability of contamination risks occurring at this site will be classified in accordance with Table A4.2 below which is also adapted from the CIRIA guidance. Note that for each category, it is assumed that a pollution linkage exists. Where a pollution linkage does not exist, the likelihood is zero, as is the risk.

Table A4.2: Classification of Probability

Classification	Definition of Probability
High Likelihood	Circumstances are such that an event appears very likely in the short-term or almost inevitable in the long-term; or there is already evidence that such an event has occurred.
Likely	Circumstances are such that such an event is not inevitable, but is possible in the short-term and is likely over the long-term.
Low Likelihood	Circumstances are such that it is by no means certain that an event would occur even over a longer period, and it is less likely in the short-term.
Unlikely	Circumstances are such that it is improbable that an event would occur even in the very long-term.

For each possible pollution linkage (source-pathway-receptor) identified, the potential risk can be evaluated, as presented in Table A3.3. Based upon this, CIRIA C552 presents definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case, as in Table A3.4. These risk categories apply to each possible pollutant linkage, and not simply to each hazard/source of contamination or sensitive receptor.

Table A4.3: Overall Contamination Risk Matrix

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate risk	Low risk
	Low likelihood	Moderate risk	Moderate risk	Low risk	Very low risk
	Unlikely	Low risk	Low risk	Very low risk	Very low risk

Table A4.4: Definition of Risk Categories and Likely Actions Required

Risk Category	Definition and likely actions required
Very high	<ul style="list-style-type: none">• Severe harm to a defined receptor is very likely, or has already occurred.• The risk is likely to result in a substantial liability.• Urgent investigation (if not already undertaken) is likely to be required.• Urgent remediation is likely to be required.
High	<ul style="list-style-type: none">• Harm to a defined receptor is likely.• The risk, if realised, may result in a substantial liability.• Urgent investigation (if not already undertaken) is likely to be required.• Remediation is likely to be required in the long term, possibly sooner.
Moderate	<ul style="list-style-type: none">• Harm to a defined receptor is possible, but severe harm is unlikely.• Investigation is likely to be required to clarify the level of potential liability and risk.• Some remediation may be required in the longer term
Low	<ul style="list-style-type: none">• Harm to a defined receptor is possible, but is likely to be mild at worst.• Liabilities could theoretically arise, but are unlikely.• Further investigation is not required at this stage• Remediation is unlikely to be required.
Very low	<ul style="list-style-type: none">• Harm to a defined receptor is unlikely, and would be minor at worst.• No liabilities are likely to arise.• Further investigation is not required at this stage• Remediation is very unlikely to be required.

APPENDIX 6 – BGS BOREHOLE RECORDS

TQ 37 NW 3216, 7939 2440

RECORD OF BOREHOLE No: C

START DATE 8 AUGUST 1997 CASING DETAILS 200mm to 31.00m SHEET 1 OF 2
 TYPE OF BORING CABLE PERCUSSION BOREHOLE DIA 200mm to 15.00m ORIENTATION VERTICAL
 EQUIPMENT MISCOR MAYFAIR DRILL FLUID CO-ORDINATES E N
 GROUND LEVEL 3.30m O.D

Date & Time	Casing Depth (m)	Rig/Less (m) (Push Return)	SAMPLE/CORE RECOVERY			Core Size	Fechter	DESCRIPTION OF STRATA	Depth (m) (Thickness)	Level (m O.D.)	Strata Symbol
			Depth (m)	Type	No						
8.8			0.20-0.40	B	1			CONCRETE AND BRICKS	0.15	3.15	
			0.70-0.90	B	2			EARTH RUBBLE	0.20	2.95	
			1.00-1.50 c(14)	B	3			CONCRETE	0.50	2.45	
			1.85-2.20 (0.35 Rec)	U	4			1 MADE GROUND - (topsoil, sand and clay with flint gravel)	(1.00)		
			2.25	D	5				1.85	1.85	
			2.50-3.00 c(18)	B	6			2 MADE GROUND - (sand and flint gravel with clay pockets and brick fragments grading into sandy clay).			
			3.50-4.00 c(12)	B	7						
			4.00-4.40	B	8				3.50	-0.50	
			4.45-4.95 c(8)	B	9			3 MADE GROUND - (sand with flint gravel, brick fragments with hydrocarbon odour)	(1.10)		
			5.50-6.00 c(15)	B	10				5.00	-1.70	
			6.50	D	11			4 Medium dense, becoming very dense brown very sandy subangular to subrounded fine to coarse flint GRAVEL Grades to sand and gravelly sand in places			
			7.00-7.50 c(19)	B	12						
			8.00	B	13						
			8.40-8.90 c(59)	B	14				(5.40)		
			9.00	N	15						
			9.50	D	16			5 From 9.40m, with occasional soft brown silty clay pockets			

