

**GLENFALL HOUSE, MILL LANE,
CHELTENHAM**

Mr and Mrs Bunner

Water Management Statement

242270-KTN-TN-01-B

18th September 2024



The Site
24 Chosen View Road
Cheltenham
GL51 9LT

DOCUMENT CONTROL

Document Status

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- A CATCHMENT PLAN
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1.0 INTRODUCTION

- 1.1 K-Ten Consulting Ltd (K-Ten) provide professional Flood Risk, Infrastructure and Drainage services throughout the UK.
- 1.2 K-Ten have been commissioned by Mr and Mrs Bunner (applicant) to prepare a Water Management Statement to support a planning application at Glenfall House, Mill Lane, Cheltenham.
- 1.3 The project consists of the part change of use of principal listed building from hotel/event venue to single dwelling (C3), including removal of extensions/alterations to principal building. Demolition of coach house, stables and 20th century buildings and extensions and replacement with new extension and outbuildings consisting of a leisure building with swimming pool, garage/store, greenhouse and 5no. new dwellings to be occupied as holiday accommodation. Alterations to historic landscaped grounds and kitchen garden.
- 1.4 This Water Management Statement will summarise the below ground drainage requirements on site in accordance with Cheltenham Borough Council guidelines and National Standards.

2.0 EXISTING SITE DETAILS

Site Location

- 2.1 The site is located off Mill Lane, Cheltenham GL54 4EP. The approximate site co-ordinates are E 397950, N 221750 and National Grid SO979217.

Existing Hydrology

- 2.2 The closest main watercourse, in accordance with EA River maps, is the Ham Brook, located to the west of the site.
- 2.3 An ordinary watercourse is located to the north of the site and passes beneath the site access. The level of the watercourse is approximately 10m lower than site levels.
- 2.4 Online soil maps indicate the site to be underlain by *slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils* which suggests infiltration will not be viable.

Access

- 2.5 The proposed access will be via the existing track off Mill Lane.

Existing Drainage

- 2.6 The existing site area consists of buildings, parking and soft landscaping.
- 2.7 Refer to **Appendix A** for existing site plan and impermeable catchment, measured as 3,100m², comprising of roof area and hard landscaping/access.
- 2.8 Severn Trent asset records show no public storm and foul sewers within close proximity of the site.
- 2.9 Refer to **Appendix B** for Severn Trent Water asset maps.

3.0 FLOOD RISK

- 3.1 In accordance with Environment Agency Flood maps for planning the site sits within Flood Zone 1, classified as land having less than a 1 in 1,000 year (0.1%) annual probability of fluvial flooding (low risk).
- 3.2 The site is not shown to be at risk of surface water flooding (pluvial).

4.0 PROPOSED SURFACE WATER DRAINAGE STRATEGY

- 4.1 The proposed development will replace existing impermeable areas with permeable construction where possible and result in an overall 41.9% reduction in impermeable catchment compared to existing. Refer to **Appendix A** for catchment plans.
- 4.2 A surface water strategy is proposed to manage and reduce the flood risk and surface water run-off from the development, with consideration to SuDS.
- 4.3 The SuDS hierarchy dictates that surface water run off should be managed as high up the following list as practically possible:
 - a) into the ground (via infiltration) and re-use, or then;
 - b) to a surface water body, or then;
 - c) to a surface water sewer, highway drain or another drainage system, or then;
 - d) to a combined sewer.
- 4.4 Online soil maps indicate *slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils* which suggests infiltration will not be viable.
- 4.5 Infiltration testing shall be undertaken to BRE365 prior to development to confirm rates and if feasible traditional soakaways shall be considered as the primary method of surface water management.
- 4.6 Soakaways shall be located a minimum 5m from any structure.
- 4.7 If infiltration is not feasible a direct connection to the Ordinary Watercourse to the north will be proposed with development discharge rate restricted to a minimum 40% betterment on existing Brownfield run off rates or Greenfield run off rates (QBar).
- 4.8 A Land Drainage consent will be required for connection to existing ordinary watercourse.
- 4.9 On site attenuation, where required, will be required to cater for all storm events up to and including the 1 in 100 year with a 40% allowance for climate change.
- 4.10 External paved areas will be constructed with permeable materials where possible.
- 4.11 Water butts shall be considered for water re-use and irrigation.
- 4.12 Exceedance flows shall be directed away from the dwelling and to the north and the existing site topography towards the watercourse.
- 4.13 Severn Trent asset records show no public storm sewers within close proximity of the site.
- 4.14 Private drainage will be designed in accordance with Building Regulations Part H.

