



NEWLANDS FARM, LODDON VALLEY GARDEN VILLAGE

FLOOD RISK ASSESSMENT AND DRAINAGE STRATEGY

GLEESON LAND LIMITED

11 NOVEMBER 2025





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1.0 Introduction

Context

- 1.1. This Flood Risk Assessment (FRA) has been prepared by Abley Letchford, on behalf of Gleeson Land Limited to support an outline application for the comprehensive development of land at Newlands Farm as part of Loddon Valley Garden Village.

Development Proposals

- 1.2. The proposals comprise:
- 1.3. Up to 430 dwellings;
- 1.4. vehicular, bus, cycle and pedestrian corridor between Mole Road and northern boundary of site, to connect with the proposed Loddon Garden Village spine road;
- 1.5. New pedestrian and cycle link between Byway ARB03 (Carter's Hill Lane) and Byway ARB03 (Ellis's Hill);
- 1.6. Comprehensive strategic landscaping and network of multi-functional green and blue infrastructure;
- 1.7. Biodiversity enhancements to achieve at least a net gain of 10%;
- 1.8. Associated utilities, infrastructure, and engineering works.
- 1.9. All matters reserved other than details for the approval of the principal access from Mole Road.

The Illustrative Masterplan is included within **Appendix A**.

Requirement for a Flood Risk Assessment

- 1.10. The requirement for an FRA is set out in Section 14 of the revised National Planning Policy Framework (NPPF) as revised in December 2024.
- 1.11. The footnote accompanying Paragraph 181 states:

'A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use.'
- 1.12. The site is a greenfield site that comprises of farmland and defined hedges. The area of the site is approximately 23.35 hectares. As the site area extends greater than 1 hectare, a site-specific flood risk assessment is required. To comply with the requirements of the NPPF, matters related to flood risk and drainage are addressed within this report.



Report Aim and Formation

- 1.13. The principal aims of this report are to demonstrate that the proposed development complies with national and local planning policy in respect to flood risk and to demonstrate that a suitable drainage strategy can be provided as part of development.
- 1.14. This report will also summarise the impacts the development could have on flood risk to the surrounding area and outlines the mitigation strategies that will be implemented to minimise this risk.
- 1.15. The drainage design embraces the guiding principles of Sustainable Drainage Systems (SuDS) which are central to the design of the surface water drainage strategy for the proposed development.

Report Structure

- 1.16. This report addresses the requirements of revised NPPF and considers the following aspects:
- Section 2: Policy and Sources of Information – a review of policy relevant to the assessment and sources of information used to inform the assessment.
 - Section 3: Site Setting – a description of the site location, topography, geology and hydrology.
 - Section 4: Overview of Flood Risk – a review of data for flooding from all sources to determine the baseline flood risk to the site and an assessment of the impacts of the development on flood risk.
 - Section 5: Sequential Test and Exception Test – a description of the proposed development and a classification of the vulnerability in the context of the Sequential Test and Exception Test.
 - Section 6: Flood Risk Mitigation – the mitigation measures implemented to manage the potential flood risk to the development.
 - Sections 7 and 8: Drainage Strategy – a summary of appropriate strategies to manage the surface water and foul water from the site in the post development scenario.
 - Section 9: Conclusion – a summary of the development proposals in the context of site vulnerability and the requirements of the NPPF.



2.0 Policy and Sources of Information

Introduction

- 2.1. This chapter provides a review of policy relevant to the assessment and the available information on all sources of flood risk.

National Planning Policy

- 2.2. National Policy in relation to flood risk is set out in Section 14 of the National Planning Policy Framework, Dec 2024 (NPPF) and Planning Practice Guidance ID:7 for Flood Risk and Coastal Change, Aug 2022 (PPG). Flood Risk is discussed at Paragraphs 170 to 182 of the NPPF.
- 2.3. Paragraphs 173 to 176 discuss the sequential approach with respect to individual applications. Paragraph 174 refers to the Strategic Flood Risk Assessment (SFRA) that would form the basis of applying the Sequential Test for local authorities to allocate developments, whilst Paragraphs 177-179 relate to Exception Tests.
- 2.4. Paragraph 181 discusses the determination of planning applications stating:
'When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:
 - a) *Within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location.*
 - b) *The development is appropriately flood resistant and resilient, such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment.*
 - c) *It incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate.*
 - d) *Any residual risk can be safely managed; and*
 - e) *Safe access and escape routes are included where appropriate, as part of an agreed emergency plan.'*
- 2.5. The proposed development is for up to 430 dwellings at the site which covers approximately 23.35 hectares and would, therefore, be classed as a Major development because the site is greater than 10 dwellings. Paragraph 182 states:
'Sustainable drainage systems provided as part of proposals for major development should:
 - a) *Take account of advice from the lead local flood authority.*
 - b) *Have appropriate proposed minimum operational standards; and*
 - c) *Have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development.'*



- 2.6. The PPG sets out more specific guidance on how to apply and implement the NPPF policies. This includes guidance on when a Sequential Test is required and considerations on how to apply the test. In paragraph 023 of the PPG the aim of the sequential approach is clarified and includes the following:

‘The approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. ‘

- 2.7. In applying the Sequential Test to planning applications, NPPF paragraph 175 confirms specific development cases when the test is not applicable:

‘The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk).’

- 2.8. The PPG goes on to state when and how to apply the sequential Test to planning applications and in paragraph 027 states:

‘..... In applying paragraph 175 a proportionate approach should be taken. Where a site-specific flood risk assessment demonstrates clearly that the proposed layout, design, and mitigation measures would ensure that occupiers and users would remain safe from current and future surface water flood risk for the lifetime of the development (therefore addressing the risks identified e.g. by Environment Agency flood risk mapping), without increasing flood risk elsewhere, then the sequential test need not be applied.’

- 2.9. This FRA demonstrates how the proposed layout, design and mitigation measures for this development address the potential flooding across the site.

Environment Agency

- 2.10. The Flood and Water Management Act (2010) provides the Environment Agency (EA) a strategic overview role for all forms of flooding and coastal erosion. They also have direct responsibility for the prevention, mitigation and remediation of flood damage for main rivers and coastal areas. The EA is a statutory consultee in relation to flood risk and planning dependent upon criteria.
- 2.11. The EA Flood Map for Planning, EA Long Term Flood Risk Mapping and the Catchment Data Explorer websites have been interrogated in respect to flood risk extents and sources.

Local Authorities

- 2.12. The site lies within the administrative area of Wokingham Borough Council (WBC). WBC is the Local Planning Authority (LPA) and Lead Local Flood Authority (LLFA).
- 2.13. Planning guidance published by WBC regarding the flood risk was referred to in order to assess the methodology best suited to suit the local area. The following key documents were reviewed:
- WBC Adopted Core Strategy, Core Policy CP ‘Sustainable Development’ (adopted January 2010);



- WBC Local Plan Update (2023-2040) (dated February 2025);
 - WBC Local Plan Update Proposed Submission Plan (Regulation 19) (dated September 2024)
 - WBC Local Flood Risk Management Strategy (April 2015);
 - WBC Preliminary Flood Risk Assessment (PFRA) (dated June 2011) and PFRA addendum (dated 2017);
 - WBC Level 1 Strategic Flood Risk Assessment (SFRA) (dated May 2023); and
 - WBC Level 2 SFRA (dated August 2023).
- 2.14. WBC became the LLFA under the Flood and Water Management Act 2010. WBC provide guidance to assess, manage and inform flood risk.
- 2.15. As LLFA, WBC's Flood and Water Management Team provide a planning application drainage checklist to assist developers seeking planning permission for new sites by setting criteria to be met as part of the design of the drainage strategy and a list of documentation to be presented in the associated Flood Risk Assessment. A completed planning application drainage checklist is included within **Appendix B**.
- 2.16. WBC has permissive rights over any Ordinary Watercourses including land drainage ditches. If any work is required within the watercourse (improvements or crossings) then approval from the LLFA is required under the Flood and Water Management Act 1991.

Local Water Authority

- 2.17. Thames Water is responsible for the supply of clean water and the disposal of wastewater for the Shinfield and Arborfield area.
- 2.18. Information with regards to sewer and water main flooding contained within the SFRA has been reviewed as part of this FRA. All Water Companies have a statutory obligation to maintain a register of properties and areas which are at risk of flooding from the public sewerage system and is shown on the DG5 Flood Register.

Other Sources of Information

- 2.19. A desktop study of the site was carried out using the following websites to ascertain local features, hydrology and soil characteristics:
- DEFRA's Magic Map portal.
 - British Geological Survey (BGS) 'Geology of Britain' online viewer; and
 - Cranfield University 'Soilscapes' portal.
- 2.20. A site walkover was carried out on the 02/04/2025 which allowed observations of the topography and Ordinary Watercourses within the site.



- 2.21. Guidance with respect to Sustainable Drainage Systems (SuDS) is contained within DEFRA document Sustainable Drainage Systems, Non-statutory technical standards for sustainable drainage systems March 2015, CIRIA C753 The SuDS Manual and within the NPPF Planning Practice Guidance (PPG) – ‘Flood Risk and Coastal Change’.
- 2.22. Additional guidance on development and flood risk is contained within CIRIA C624 Development and Flood Risk – Guidance for the Construction Industry which identifies several key aims for a development to ensure it is sustainable in flood risk terms.

