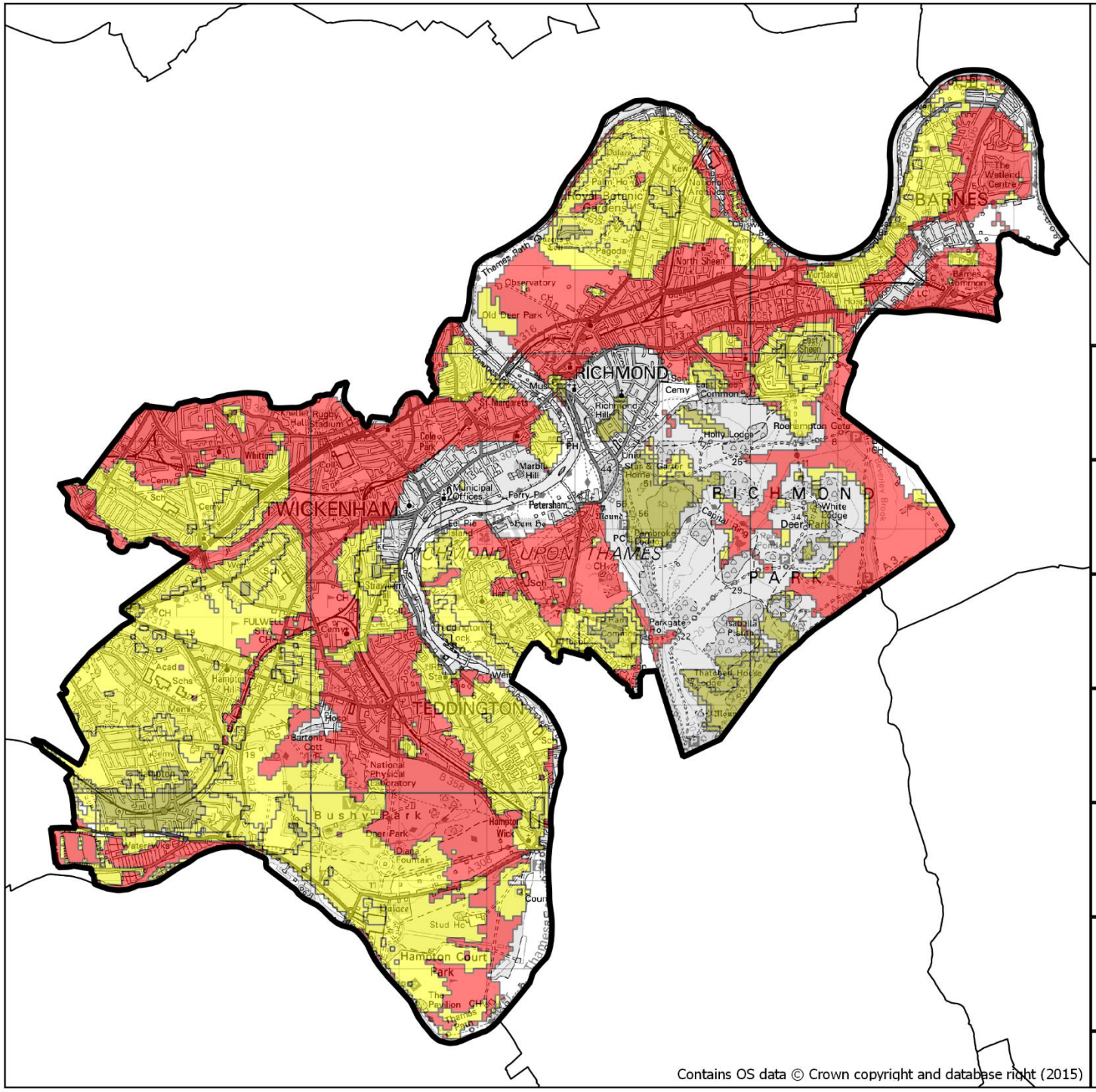



# Legend

Borough Boundary

## BGS Susceptibility to Groundwater Flooding

- 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

in association with

Environment Agency

Metis Consultants Limited

METIS

Client

LONDON BOROUGH OF RICHMOND UPON THAMES