REMARKS: A hand-dug pit was excavated prior to commencement of boring. Water was added to facilitate boring from 4.45m.

SCALE 1 : 50 (When reduced to A4)

FOUNDATION & EXPLORATION SERVICES

NEWINGTON CAUSEWAY
TASK NO: PGE/3098

CONTRACT No: 640

FIGURE 38

TQ 37 NW 2440

2440

RECORD OF BOREHOLE No: C

START DATE 8 AUGUST 1987 CASING DETAILS 200mm to 11.00m SHEET 2 OF 2
 TYPE OF BORING CABLE PERCUSSION BOREHOLE DIA 200mm to 11.00m ORIENTATION VERTICAL
 EQUIPMENT P1100N HAYFARER DRILL FLUID CO-ORDINATES E N
 GROUND LEVEL 3.30m O.D.

Date & Time	Casing Depth (m)	Water Level in Borehole	SAMPLE / CORE RECOVERY			Core Size	Fracture	DESCRIPTION OF STRATA	Depth (m) (Thickness)	Level (m O.D.)	Draw Symbol
			Depth (m)	Type	No						
			10.25	D	17			Continued from Sheet 1	(5.60)		
			2165/107mm	B	18			From 10.25m to 10.60m, very dense sandy gravel horizon	10.60	-7.30	
			10.25-10.50	U	19						
			10.60-11.05								
			11.10	D	20			11 Stiff to very stiff, locally firm fissured dark brown-grey silty CLAY.			
			12.00-12.45	U	21			12			
			12.50	D	22				(4.90)		
								13			
			13.50-13.95	U	23						
			14.00	D	24			14			
			14.50-14.95	U	25						
8/8	11.00		15.00	D	26			15	15.00	-11.70	
								END OF BOREHOLE			

REMARKS

SCALE 1 : 30 (When reduced to A4)