3.0 Site Setting

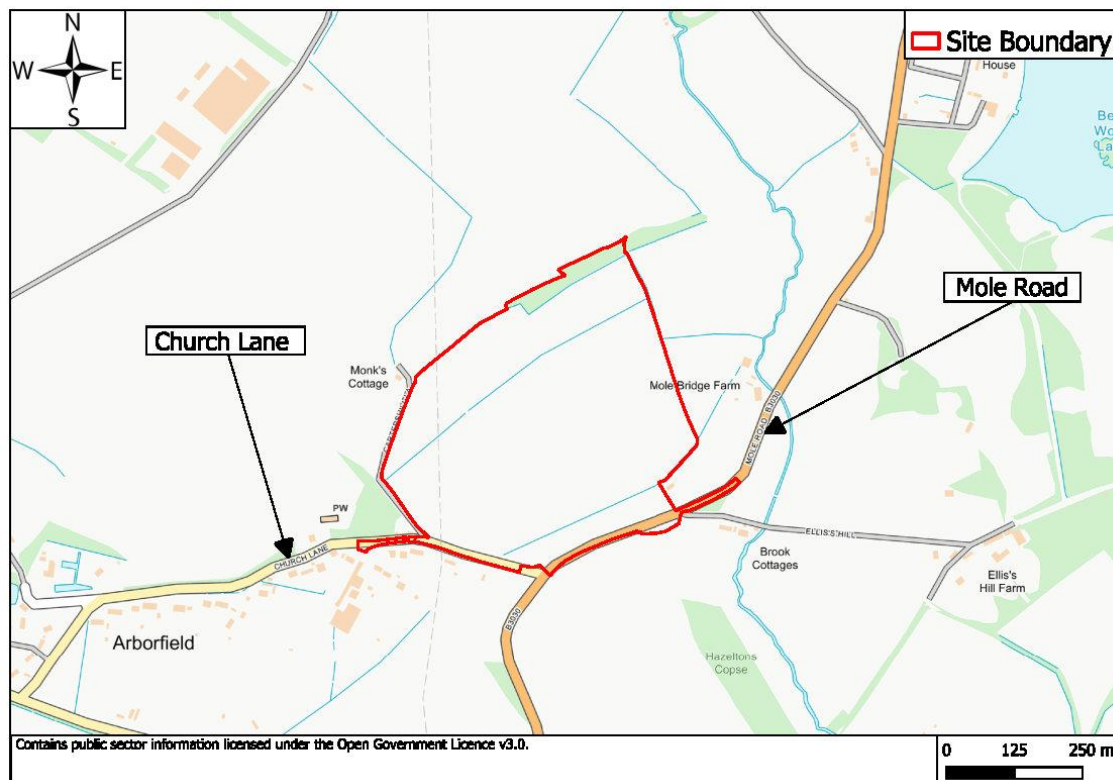
Introduction

- 3.1. This chapter provides a description of the site location, its topography, hydrological context, geology and hydrogeology.

Site Location

- 3.2. The site is located at land to the north of Mole Road. The nearest postcode is RG2 9JF. The site centre grid reference is 476165E, 167984N. The site location is shown in **Figure 1**.

Figure 1 - Site Location

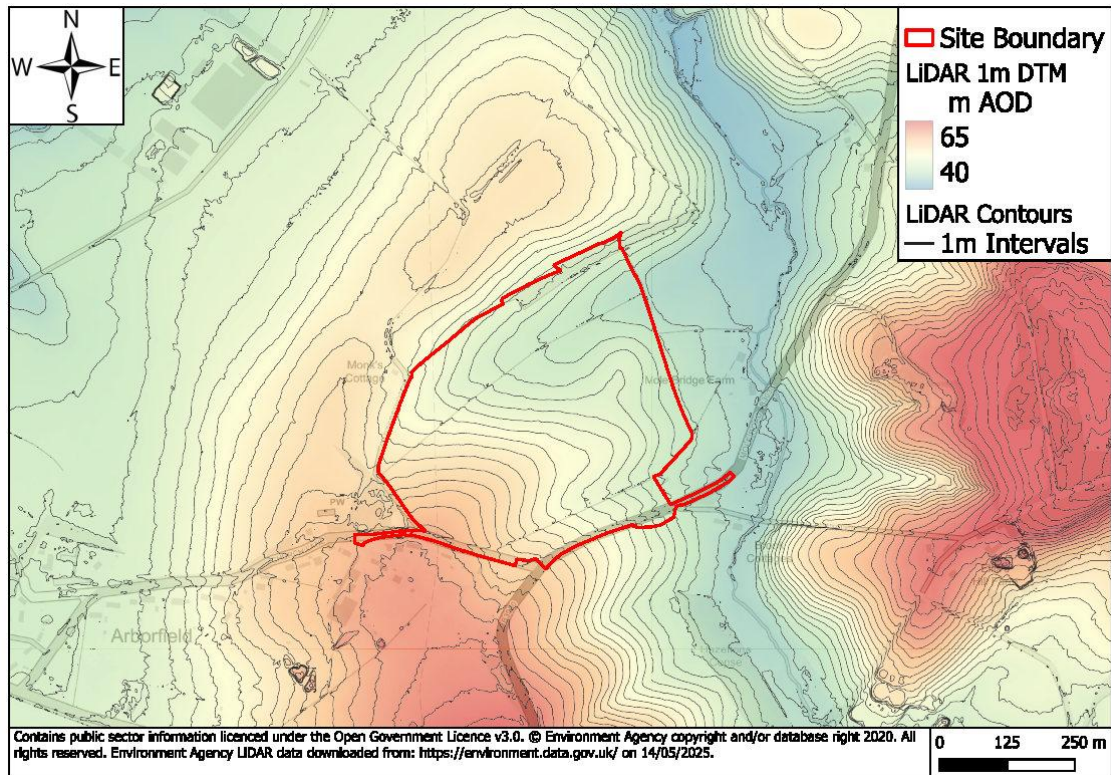


- 3.3. The site is located northeast of Arborfield and 2km east of Shinfield. The site boundary is bounded by Mole Road in the south and Mole Bridge Farm in the east.
- 3.4. The site covers an area of approximately 23.35 hectares.

Topography

3.5. The ground levels across the site are shown by LiDAR in **Figure 2**.

Figure 2 - Site Topography

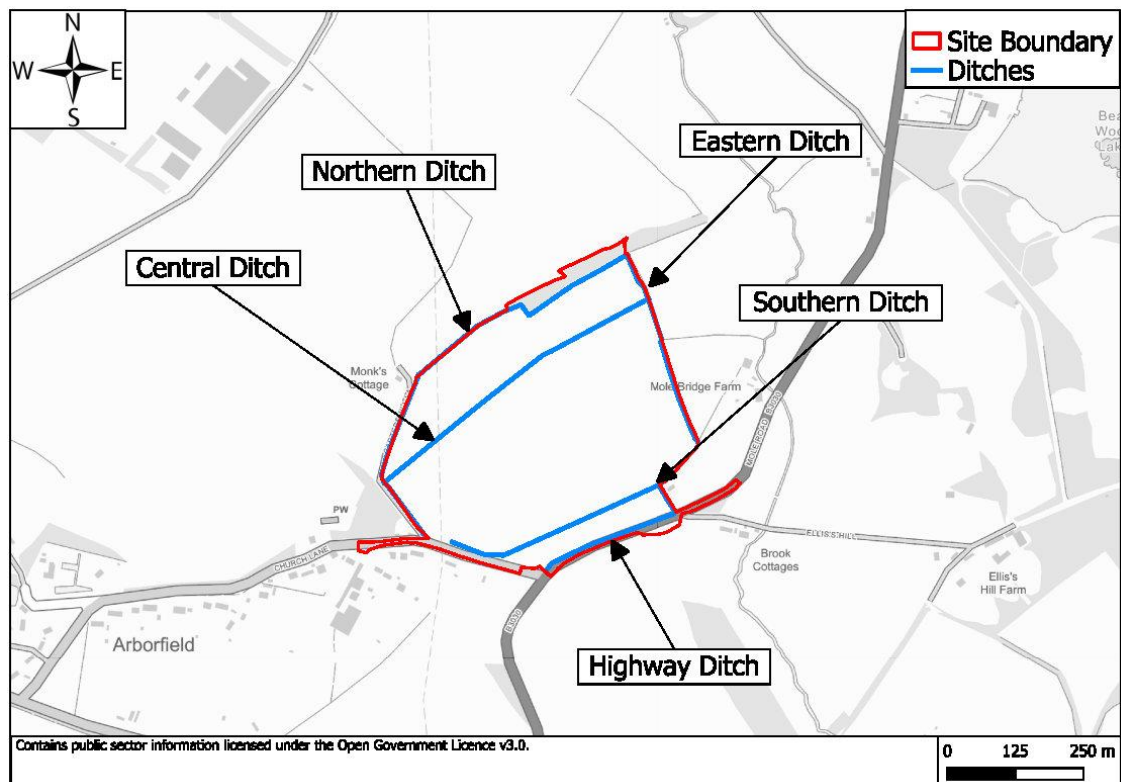


- 3.6. The LiDAR shows that the site slopes upwards from east to west. Ground levels across the site are between 45m AOD and 59m AOD. The highest ground levels are within the southwestern part of the site with an elevation of 59m AOD. The lowest ground levels are within the northeastern part of the site with an elevation of 45m AOD.
- 3.7. A topographical survey has been carried out. The survey data generally agrees with the LiDAR. A copy of the topographical survey is included within **Appendix A**.

Watercourses and Ditches

- 3.8. The nearest Main River is the Barkham Brook, which is located 230m east of the site. A site visit was undertaken on the 02/04/25. Ordinary Watercourses were found within the site. This is shown in **Figure 3**.

Figure 3 – Ditch Locations



- 3.9. **Figure 4, 5, 6, 7 and 8** show photographs of the ditches taken during the site walkover.

Figure 4 – Central Ditch



3.10. **Figure 4** shows a well-defined grassy channel within the central part of the site.

Figure 5 – Central Ditch



3.11. **Figure 5** shows the shallow vegetated ditch in the northern part of the site.

Figure 6 – Eastern Ditch



3.12. **Figure 6** shows a shallow and narrow hedgerow ditch along the eastern site boundary.

Figure 7 - Southern Ditch



3.13. **Figure 7** shows a shallow hedgerow ditch in the southern part of the site.

Figure 8 - Highway Ditch



3.14. **Figure 8** shows a grassy channel along Mole Road. The ditch contains a brick headwall with a pipe culvert.