Project Title

London Borough of Richmond Upon Thames Strategic Flood Risk Assessment Level 1

Drawing Title

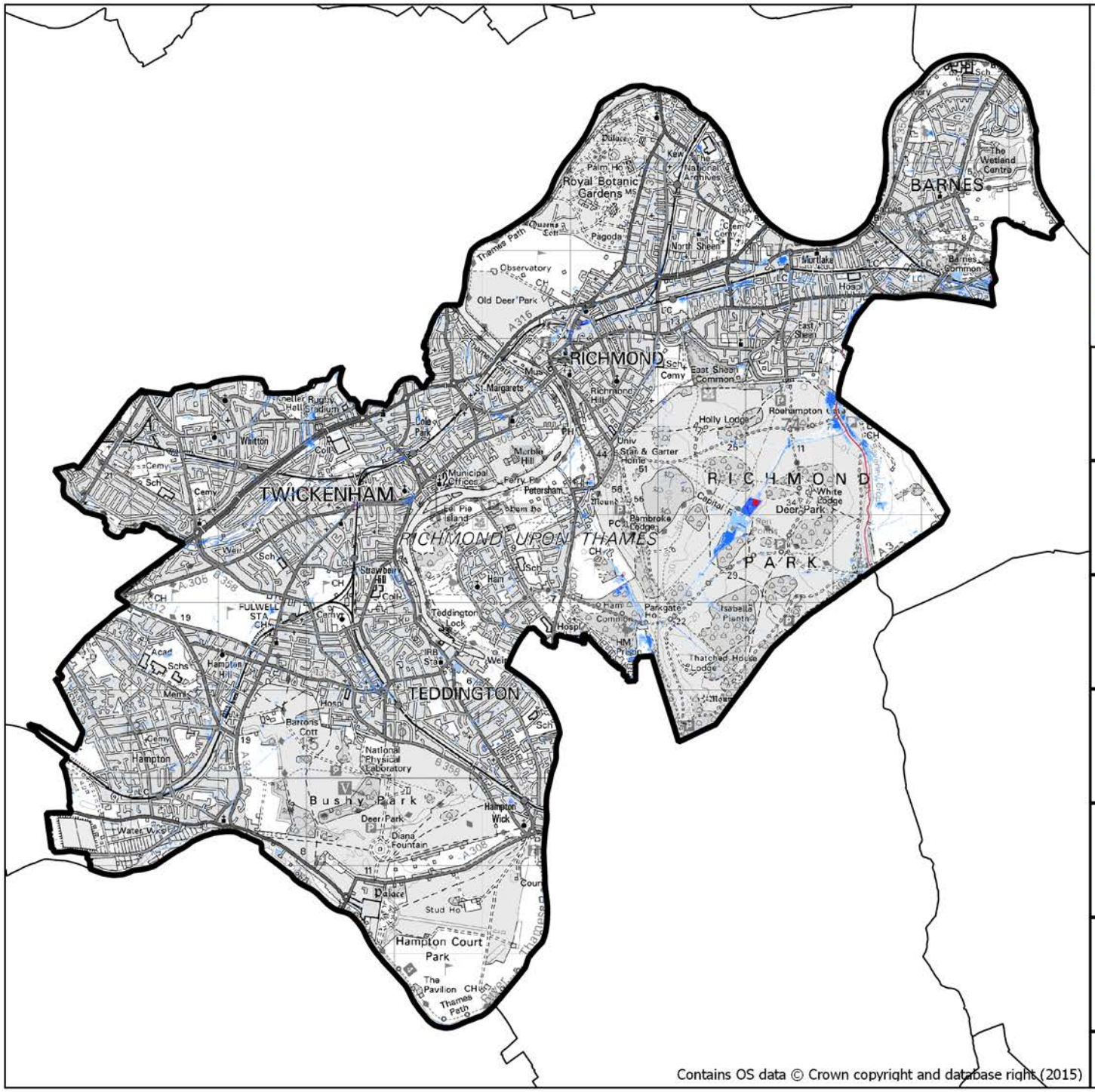
BGS Susceptibility to Groundwater Flooding



Drawing Number

FIGURE E

1:65,000




## Legend

Borough Boundary

Predicted Surface Water Flood Depth (m)