FOUNDATION & EXPLORATION SERVICES

SEWINGTON CAUSEWAY
TASK NO: FGE/3098

CONTRACT No: 640

FIGURE: 39

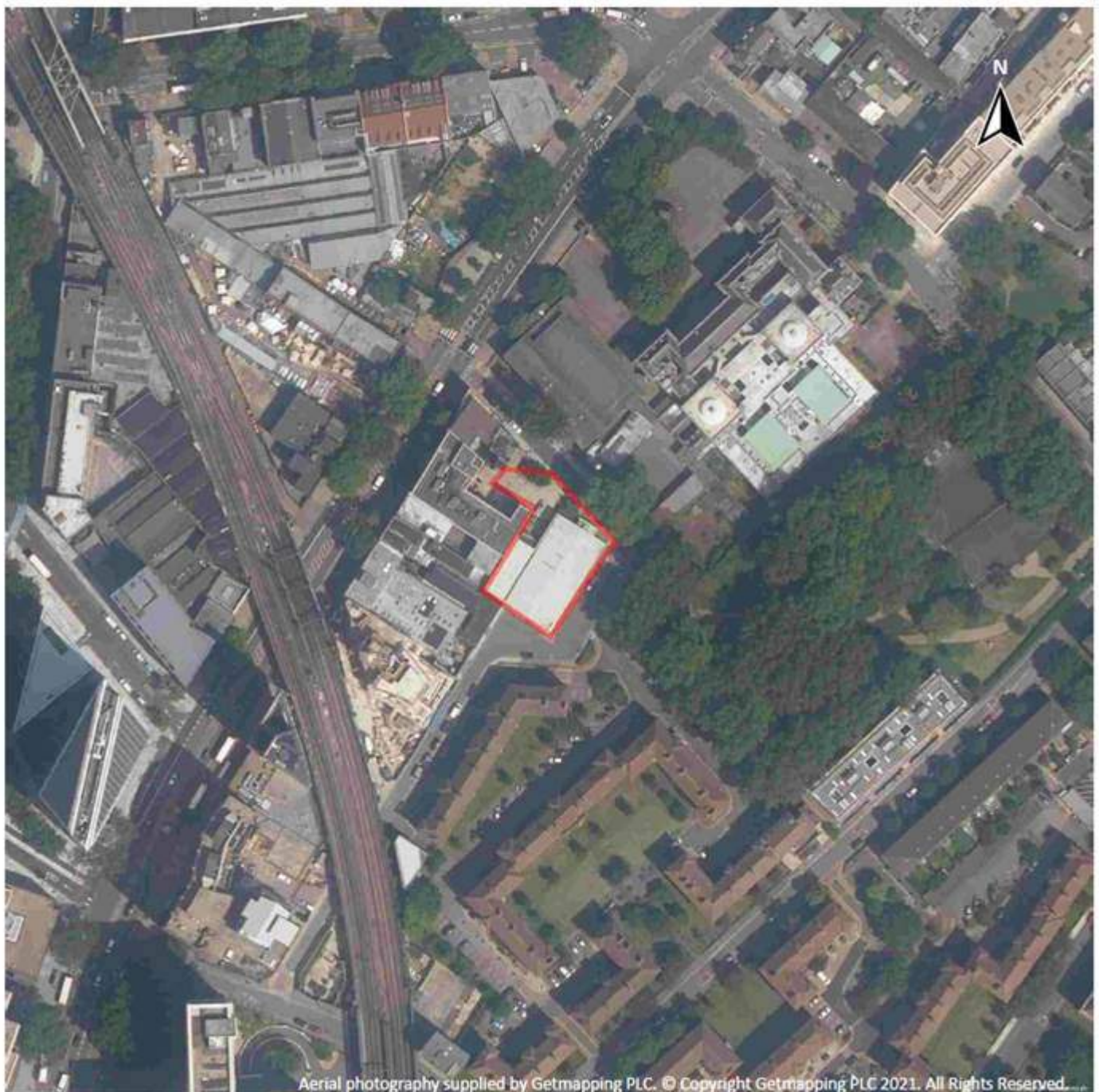
APPENDIX 7 – LOCAL AUTHORITY CORRESPONDENCE

Clare Prosser

From: Clare Prosser <clp@jomasassociates.com>
Sent: 24 May 2021 09:20
To: 'CCU@southwark.gov.uk'; 'environment@southwark.gov.uk'
Cc: 'projects@jomasassociates.com'
Subject: P3637J2281 - CLP - Avonmouth House, 6 Avonmouth St, SE1 6NX - Local authority request

Good morning,

Jomas Associates Ltd have been appointed as environmental consultants with regards to land contamination issues for a site located at Avonmouth House, 6 Avonmouth St, SE1 6NX (GR: 532152 179352). The site boundary and location is shown below:



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We are currently undertaking a Preliminary Risk Assessment / Phase 1 Desk Study Basement impact assessment, as part of our investigations the following information sources will be consulted:

- Historical Ordnance survey mapping spanning dates 1871 – 2021
- Environmental database report collating information from EA, BGS, Public Health England, Coal Authority, and Ordnance Survey sources (including recorded pollution incidents and licensing of potentially contaminative activities)
- BGS and EA geological and hydrogeological records
- A site walkover
- Available planning records from the Local Authority planning website

Does the Local Authority possess any additional information or records pertaining to land contamination issues at the site, which are not likely to be obtained via the above source? Of principal interest would be:

- Site investigation or remedial reports pertaining to the site or the site vicinity
- Information relating to any potential landfilling in the site vicinity
- Details of any private water supplies in the site vicinity
- Any anecdotal information or specific local concerns that the local authority has / is aware of with regards to land contamination in the site vicinity
- Any local mapping resources which are unlikely to be supplied from Ordnance Survey
- Records of tanks or fuel storage at the site




Kind regards,



Clare Prosser BSc (Hons) MSc FG5
Geo-Environmental Engineer

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WE LISTEN, WE PLAN, WE DELIVER

Geotechnical Engineering and Environmental Services across the UK.



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