Surface and Foul Water Sewers

- 3.15. Sewer asset records obtained from Thames Water show that there are no surface sewers within the site. A foul sewer is located in Church Lane, at the western edge of the site.
- 3.16. A copy of the Thames Water asset record is included within **Appendix A**.

Geology and Hydrogeology

- 3.17. The British Geological Survey (BGS) 'Geology of Britain' online viewer indicates that the geology underlying the site is London Clay Formation – Clay, Silt and Sand.
- 3.18. The Cranfield University 'Soilscapes' online viewer indicates that the soil underlying the site is Slowly permeable seasonally wet slightly acidic but base-rich loamy and clayey soils.
- 3.19. The DEFRA Magic Map online viewer indicates that the site lies outside any source protection zone (SPZ). The site lies within a Secondary A aquifer.
- 3.20. A Secondary A aquifer is described by the BGS as 'permeable layers capable of supporting water supplied at a local rather than strategic scale, and in some areas forming an importance source of base flow to rivers. There are generally aquifers formerly classed as minor aquifers'.

4.0 Overview of Flood Risk

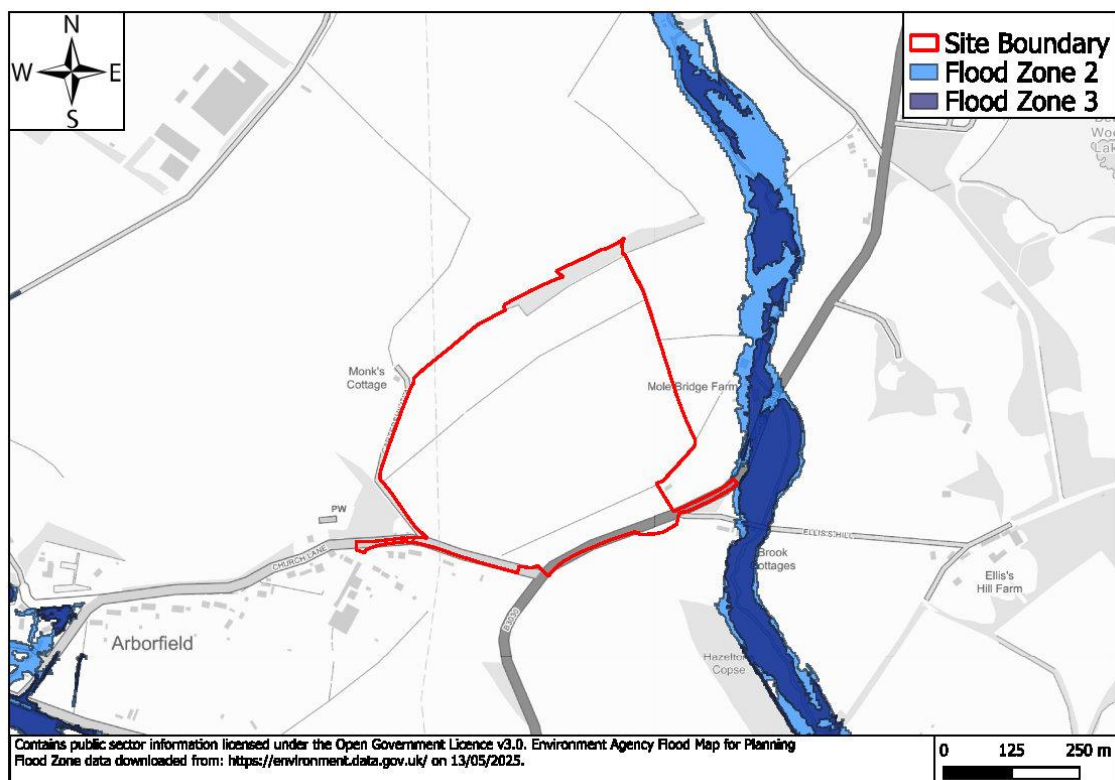
EA Flood Zone Map

4.1. The EA Flood Map for Planning provides an initial indication of the extent of Flood Zones. In the NPPF, Flood Zones are defined as follows:

- Flood Zone 1 'Low Probability' – Land less than 1 in 1,000 (0.1%) annual probability of river or sea flooding.
- Flood Zone 2 'Medium Probability' – Land between 1 in 100 (1%) and 1 in 1,000 (0.1%) annual probability of river flooding, or between 1 in 200 (0.5%) and 1 in 1,000 (0.1%) annual probability of sea flooding.
- Flood Zone 3 'High Probability' – Land at 1 in 100 (1%) or greater annual probability of river flooding, or 1 in 200 (0.5%) or greater annual probability of sea flooding.

4.2. Figure 9 shows the EA Flood Zone mapping.

Figure 9 – EA Flood Zone Map



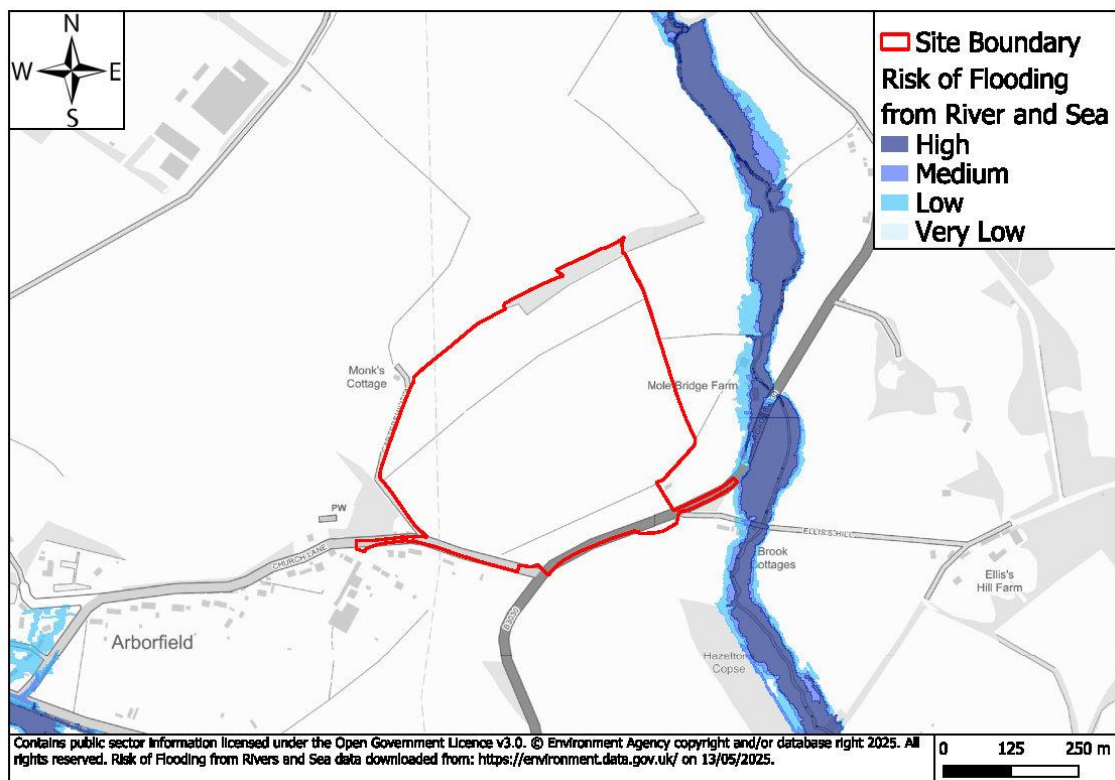
4.3. **Figure 9** shows that the entire site is within Flood Zone 1.

EA Long Term Flood Risk Mapping: Flooding from Rivers and Sea

4.4. The EA's Risk of flooding from Rivers and Sea mapping, updated in January 2025 shows areas at risk of flooding from rivers and sea taking into account the presence and condition of flood defences. The EA rivers and sea mapping defines flooding from rivers and sea based on the following:

- High Risk: 1 in 30 or more (3.3% or greater) annual probability
- Medium Risk: 1 in 100 to 1 in 30 (1% to 3.3%) annual probability
- Low Risk: 1 in 1,000 to 1 in 100 (0.1% to 1%) annual probability
- Very Low Risk: Less than 1 in 1,000 (0.1%) annual probability

Figure 10 – Long Term Flood Risk Mapping Rivers and Sea



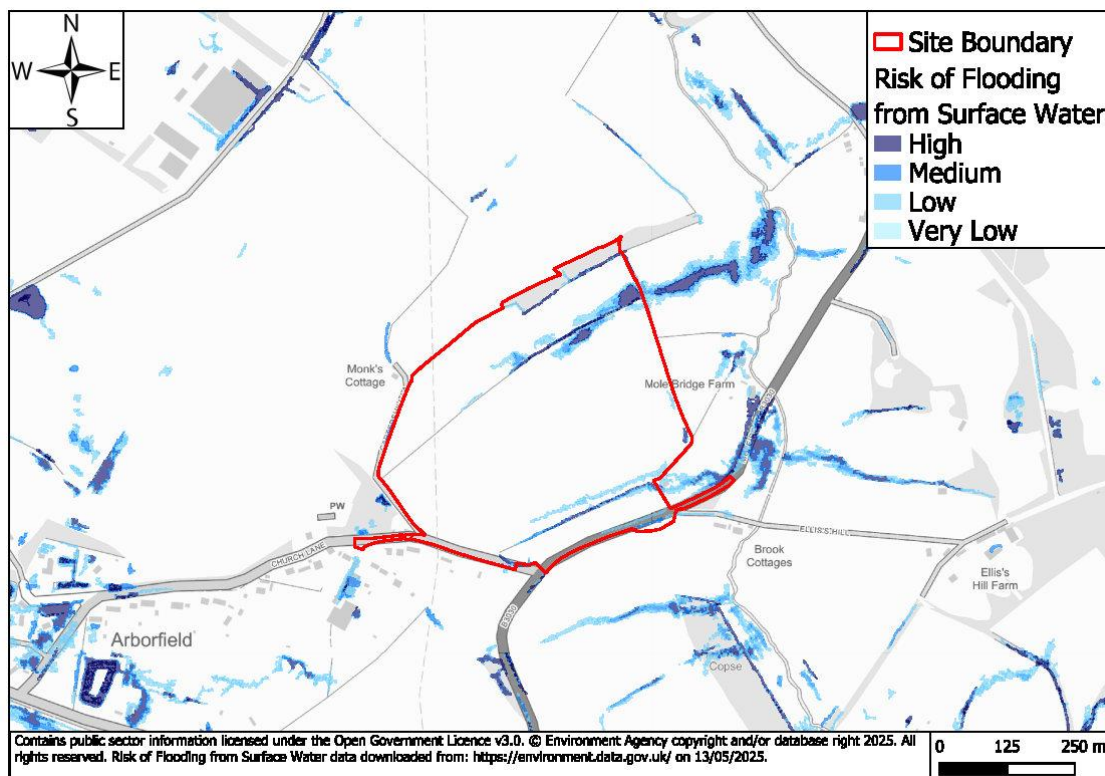
4.5. **Figure 10** shows the potential for flood risk from rivers and sea based on this mapping.