- 0.00 - 0.15
- 0.15 - 0.30
- 0.30 - 0.60
- 0.60 - 0.90
- 0.90 - 1.20
- > 1.20

in association with

Environment Agency

Metis Consultants Limited

METIS

Client

LONDON BOROUGH OF RICHMOND UPON THAMES

Project Title

London Borough of Richmond Upon Thames Strategic Flood Risk Assessment Level 1

Drawing Title

Updated Flood Map for Surface Water

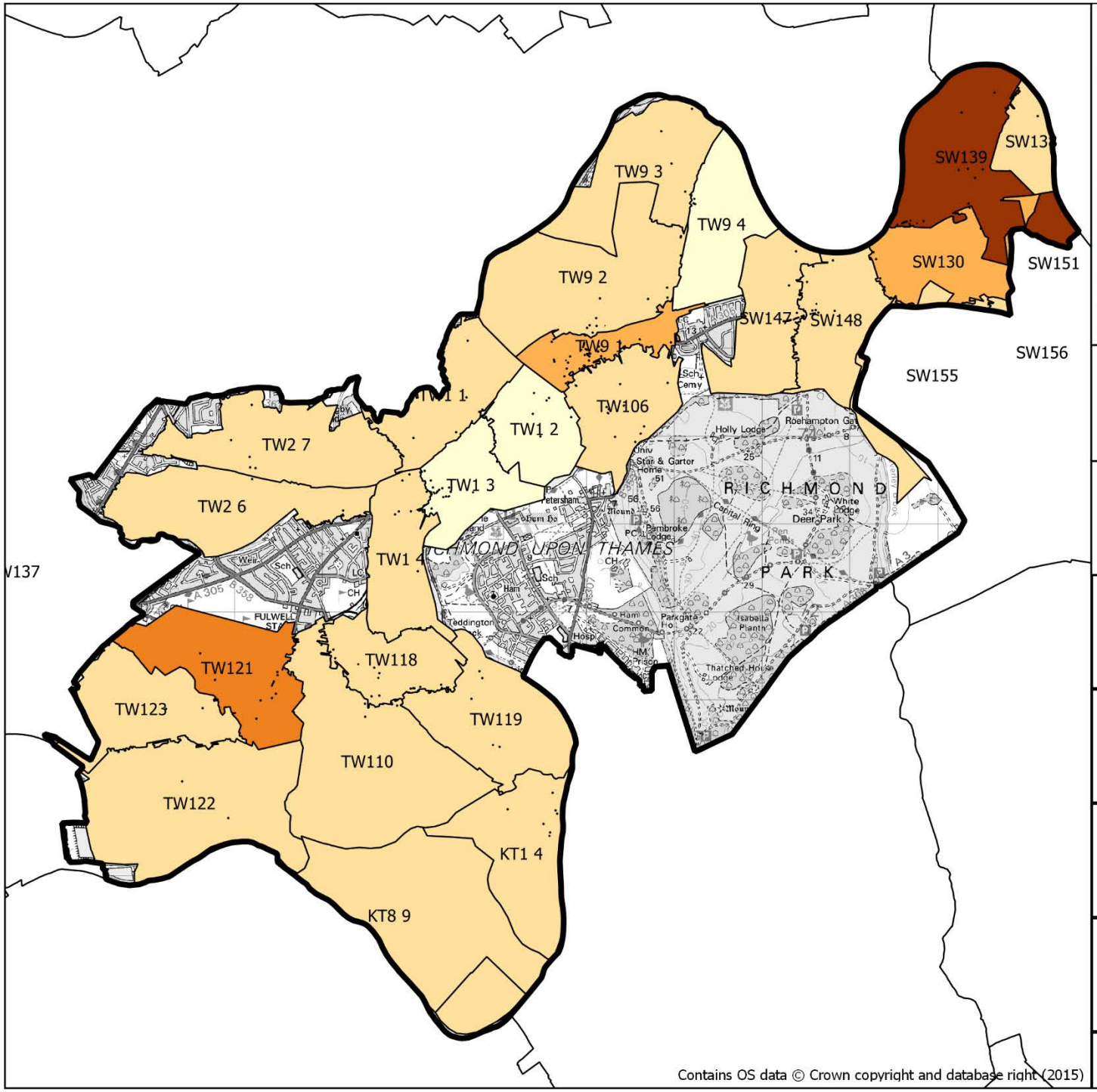
1% chance of flooding in any one year



Drawing Number

FIGURE G

1:65,000




## Legend

Borough Boundary

**Number of Sewer Flooding Incidents based on DG5 data**

- 0
- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 25

in association with Thames Water

Metis Consultants Limited

Client

LONDON BOROUGH OF RICHMOND UPON THAMES

Project Title

London Borough of Richmond Upon Thames Strategic Flood Risk Assessment Level 1

Drawing Title

Sewer Flooding Incidents



Drawing Number

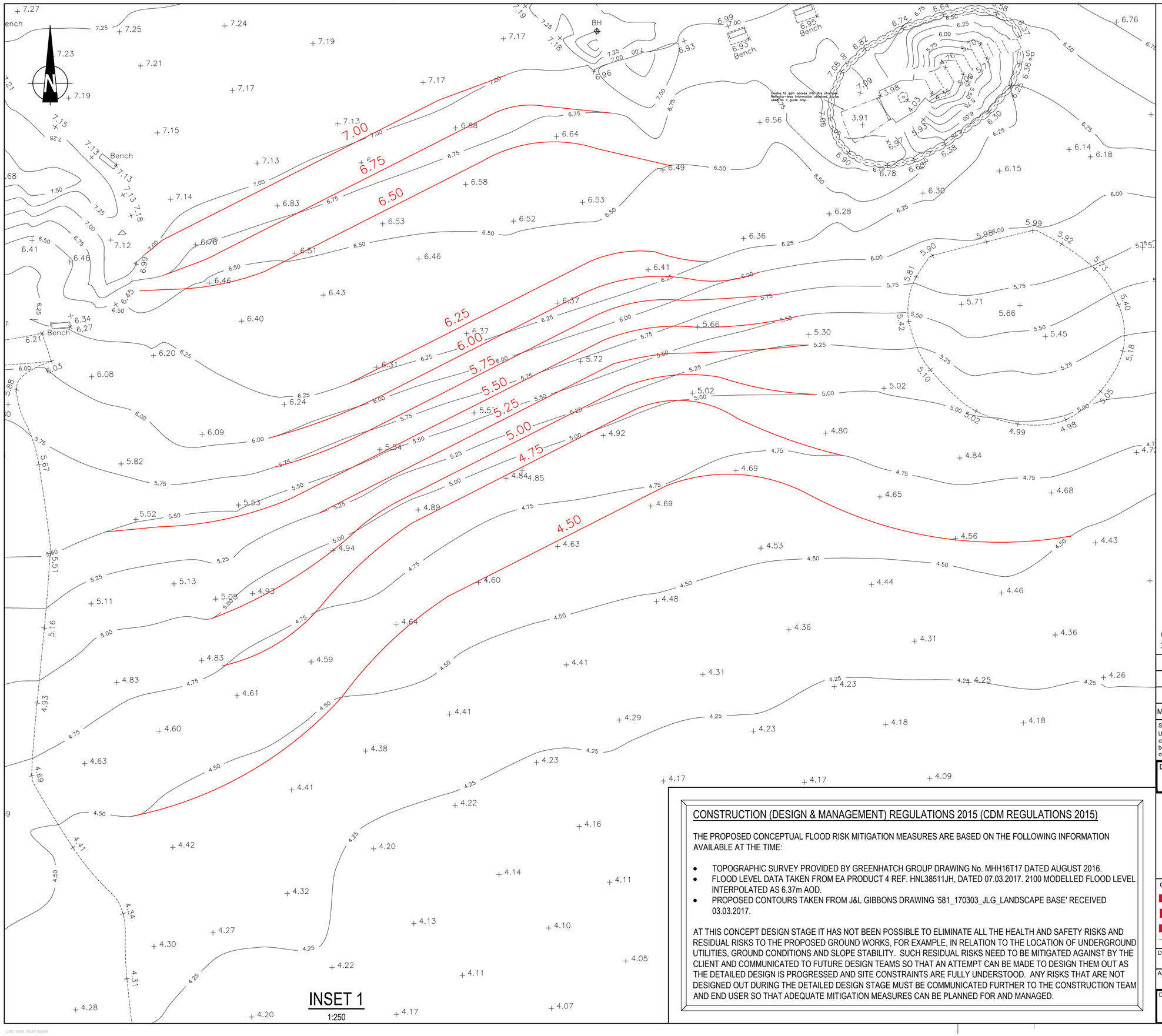
FIGURE I

1:65,000

# Appendix G Flood Storage Compensation

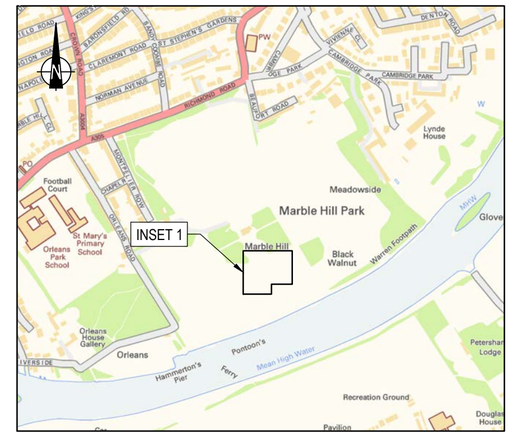
Flood Compensation Scheme undertaken by Peter Brett Associates LLP, dated 16.03.17:

- 40611/4001/001 'Flood Compensation Analysis'