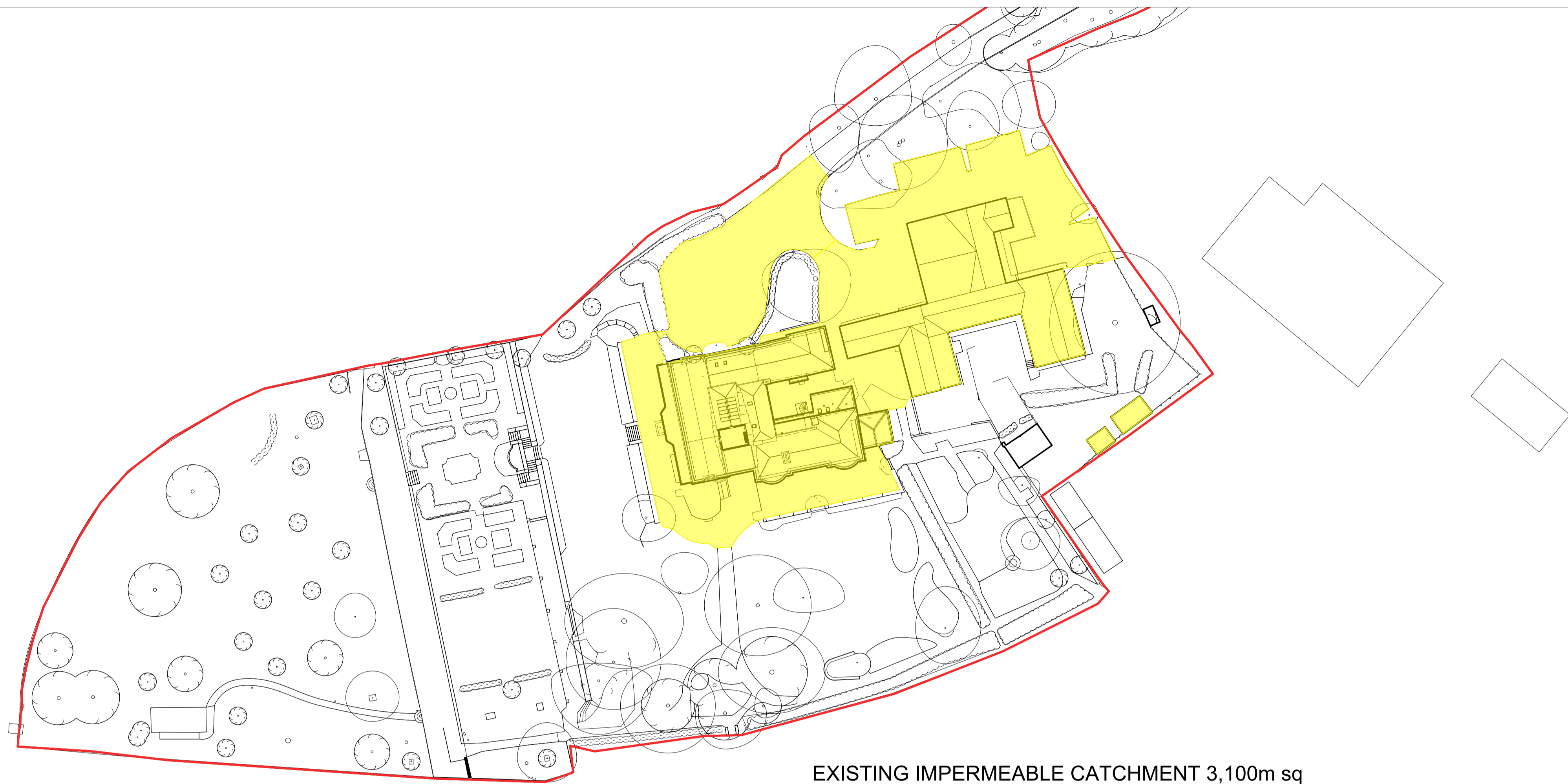
5.0 PROPOSED FOUL DRAINAGE STRATEGY

- 5.1 Severn Trent asset records show no public foul sewers within close proximity of the site.
- 5.2 Development foul drainage will be treated on site via a wastewater treatment plant with Primary and Secondary Treatment.
- 5.3 Clean water treated discharge will be to existing watercourse to the north in accordance with Environment Agency General Binding Rules.
- 5.4 A Land Drainage consent will be required for connection to existing ordinary watercourse.
- 5.5 All private drainage will be designed in accordance with Building Regulations Part H