4.6. The mapping confirms that the site is not at risk of flooding from rivers and sea.

Flood Risk from Surface Water

- 4.8. The EA's Risk of Flooding from Surface Water mapping indicates areas that could be susceptible to surface water flooding during extreme rainfall events. The EA surface water mapping defines rainfall events based on the following:
- 1 in 30 (3.3%) annual probability 'High Risk'
 - 1 in 100 (1%) annual probability 'Medium Risk'
 - 1 in 1,000 (0.1%) annual probability 'Low Risk'
 - Lower than 1 in 1,000 (0.1%) annual probability 'Very Low Risk'.
- 4.9. The NPPF PPG – 'Flood Risk and Coastal Change' includes the 1 in 100 annual probability of surface water flood (including climate change) within the definition of the design flood event to be used to inform a FRA.

Figure 11 - EA Flood Risk from Surface Water



- 4.10. The EA Flood Risk from Surface Water mapping, Figure 11 shows that the majority of the site is not at risk of flooding from surface water. There are surface water flow routes of 'High', 'Medium' and 'Low' risk of flooding from surface water, which extend along the ditches which are tributaries of the Barkham Brook.
- 4.11. Therefore, the site is at low risk of flooding from surface water.



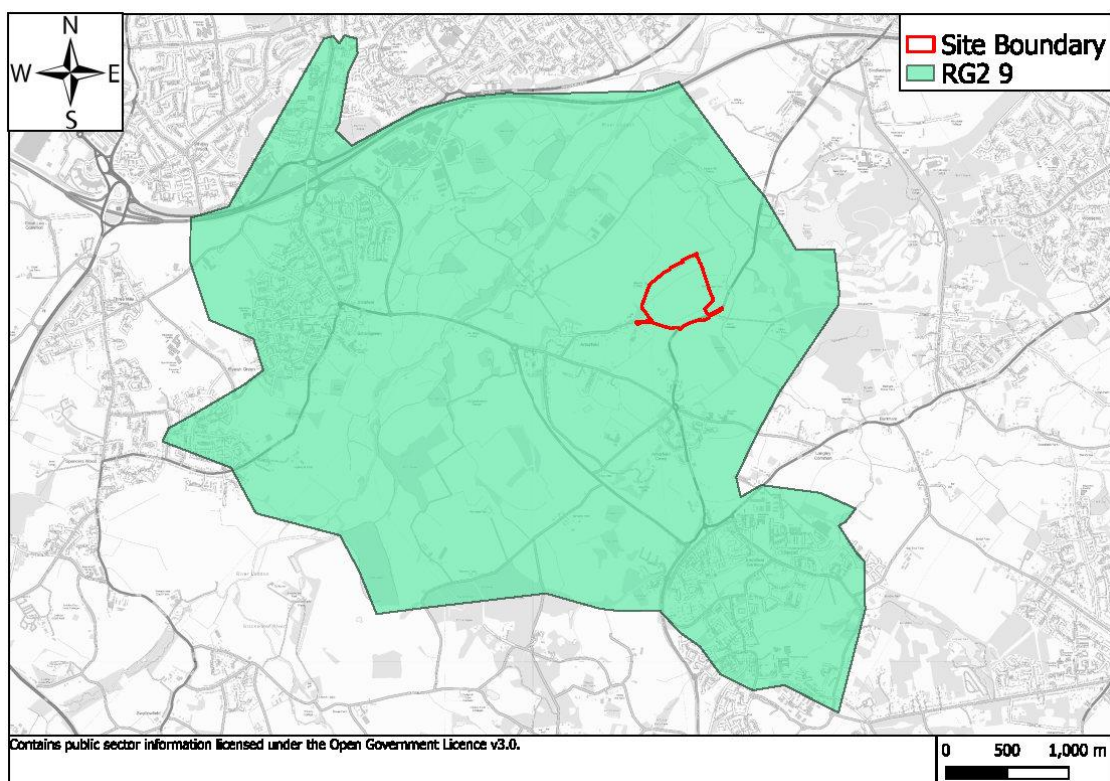
Flood Risk from Groundwater

- 4.12. Groundwater flooding has the potential to occur after prolonged periods of unusually high rainfall. During such periods, more water than usual infiltrates through the ground, raising the water table above its normal depth below the surface. Where the water table is at a shallow depth in any case, the water table can reach the surface. This can cause groundwater to merge with rainfall and cause localised flooding.
- 4.13. The WBC Level 1 SFRA (Appendix A Map D2) assesses the area for susceptibility to groundwater flooding. The mapping is included within **Appendix A**.
- 4.14. The mapping shows that the majority of the site has 25% susceptibility of groundwater flooding. The northwestern corner of the site has susceptibility of between 50% to 70% of groundwater flooding.
- 4.15. Since the majority of the site has low susceptibility to groundwater flooding the overall risk of groundwater flooding is considered to be low.

Flood Risk from Sewers

- 4.16. When exceeded, surcharged sewer networks can lead to flooding from backed up manholes and gully connections.
- 4.17. Thames Water Asset Location Plans (ALS/ALS/24/2025_5137033) show that there are no surface or foul sewers within the site or immediately adjoining. A copy of the Thames Water Asset Plans is included within **Appendix A**.
- 4.18. The WBC Level 1 SFRA includes a table of sewer flooding incidents recorded by Thames Water (January 2000-May 2022). During this period, there were 172 flooding incidents within the postcode area RG2 9.
- 4.19. Figure 12 shows the extent of the RG2 9 postcode area.

Figure 12 – Postcode Area



4.20. The WBC Level 1 SFRA reports 172 sewer flooding incidents within the postcode area RG2 9. However, **Figure 12** shows that the postcode area covers a significantly greater area than the site boundary. Moreover, Thames Water Asset Plans do not show any assets within the site boundary, suggesting it's unlikely that sewer flooding occurred within the site.

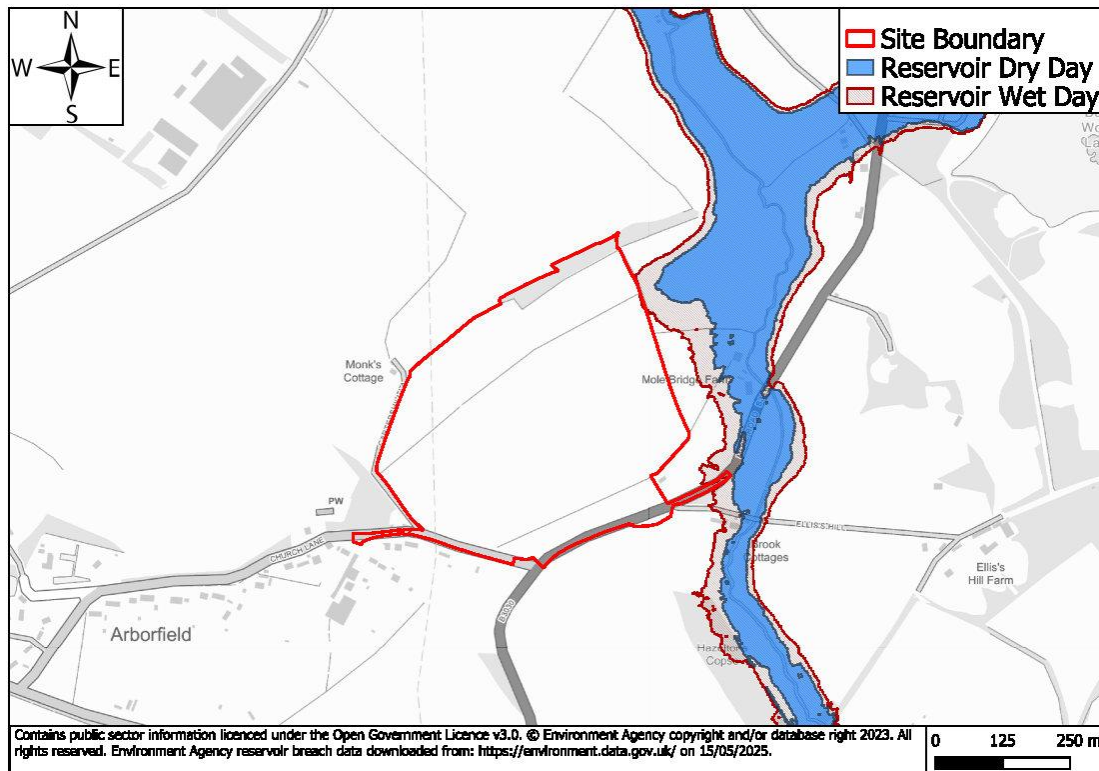
4.21. Therefore, the site is considered to be at low risk of flooding from sewers.

Flood Risk from Reservoirs

4.22. The EA flood risk from reservoirs mapping indicates areas that would be at risk of flooding in the event of a reservoir breach.