## INSET 1

1:250




## KEY PLAN

1:10,000

### FLOOD COMPENSATION ANALYSIS

| LEVEL BANDS (m AOD) | EXISTING STORAGE (m³) | PROPOSED STORAGE AFTER CONTOURS AMENDED (m³) | NET GAIN (m³) |
|---|---|---|---|
| 6.30-6.10 | 2401 | 2432 | 31 |
| 6.10-5.90 | 2271 | 2292 | 21 |
| 5.90-5.70 | 2154 | 2173 | 19 |
| 5.70-5.50 | 2044 | 2058 | 14 |
| 5.50-5.30 | 1925 | 1936 | 11 |
| 5.30-5.10 | 1812 | 1823 | 11 |
| 5.10-4.90 | 1692 | 1702 | 10 |
| 4.90-4.70 | 1525 | 1551 | 26 |
| 4.70-4.50 | 1314 | 1360 | 46 |
| 4.50-4.30 | 968 | 983 | 15 |

| TOTAL GAIN (m³) | 204 |
|---|---|

KEY:

7.00 PROPOSED CONTOUR AND LEVEL (m AOD)



| Mark | Revision | Date | Drawn | Chkd | Appd |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

Drawing Issue Status

FOR INFORMATION

## CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015 (CDM REGULATIONS 2015)

THE PROPOSED CONCEPTUAL FLOOD RISK MITIGATION MEASURES ARE BASED ON THE FOLLOWING INFORMATION AVAILABLE AT THE TIME:

- TOPOGRAPHIC SURVEY PROVIDED BY GREENHATCH GROUP DRAWING No. MHH16T17 DATED AUGUST 2016.
- FLOOD LEVEL DATA TAKEN FROM EA PRODUCT 4 REF. HNL38511JH, DATED 07.03.2017. 2100 MODELLED FLOOD LEVEL INTERPOLATED AS 6.37m AOD.