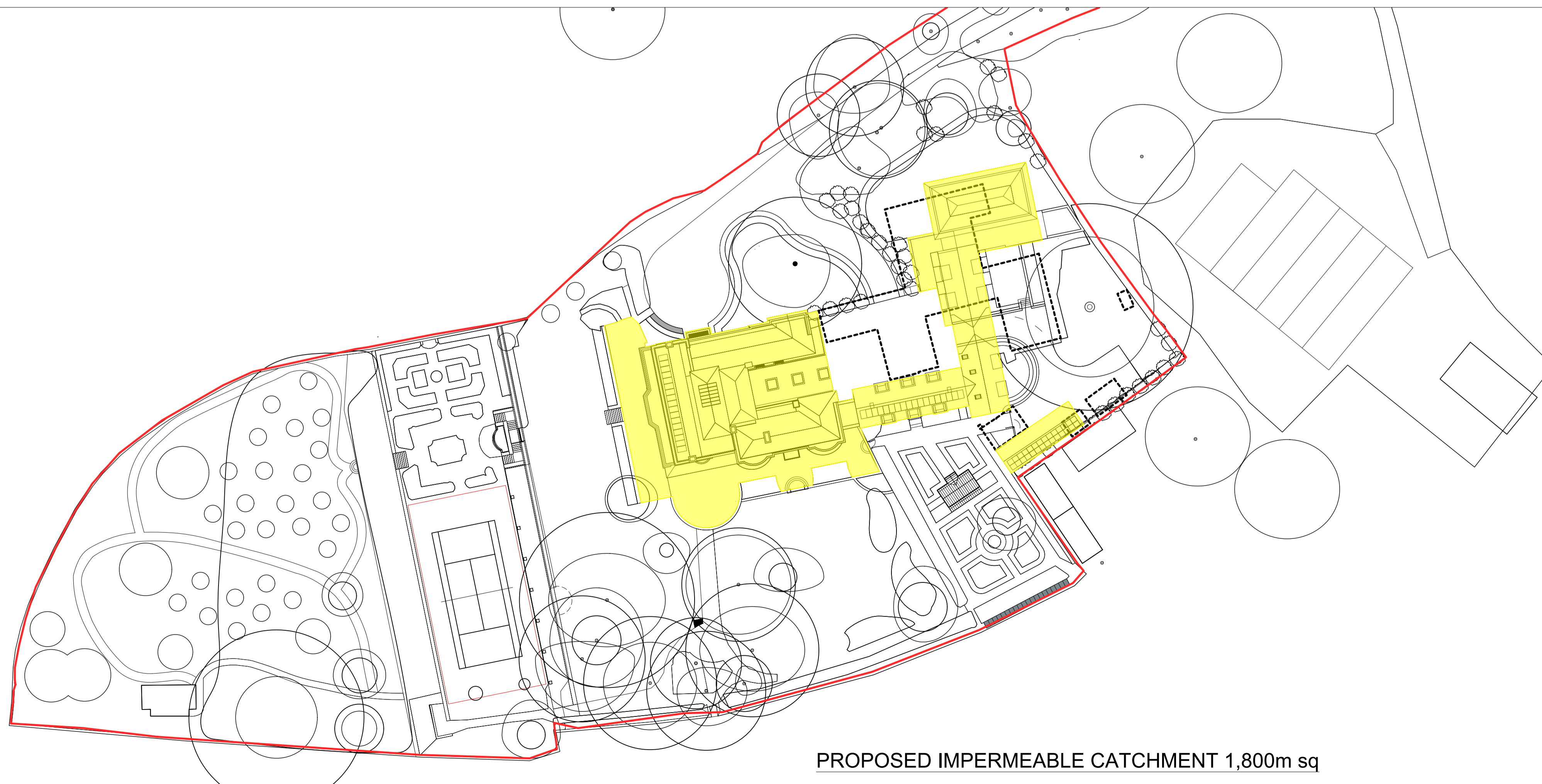
6.0 MAINTENANCE AND MANAGEMENT

- 6.1 Maintenance of SuDS features is required in order to ensure that the surface water drainage system operates effectively, and the risk of flooding of the site and surrounding areas is reduced.
- 6.2 A maintenance schedule should be undertaken to ensure that the drainage system remains fully operational for the design lifetime.
- 6.3 The SuDS Manual (CIRIA C753) and specific product suppliers guidelines should also be referred to for further information on maintenance and frequency.
- 6.4 All on site drainage will be maintained and managed through the property owner