4.23. Figure 13 shows the flood risk from reservoirs.

Figure 13 - EA Flood Risk from Reservoirs



4.24. The mapping shows that the majority of the site is not at risk in the event of a reservoir breach. There is a small area within the northeast site boundary with a risk of flooding from reservoirs in a wet day scenario.

4.25. Therefore, the site is at low risk of flooding from reservoirs.

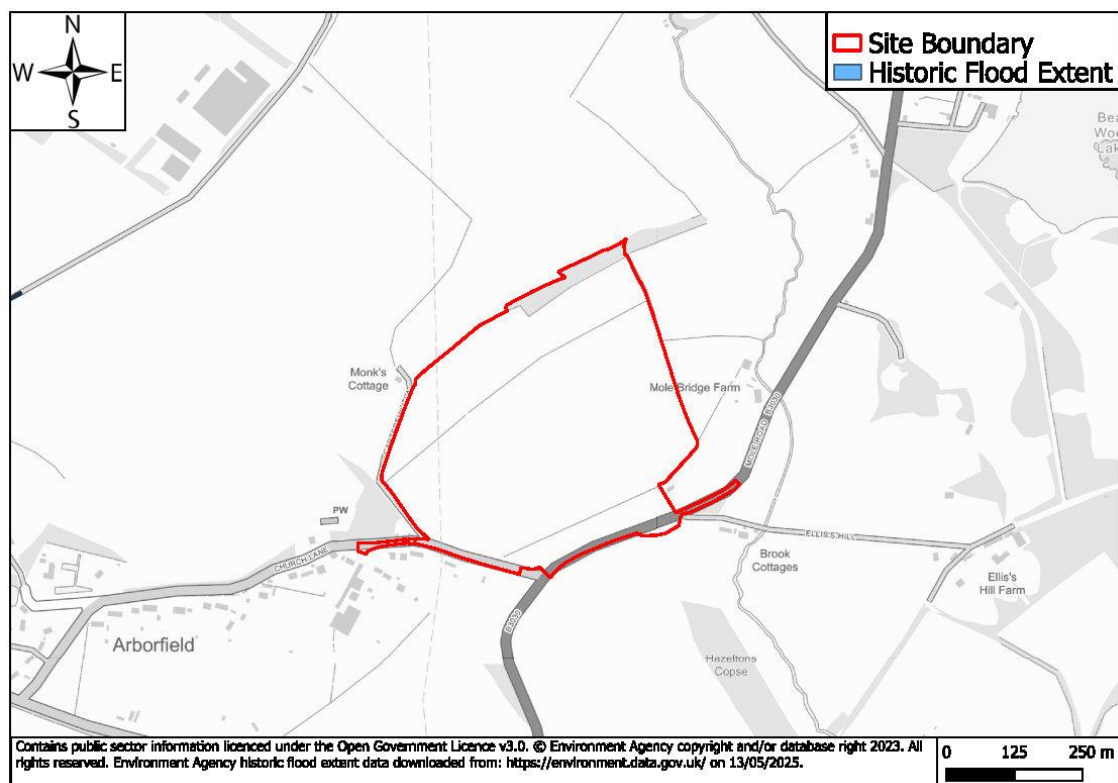
Flood Risk from Other Sources

4.26. The EA flood risk maps, WBC Level 1 and Level 2 SFRA indicate that the site is not at risk from other sources.

Historic Flooding

4.27. **Figure 14** shows the historic flood extent records held by the EA. The EA Historic Flood Map shows the maximum extent of recorded flood events.

Figure 14 - Historic Flood Extent



4.28. The mapping shows that the site has no record of historic flooding.



Flood Risk Summary

4.29. A summary of flooding from all sources is provided in Table 1.

Table 1 - Summary of Flood Risk

Source of Flooding	High	Medium	Low	Comments
Fluvial			✓	The EA Flood Map for Planning shows that the entire site is located within Flood Zone 1. The SC Level 1 SFRA mapping confirm the EA Flood Zones. The EA long term flood rivers and sea mapping shows that the sites are at low risk of flooding from rivers and sea.
Pluvial			✓	The EA Flood Risk from Surface Water mapping shows that the majority of the site is not at risk of flooding from surface water. There are surface water flow routes of 'High', 'Medium' and 'Low' risk of flooding from surface water, which extend from tributaries of the Barkham Brook. Therefore, the site is at low risk of flooding from surface water.
Groundwater			✓	The WBC Level 1 SFRA assesses the area for susceptibility to groundwater flooding. The mapping shows that the majority of the site has 25% susceptibility of groundwater flooding. The northwestern corner of the site has susceptibility of between 50% to 70% of groundwater flooding. Since the majority of the site has low susceptibility to groundwater flooding the overall risk of groundwater flooding is considered to be low.
Sewers			✓	Thames Water Asset Location Plans show that there are no surface or foul sewers within the site or immediately adjoining. The WBC Level 1 SFRA reports 172 sewer flooding incidents within the postcode area RG2 9. However, Figure 8 shows that the postcode area covers a significantly greater area than the site boundary. Moreover, Thames Water Asset Plans do not show any assets within the site boundary, suggesting it's unlikely that sewer flooding occurred within the site. Therefore, the site is considered to be at low risk of flooding from sewers.



Source of Flooding	High	Medium	Low	Comments
Reservoirs canals and other artificial sources			✓	The EA flood risk from reservoir mapping shows that the majority of the site is not at risk in the event of a reservoir breach. There is a small area within the northeast site boundary with a risk of flooding from reservoirs in a wet day scenario. Therefore, the site is at low risk of flooding from reservoirs. EA and WBC Level 1 and Level 2 SFRA mapping do not indicate the site to be at risk of flooding from other sources.



5.0 Sequential Test and Exception Test

NPPF Sequential Test and Exception Test

- 5.1. NPPF states that Local Planning Authorities allocating land for development should apply the Sequential Test to demonstrate that there are no reasonably available sites in areas with a lower probability of flooding that would be appropriate to the type of development or land use proposed.
- 5.2. Whilst yet not formally allocated as part of the Development Plan, the sequential and Exception Tests have been used to inform WBC housing strategy, which included the application site. The site, land at Newlands Farm, is allocated with the WBC Local Plan Update (Policy SS13: Loddon Valley Garden Village).
- 5.3. The WBC Local Plan Update states:

‘The development passes the sequential test for allocation because there is a need to identify a sufficient supply of dwellings and employment floorspace to meet needs. In line with the preferred spatial strategy, a strategic site is required to help meet development needs.’
- 5.4. The NPPF states

‘Where planning applications come forward on sites allocated on the development plan through the Sequential Test, applicants may not need to apply the Sequential Test’. Therefore, the Sequential Test is not required.
- 5.5. The Sequential Test is not required, and therefore the Exception Test is not required.



6.0 Flood Mitigation Strategy

Sequential Approach

- 6.1. The NPPF encourages a 'sequential approach' in master planning for new development: locating the more vulnerable uses of the development in the areas of lowest flood risk from all sources.
- 6.2. The masterplan reflects this sequential approach as the surface water flow routes shown within the EA surface water flood maps have been accounted for within the masterplan, as watercourse corridors have been retained.

Ground Floor Levels

- 6.3. Ground floor levels should be set a minimum of 150mm above the surrounding ground level to mitigate the residual flood risk from surface water runoff events. It is recommended that surrounding ground levels are appropriately contoured to direct surface water away from the development.

Floodplain Storage and Flow Routing

- 6.4. The proposed built development areas are located outside of the fluvial flood extents for the design event. There is therefore no impact on fluvial floodplain storage or conveyance as a result of the proposed built residential development.

Safe Access

- 6.5. The residential development areas are located outside of areas of flood risk, which ensures continuous safe access for the development.

Residual Risk

- 6.6. The NPPF PPG – 'Flood Risk and Coastal Change' defined residual risk as coming from 'flood risk management infrastructure' and the 'residual risk to a development once any site-specific flood mitigation measures are taken into account'.
- 6.7. Residual risk to the site includes a breach in the raised flood defences, the failure of a reservoir and a flood event greater than the designed standards.
- 6.8. The residual risk to the site is low. The EA AIMS dataset which contains information of flood defences indicates that the site does not benefit from raised flood defences. The EA mapping for reservoir breaches indicates that the site is not risk of flooding in the event of a reservoir breach. The 'More Vulnerable' residential development is located outside of the 1 in 1,000 annual probability flood extent.



7.0 Surface Water Drainage

Introduction

- 7.1. This chapter provides details of the surface drainage strategy and includes measures to drain the proposed development site. The site is bounded by hedges and ditches which would intercept any overland flow from off site, therefore no allowance has been made within the proposed on site networks for overland flow generated beyond the site boundaries.

Overall Strategy

- 7.2. The proposed drainage strategy has been designed to the requirements of the NPPF by providing a comprehensive drainage system which embraces the SuDS philosophy and key principles. The utilisation of Sustainable Drainage Systems (SuDS) not only provides the benefit of controlling waters at source and online treatment of collected surface water but also allows enhanced aesthetics through improved landscaping, biodiversity, and ecological opportunities.
- 7.3. These features offer a holistic treatment train and management system to the benefit of new residents, members of the wider community, downstream receptors and the environment.
- 7.4. The alteration of natural surface water flow patterns through developments can lead to problems elsewhere in the catchment, particularly flooding downstream. Changes of land uses can have significant downstream impacts where existing drainage systems may not have sufficient capacity for any additional surface water flow.
- 7.5. A surface water management strategy is therefore required to manage and reduce the flood risk posed by the surface water runoff from the site. The surface water drainage arrangements for any development site should be such that the volumes and peak flow rates of surface water leaving a developed site are no greater than the rates of the pre-development scenario, unless specific offsite arrangements are made and result in the same net effect.
- 7.6. Sustainable water management measures (SuDS) should be introduced to control the surface water runoff from the proposed development site, therefore managing the flood risk to the site and surrounding areas, from the surface water runoff.
- 7.7. The Construction Industry Research and Information Association, CIRIA's C690 states the following:
- **Prevention** – the use of good site design and housekeeping measures on individual sites to prevent runoff and pollution (e.g. minimise areas of hard standing surfaces)
 - **Source Control** – control of runoff at or very near its source (such as the use of rainwater harvesting)
 - **Site Control** – management of water from several sub-catchments (including routing water from roofs and car parks to one or several soakaways for the entire site)
 - **Regional Control** – management of runoff from several sites, typically in a detention basin or wetland.