- PROPOSED CONTOURS TAKEN FROM J&L GIBBONS DRAWING '581_170303_JLG_LANDSCAPE BASE' RECEIVED 03.03.2017.

AT THIS CONCEPT DESIGN STAGE IT HAS NOT BEEN POSSIBLE TO ELIMINATE ALL THE HEALTH AND SAFETY RISKS AND RESIDUAL RISKS TO THE PROPOSED GROUND WORKS, FOR EXAMPLE, IN RELATION TO THE LOCATION OF UNDERGROUND UTILITIES, GROUND CONDITIONS AND SLOPE STABILITY. SUCH RESIDUAL RISKS NEED TO BE MITIGATED AGAINST BY THE CLIENT AND COMMUNICATED TO FUTURE DESIGN TEAMS SO THAT AN ATTEMPT CAN BE MADE TO DESIGN THEM OUT AS THE DETAILED DESIGN IS PROGRESSED AND SITE CONSTRAINTS ARE FULLY UNDERSTOOD. ANY RISKS THAT ARE NOT DESIGNED OUT DURING THE DETAILED DESIGN STAGE MUST BE COMMUNICATED FURTHER TO THE CONSTRUCTION TEAM AND END USER SO THAT ADEQUATE MITIGATION MEASURES CAN BE PLANNED FOR AND MANAGED.

# MARBLE HILL PARK

# FLOOD COMPENSATION ANALYSIS

Client: ENGLISH HERITAGE

| | | |
|---|---|---|
| Date of 1st Issue: 09.03.2017 | Designed: - | Drawn: smr |
| A2 Scale: AS SHOWN | Checked: CC | Approved: - |
| Drawing Number: 40611/4001/001 | Revision: - | |

peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

READING
Tel: 01189 500 761