APPENDIX A
CATCHMENT PLAN



EXISTING IMPERMEABLE CATCHMENT 3,100m sq



PROPOSED IMPERMEABLE CATCHMENT 1,800m sq

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CLIENT:
MR AND MRS BUNNER

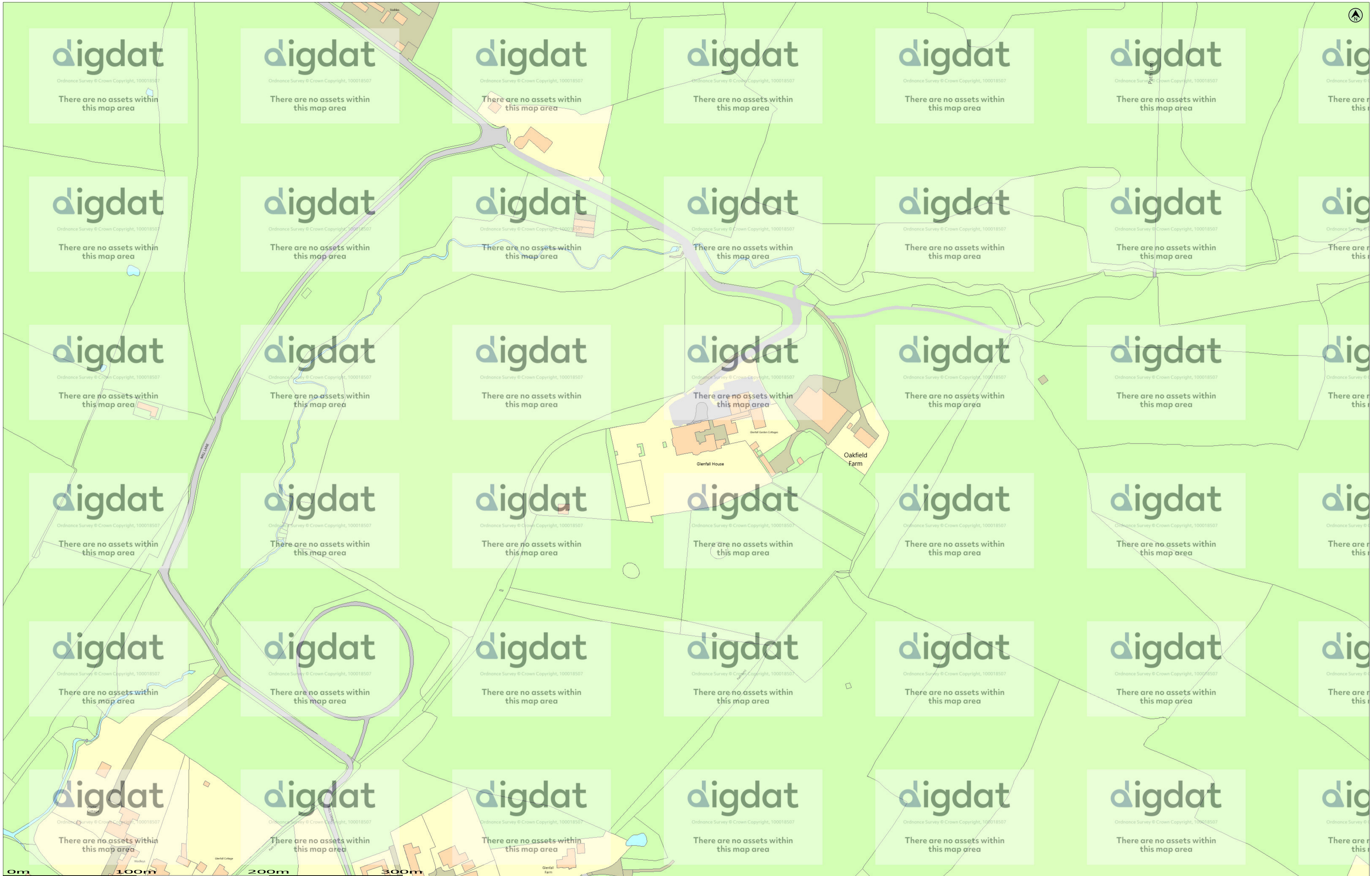
PROJECT:
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MILL LANE
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TITLE:
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APPENDIX B
SEVERN TRENT SEWER RECORDS



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Public Four Gravel/Lateral Drain	Highway Drain	Manhole Foot	Manhole Surface
Public Combined Gravel/Lateral Drain	Overflow Pipe	Abandoned Pipe	Chamber
Public Surface Water Gravel/Lateral Drain	Disposed Pipe	Covered Water Course	Section 104 sewers are shown in green
Pressure Foot	Pressure Combined	Pressure Surface Water	Private sewers are shown in magenta
Pressure Surface Water	Pumping Station	Flang	

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Wastewater Plan A1
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