- 7.8. The SuDS Manual 2015 (C753) provides best practice guidance on the planning, design, construction, operation and maintenance of SuDS. This document provides guidance to ensure that SuDS are planned and designed to maximise the opportunities and benefits of surface water management.
- 7.9. The four main categories of benefits that can be achieved by SuDS, referred to as the four pillars of SuDS design, are:
- **Water quantity** – control the quantity of runoff to support the management of flood risk, and maintain and protect the natural water cycle;
 - **Water quality** – manage the quality of the runoff to prevent pollution
 - **Amenity** – create and sustain better places for people
 - **Biodiversity** – create and sustain better places for nature.
- 7.10. Supplemental to CIRIA guidance, Document H of the Building Regulations 2015 sets out three possible options to discharge surface water runoff. Rainwater shall discharge to one of the following, listed in order of priority:
- An adequate soakaway or some other adequate infiltration system; or where that is not reasonably practicable,
 - A watercourse; or where that is not reasonably practicable
 - A sewer.
- 7.11. As the underlying geology is not conducive to the use of infiltration type techniques (Ref: Para 3.17 above), the surface water drainage proposals will be designed to attenuate runoff with controlled discharge to the existing local watercourses i.e. the existing open field ditch on site which would be feasible point of discharge.
- 7.12. Implementation of SuDS will ensure that flood risk downstream is not increased due to the proposed development. These features will also provide positive improvements to the quality of surface water runoff.
- 7.13. The following SuDS components are deemed applicable to the site:
- Pervious surfacing systems – structural surfaces that allow water to penetrate into a granular layer thus providing storage and treatment, e.g. pervious paving.
 - Conveyance systems – components that convey flows to downstream storage systems, e.g. swales and filter drains.
 - Storage systems – components that control flow, and possibly volumes, by storing water and releasing it slowly, e.g. geocellular units, attenuation basins and wetlands.
 - Treatment systems – components that remove or facilitate the degradation of contaminants present in runoff, e.g. filter strips and proprietary treatment systems.



Pre and Post Development Areas/Rates

- 7.14. To quantify any potential increase in surface water runoff, the existing Greenfield/Pre-Development runoff rate from the site must be determined. The rates of runoff have been determined using the current 'industry best practice' guidelines as outlined in the Interim Code of Practice for SuDS. The recommended methodology for sites up to 50 hectares in area is the ICP SuDS method.
- 7.15. An assessment of existing surface water runoff has been undertaken to determine the potential surface water options and attenuation requirements for the site utilising the following parameters taken from the UK Centre for Ecology & Hydrology Flood Estimation Handbook Web Service:
- NGR: SU 76287 67965
 - BFIHOST: 0.333
 - BFIHOST19: 0.393
 - PROPWET: 0.29
 - SAAR6190: 649mm
 - Q_{BAR} / Q_{MED} Factor: 1.14
- 7.16. The calculated Greenfield run off discharge rates, based on a discharge rate per hectare of impermeable area, are as presented in Table 2. The corresponding runoff outputs created with H R Wallingford Greenfield runoff rate estimation tool can be found within Appendix C.

Table 2 - Pre-Development Runoff Rates/Volumes per Hectare

Annual Probability	Greenfield/Pre-Development Runoff Rate per hectare (l/s)	Greenfield/Pre-Development Volume 360 minute storm (m ³ /ha)
1 in 2 year event	4.43	99
QBar	5.03	-
1 in 30 year event	11.57	235
1 in 100 year event	16.05	293

- 7.17. Based on the Illustrative Masterplan, it has been conservatively estimated that the impermeable surfaces will be approximately 65% of the developable area. Depending upon how future Reserved Matters Site Layouts evolve, this percentage typically reduces slightly to around 55-60%.
- 7.18. The use of 65% therefore provides for a robust assessment which allows for fluctuations in residential density, and future urban creep of up to 10% on private curtilage areas, which typically results in approximately 5% of the total area, in accordance with The SuDS Manual (CIRIA 753).



- 7.19. In order to comply with best practice as stipulated in EA Report SC030219 'Rainfall Runoff Management for Developments', proposed discharge rates should be restricted to one of two methods for all storms up to and including the 1 in a 100 year storm event plus a 40% allowance for climate change.

Variable Greenfield discharge rates

- 7.20. This would require traditional onsite attenuation to hold back flows controlled by a complex control device, such as multiple vortex control devices. Discharge rates would be set so as not to exceed the pre-development 1in1, 1in30 and 1in100 year runoff rates set out in **Table 2** based on the appropriate catchment area.
- 7.21. In addition to this onsite attenuation, consideration of Long Term Storage would also be necessary given the increase in discharge volume generated by the proposed development, over and above that pre-development. This storage would need to be released into the surrounding watercourses at a low rate of 2.0 l/s/ha. This would normally be controlled by a secondary attenuation area and supplemental control device.
- 7.22. The Long Term Storage (LTS) requirement calculations based upon CIRIA EQ 24.10, have been included in Appendix C with the calculated value being 134m³/ha.
- 7.23. The drainage simulation software Causeway Flow has been used to determine the combined 100 + 40% Climate Change Long Term and basic attenuation requirements per hectare of impermeable catchment.

Table 3 Variable Rate Discharge Attenuation Storage Volumes

Attenuation	Volume requirements (per hectare of impermeable catchment)
Attenuation Volume	865m ³
Long Term Storage (Discharged at 2 l/s/ha)	134m ³
Total Attenuation Required	999m³

1. Qbar Greenfield discharge rate

- 7.24. Alternatively, all discharge flows could be restricted to Qbar. This would negate the requirement for Long Term Storage and again flows would be attenuated on site and discharged utilising an onsite control device, such as a vortex control device. This normally requires a greater volume of attenuation.
- 7.25. For the purposes of this report and to provide a robust analysis, all attenuation requirements have been calculated utilising all discharge flows restricted to Qbar, as this is normally the worst case scenario. Table 2 establishes the 'per hectare' calculation of Qbar as being 5.03 litres/second.
- 7.26. The use of Qbar gives a value for the average annual peak runoff rate, this provides a comprehensive SuDS scheme with the volume runoff being reduced for intense storms. However, either method described above is viable and will be investigated further during detailed design.



With the above in mind, and having assessed limiting the offsite discharge rate to Qbar, the anticipated attenuation volumes for a 100 year storm with a 40% allowance for climate change are as follows:

Table 4 - Calculated Attenuation Volumes based on Qbar

Attenuation	Volume requirements (per hectare of impermeable catchment)
Total Attenuation Required	1024m³

- 7.27. It likely that at the detailed design a mixture of both strategies may be beneficial as complexities can lie within the use of the variable discharge rates especially when used at source but the reduction of the required storage volumes can have other benefits for the use of the development such as dedicated green space areas and play areas.

Surface Water Proposals

- 7.28. It is proposed to provide a network of trapped gullies, pipes and Sustainable Drainage (SuDS) features to collect the surface water runoff from impermeable areas such as roads, roofs and driveways. The traditional systems will work in combination with such features as permeable paving, roadside swales and filter drains, within the residential parcels and green blue infrastructure corridors, to filtrate, store and transport water to attenuation basins, providing storage during high return period events, and water quality benefits.
- 7.29. The final attenuation basins will drain, with a controlled discharge into the existing ditch on the eastern side of the site.
- 7.30. At this stage of the design process, spatial provision has been made for the basins to hold the entire attenuation volume. However, as design develop, it is anticipated SuDS features within the catchments, such as permeable paving, swales and filter drains will assist in reducing the volume required in the basins. These features will provide filtration at source and on plot SuDS to mimic the existing greenfield conditions as well as enhance the green blue corridors through the site.
- 7.31. Drawing HD165-OUT-500, a copy of which is included within Appendix C, provides a high level overview of the drainage proposals together with the estimated requirements for the required storage and SuDS features for the parcels within the various zones of the proposed development.
- 7.32. The banks of the SuDS basins will be designed in accordance with the SuDS Manual C753 in respect to having a maximum gradient of 1 in 5 and an appropriate freeboard above the maximum water level. This allows landscaping of both wetland and wildflower mixes to provide an appropriate landscape context in the vicinity of the features through the provision of an aquatic shelf.
- 7.33. Open SuDS features will be designed so as not to compromise the safety of residents, visitors and their property. Generally open boundaries are provided, and perimeter planting could be utilised to define the extents of the features.



- 7.34. Proposed discharge rates will be restricted to Q_{bar} for all storm events up to and including the 1 in 100 year storm event plus 40% allowance for climate change. This would negate the requirement for Long Term Storage and flows would be attenuated on site and discharged utilising an onsite flow control device such as a hydrobrake.
- 7.35. All conveyance systems will be designed to ensure no surface flooding in 1 in 30 year storm event, in accordance with industry standard, with all attenuation features designed to allow for the 1 in 100 year storm event plus 40% climate change allowance.
- 7.36. The proposals draw reference to the DEFRA document Sustainable Drainage Systems, Non-statutory technical standards for sustainable drainage systems June 2025, as well as CIRIA C753 The SuDS Manual.
- 7.37. This proposal identifies the principal components of the surface water strategy and is subject to further detailed localised investigations as part of the subsequent Reserved Matters applications. These assumptions are subject to evolution as the design develops..
- 7.38. There is scope to utilise source control techniques (such as swales, granular strips and permeable paving) which will assist with the reduction of larger attenuation storage features. This should be embraced and investigated as the project progresses.
- 7.39. Subject to the provision of additional geotechnical information, the attenuation basins may require partial lining to protect against the ingress of natural groundwater. Such lining provides the ability to create localised, small permanent bodies of water which adds landscaping and biodiversity opportunities to the scheme.

Exceedance Flood Routing

- 7.40. Flows in excess of the above design storms, which may flood from the network for storms in excess of the 1 in 100 year storm plus 40% climate change, will be kept within the internal road network, until such time as they can be directed into adjacent landscaping areas or existing vegetation/woodland. This ensures that no onsite or offsite residential units are afforded an increased level of protection from flood waters until such time as the rain events become significant.

Water Quality Improvements

- 7.41. CIRIA report C753 The SuDS Manual outlines the methodology for assessing water quality risks associated with new development. This is a simple index approach which provides a high level scoping analysis of the land usage and gives guidelines for appropriate treatment stages.
- 7.42. This process identifies features necessary to provide adequate substance removal in line with Environment Agency requirements. This is a three step process of Allocation, Mitigation and Review.

Surfaces generating runoff are 'graded' on their potential to contribute to various harmful pollutants and gives each surface a risk of pollution from each element. An extract of Table 26.2 within the SuDS Manual is set out below.



Table 5 - Extract from Table 26.2 SuDS Manual

Land Use	Pollution Hazard Level	Total Suspended Solids	Metals	Hydrocarbons
Residential Roofs	Very Low	0.2	0.2	0.05
Other Roofs	Low	0.3	0.2-0.8	0.05
Low traffic residential roads and non-residential parking with infrequent change.	Low	0.5	0.4	0.4
Commercial yard, parking with frequent change, other roads,	medium	0.7	0.6	0.7
Sites with heavy pollution	High	0.8	0.8	0.9

- 7.43. Historically, PPG3 documentation would recommend that pollutants were removed utilising oil separators, but since its superseding, more recent guidance has shifted to the use of SuDS features to remove pollutants; thereby providing significant improvements in treatment.
- 7.44. The use of non-mechanical features decreases the requirements for maintenance and increase natural biodiversity. That said, the SuDS Manual does not remove the possibility of utilising separators, so long as they are considered in partnership with a comprehensive overall SuDS regime.
- 7.45. Without adequate treatment, the pollutants would cause damage if they were to enter the watercourse or water table in large volumes. The use of SuDS features to slow down and degrade these pollutants is critical to the provision of an acceptable discharge.
- 7.46. The respective cleansing abilities of common SuDS features are given by corresponding mitigation indices within the SuDS Manual. An extract of Table 26.3 is set out overleaf.

Table 6 - Extract from Table 26.3 SuDS Manual

Type of SuDS component	Total Suspended Solids	Metals	Hydrocarbons
Filter strip	0.4	0.4	0.5
Filter Drain	0.4	0.4	0.4
Swale	0.5	0.6	0.6
Bioretention system	0.8	0.8	0.8



Type of SuDS component	Total Suspended Solids	Metals	Hydrocarbons
Permeable Paving	0.7	0.6	0.7
Detention Basin	0.5	0.5	0.6
Pond	0.7	0.7	0.5
Wetland	0.8	0.8	0.8

7.47. The individual pollution indices are totalled, with the first SuDS component utilising its full value and subsequent downstream SuDS features acting with 50% efficiency. This provides a realistic strategy which mimics the reduced cleansing effectiveness as the concentration of a pollutant decreases along the SuDS train.

7.48. In line with Environment Agency guidance, before the design phase is concluded, the proposals are reviewed and analysed in order to identify potential shortcomings and to ensure that adequate volume of SuDS features are provided to mitigate the risk of pollution from each source.

SuDS Maintenance Strategy

7.49. For the water treatment effects of SuDS features to remain effective, a comprehensive maintenance strategy should be implemented.

7.50. During construction, maintenance of SuDS features should be undertaken by the Contractor. Upon completion, the assets should be passed over to the Management Company, statutory authority, or community group commissioned to maintain the features in perpetuity.

7.51. As part of the strategy, a regular maintenance regime will be created, which consists of several primary measures required to ensure the longevity of the system. These should be undertaken on a regular basis to ensure consistent performance. Typical maintenance activities consist of:

- Inspecting and reporting; relatively regular review of the condition identifying issues and providing resolutions. Periodic review from the maintenance contractor;
- Litter and debris removal;
- Grass trimming, overall cutting and localised strimming preventing blockages;
- Weed and evasive plant control;
- Shrub management;
- Aquatic and shoreline vegetation management;
- Sweeping pervious surfaces; and
- Oil removal from proprietary systems.



- 7.52. A remedial maintenance schedule would be recommended as part of the handover of the SuDS features, remedial maintenance is required to provide repairs to the system and monitor long term damage ensuring the system remains consistently productive. The schedule could consist of;
- Structure rehabilitation and repair;
 - Infiltration surface rehabilitation;
 - Scarifying to remove “Thatch”;
 - Spiking or Tining the soil;
 - Air pressure treatment.
- 7.53. The maintenance schedule contents and timing will depend upon multiple factors including usage, contents of water utilising the system, location and biology. To this end, it is suggested that the schedule be finalised as part of detailed design; ensuring the most comprehensive maintenance schedule is incorporated for the phase in hand.
- 7.54. Community outreach can be undertaken as part of the development, which will raise awareness on the importance of SuDS to both flood risk and water quality in the local area. Imparting the new residents with knowledge on the risks associated with pollution to the surface water drainage system is key, as is the direct effect their actions may have on water quality and biodiversity in the area.

Adoption and Ownership

- 7.55. The drainage system is designed to the appropriate standards including the new Sewerage Sector Guidance (SSG), the Building Regulations and the requirement of the National Planning Policy Framework.
- 7.56. The intention of adoption and ownership of drainage and SuDS is as follows:
- Surface water sewers within development parcels to be offered for adoption to Thames Water, or a NAV, under the Section 104 process of the Water Industry Act.
 - Surface water highway drains, gullies and leads within adopted roads to be maintained by the Highway Authority.
 - Above ground attenuation (i.e. swales and basins) to be maintained by a private maintenance company funded by residential properties or subject to agreement with the Local Authority.
 - SuDS features serving single properties, for example, permeable paved driveways to single dwellings, will be owned and maintained by the owner of that property.
- 7.57. Suitable adoption and maintenance regimes for SuDS should be submitted in support of the Reserved Matters application.



8.0 Foul Water Drainage

Introduction

- 8.1. This chapter provides details on the proposed foul water drainage strategy and measures to convey effluent.

Overall Strategy

- 8.2. There are currently no public sewers located within the site, and therefore a new connection will need to be established to the Thames Water sewers in the vicinity of the site.
- 8.3. An initial predevelopment enquiry has been raised with Thames Water requesting a connection into the existing network in Church Lane to the west of the site (refer to Appendix C for plan showing point of connection).
- 8.4. Thames Water have responded stating that there is insufficient capacity at the downstream Arborfield Sewage Treatment works to accommodate the site and that modelling needs to be undertaken to determine the extent of off site reinforcement works required. Thames Water will not commence modelling until they are confident that development will take place, for example once outline planning permission has been granted. Therefore at this stage there is nothing further that can be done to secure the connection. (Refer to Appendix C)
- 8.5. Due to the topography of the site, it will not be possible to discharge to the existing Thames Water sewer by gravity and so spatial provision has been made in the south east of the site for a pump station.
- 8.6. It is anticipated that the onsite sewerage network will be offered to Thames Water or a NAV for adoption under at S104 agreement. Therefore, the on site network and pumping station will be designed in accordance with the new Sewerage Sector Guidance (SSG).



9.0 Conclusion

Flood Risk

- 9.1. The EA Flood Risk mapping has been reviewed alongside the Wokingham Borough Council (WBC) Preliminary Flood Risk Assessment (PFRA) and Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA).
- 9.2. This Flood Risk Assessment (FRA) concludes that:
- The entire site lies within Flood Zone 1.
 - The EA Flood Risk from Surface Water mapping shows that the majority of the site is not at risk of flooding from surface water. There are surface water flow routes of 'High', 'Medium' and 'Low' risk of flooding from surface water, which extend along the tributaries of the Barkham Brook. Therefore, overall, the site is at low risk of flooding from surface water.
 - The WBC Level 1 SFRA assesses the area for susceptibility to groundwater flooding.
 - The mapping shows that the majority of the site has 25% susceptibility of groundwater flooding. The northwestern corner of the site has susceptibility of between 50% to 70% of groundwater flooding. Since the majority of the site has low susceptibility to groundwater flooding the overall risk of groundwater flooding is considered to be low.
 - The WBC Level 1 SFRA reports 172 sewer flooding incidents within the postcode area RG2 9. However, **Figure 8** shows that the postcode area covers a significantly greater area than the site boundary. Moreover, Thames Water Asset Plans do not show any assets within the site boundary, suggesting it's unlikely that sewer flooding occurred. Therefore, the site is considered to be at low risk of flooding from sewers.
 - The mapping shows that the majority of the site is not at risk in the event of a reservoir breach. There is a small area within the northeast site boundary with a risk of flooding from reservoirs in a wet day scenario. Therefore, the site is at low risk of flooding from reservoirs.
- 9.3. In summary, the site is at low risk of flooding from all sources.

Sequential Test and Exception Test

- 9.4. Whilst yet not formally allocated as part of the Development Plan, the sequential and Exception Tests have been used to inform WBC housing strategy, which included the application site. The site, land at Newlands Farm, is allocated within the WBC Local Plan Update (Policy SS13: Loddon Valley Garden Village).
- 9.5. The WBC Local Plan Update states:
- 'The development passes the sequential test for allocation because there is a need to identify a sufficient supply of dwellings and employment floorspace to meet needs. In line with the preferred spatial strategy, a strategic site is required to help meet development needs.'



9.6. The NPPF states ‘Where planning applications come forward on sites allocated on the development plan through the Sequential Test, applicants may not need to apply the Sequential Test’. Therefore, the Sequential Test is not required.

9.7. The Sequential Test is not required, and therefore the Exception Test is not required.

Mitigation Strategy

9.8. Ground floor levels should be set a minimum of 150mm above the surrounding ground level to mitigate the residual flood risk from surface water runoff events. Surrounding ground levels should also be appropriately contoured to direct surface water away from houses.

9.9. The surface water flow along the Ordinary Watercourses will be managed through the surface water drainage strategy.

9.10. The proposed surface water drainage strategy will manage the flood risk posed by uncontrolled surface water runoff from the site. Any increase in surface water run-off can be managed using SuDS source control techniques as well as attenuation features to provide storage in extreme storm events. This provides the minimum of two treatment storage stages which is in accordance with the recommendations of CIRIA C753. All surface water drainage systems will be designed to restrict drainage discharge rates to QBAR runoff rates and store the balance of water for all events up to and including the 1 in 100 year event including an allowance for a 40% increase in rainfall intensities as a result of climate change and urban creep.

Summary

9.11. This FRA demonstrates that the proposed development complies with national and local planning policy with respect to flood risk and drainage. The risk of flooding is adequately managed, and, with the implementation of a suitable surface water drainage strategy, the offsite flood risk is not increased.



Appendices



Appendix A – Plans

Illustrative Masterplan

Topographical Survey

Thames Water Sewer Asset Plan

EA Areas Susceptible to Groundwater Flooding



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Rev	Description	Date	Au	Ch
A	Planning Issue	08.10.25	DS/TM	TM
B	Minor Changes to Informal Mown Path	10.10.25	DS/TM	TM

Project	Newlands Farm, Arborfield		
Drawing	Illustrative Masterplan		
Client	Gleeson Strategic Land		
Job no.	GLEE250321	Date	10.10.25
Dwg no.	IMP.01	Rev.	B
Author	NJ/TM	Checked	NJ
Status	PLANNING	Scale	1:2000@A2
		Office	Portishead
Client ref.	-		

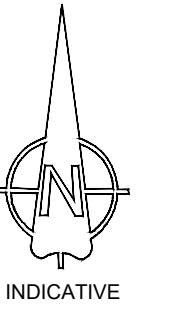
thrive.

architects

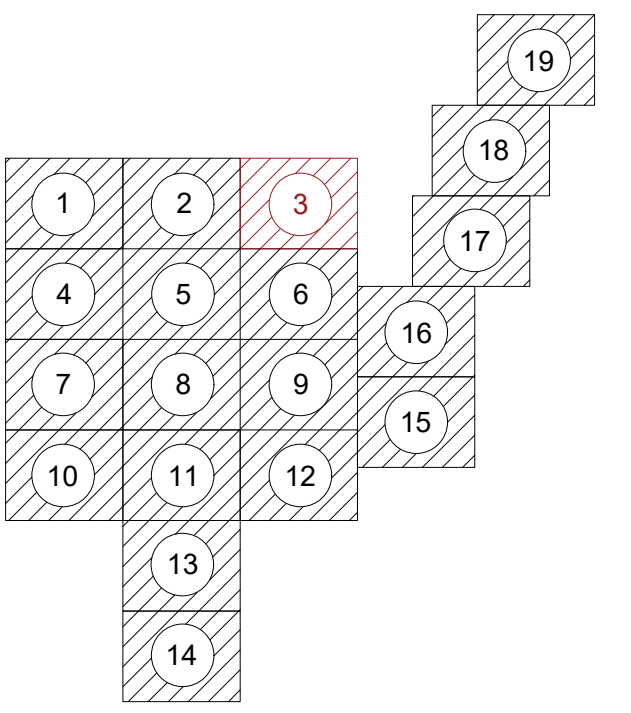
Tree Schedule				
Pt's No	Spread	Bole	Height	Species
236	11.0	0.60	14.0	OAK
237	12.0	0.70	15.0	OAK
238	10.0	0.60	14.0	OAK
239	8.0	0.70	15.0	OAK
263	15.0	1.10	15.0	OAK
264	15.0	1.20	15.0	OAK
265	16.0	1.20	15.0	OAK
351	12.0	0.60	14.0	OAK
409	12.0	0.60	14.0	OAK
443	11.0	0.50	12.0	OAK
436	8.0	0.40	9.0	BEECH
435	10.0	0.50	12.0	OAK
437	13.0	0.80	12.0	OAK
438	9.0	0.50	12.0	OAK
496	8.0	0.40	11.0	OAK
497	8.0	0.40	11.0	OAK
498	7.0	0.30	7.0	OAK
499	12.0	0.80	11.0	OAK
559	15.0	1.00	14.0	OAK
572	15.0	0.50	12.0	OAK
573	13.0	0.80	12.0	OAK
574	7.0	0.60	12.0	OAK
575	8.0	0.40	12.0	OAK
576	8.0	0.40	12.0	OAK
577	11.0	0.70	13.0	OAK
712	8.0	0.30	10.0	OAK
713	13.0	0.80	12.0	OAK
714	8.0	0.30	8.0	OAK
715	12.0	0.50	15.0	TREE UNKNOWN
851	9.0	0.40	8.0	OAK
852	5.0	0.30	6.0	TREE UNKNOWN
1047	10.0	0.70	15.0	OAK
1060	12.0	0.60	14.0	OAK
1061	13.0	0.70	14.0	OAK
1100	11.0	0.80	13.0	OAK
1120	10.0	0.60	11.0	OAK
1121	10.0	0.60	11.0	OAK
1123	13.0	0.70	15.0	OAK
1146	7.0	0.40	9.0	OAK
1147	7.0	0.40	9.0	OAK
1148	7.0	0.30	7.0	LIME
1149	11.0	0.80	12.0	OAK
1439	8.0	0.40	10.0	OAK
1443	10.0	0.50	10.0	OAK
1444	10.0	0.50	10.0	OAK
1448	13.0	0.70	12.0	OAK
1454	7.0	0.30	7.0	OAK
1473	13.0	0.80	8.0	OAK
1633	8.0	0.30	7.0	OAK
1634	8.0	0.30	7.0	OAK
1675	5.0	0.20	6.0	WILLOW
1773	7.0	0.60	14.0	CYPRESS
1873	10.0	0.80	12.0	OAK
1884	8.0	0.30	12.0	OAK
1885	7.0	0.30	10.0	OAK
1886	7.0	0.30	10.0	OAK
1887	7.0	0.30	10.0	OAK
1888	7.0	0.30	10.0	OAK
1889	12.0	0.40	12.0	OAK
1900	9.0	0.30	10.0	OAK
1901	9.0	0.30	10.0	OAK
1902	11.0	0.40	12.0	OAK
1903	8.0	0.30	10.0	OAK
1904	10.0	0.40	12.0	OAK
1905	12.0	0.40	14.0	TREE UNKNOWN
1906	8.0	0.30	10.0	TREE UNKNOWN
1907	10.0	0.30	10.0	TREE UNKNOWN
1909	10.0	0.80	13.0	OAK
1910	16.0	1.20	17.0	OAK
1911	14.0	1.00	17.0	OAK
1912	14.0	1.00	17.0	OAK
1944	9.0	0.30	10.0	ASH
1945	9.0	0.30	10.0	ASH
1956	13.0	0.80	16.0	ASH
1965	12.0	1.00	14.0	OAK
1966	12.0	1.00	14.0	OAK
2066	14.0	0.90	15.0	OAK
2067	14.0	0.90	15.0	OAK
2117	13.0	0.60	13.0	OAK
2118	13.0	0.60	13.0	OAK
2123	7.0	0.30	10.0	LOCUST
2220	8.0	0.40	12.0	OAK
2221	10.0	0.40	12.0	OAK
2222	8.0	0.30	13.0	OAK
2223	10.0	0.40	12.0	OAK
2224	10.0	0.20	9.0	OAK
2225	7.0	0.30	11.0	OAK
2226	7.0	0.30	11.0	OAK
2227	7.0	0.30	9.0	OAK
2228	7.0	0.30	10.0	OAK
2514	10.0	0.70	13.0	PINE
2515	8.0	0.20	8.0	OAK
2516	8.0	0.20	8.0	OAK
2517	10.0	0.50	14.0	OAK
2518	10.0	0.50	14.0	OAK
2519	10.0	0.50	13.0	OAK
2516	6.0	0.70	9.0	OAK
2517	9.0	0.80	9.0	ASH
2555	13.0	0.50	14.0	OAK
2556	13.0	0.50	14.0	OAK
2557	12.0	0.60	14.0	OAK
2558	12.0	0.60	14.0	OAK
2559	12.0	0.60	14.0	OAK
2562	12.0	0.60	14.0	OAK
2563	13.0	0.50	14.0	OAK
10264	10.0	0.80	11.0	STUPE
10268	10.0	1.30	16.0	OAK
10269	10.0	1.30	16.0	OAK
10325	5.0	0.30	10.0	TREE UNKNOWN
10338	9.0	0.80	8.0	OAK
10402	11.0	0.90	10.0	OAK
10433	8.0	0.70	15.0	OAK
10493	10.0	0.80	15.0	OAK
10589	8.0	0.80	15.0	OAK
10720	10.0	0.90	16.0	OAK
10721	10.0	0.90	16.0	TREE UNKNOWN
15190	10.0	1.00	16.0	TREE UNKNOWN
15191	10.0	1.00	16.0	TREE UNKNOWN
20027	13.0	1.10	14.0	OAK
20044	7.0	0.90	17.0	OAK
20037	8.0	0.80	15.0	OAK
20065	12.0	0.60	13.0	OAK
20061	12.0	0.60	13.0	OAK
20065	8.0	0.30	10.0	ASH
20070	10.0	0.80	14.0	OAK
20075	11.0	0.90	14.0	OAK
20098	8.0	0.30	9.0	OAK
25141	10.0	0.70	11.0	OAK
25165	13.0	0.90	16.0	OAK
25166	13.0	0.90	16.0	OAK
25180	12.0	0.80	14.0	OAK
25181	5.0	0.30	9.0	PINE
25182	5.0	0.30	9.0	PINE
25183	6.0	0.30	9.0	PINE
25184	5.0	0.30	7.0	PINE
25185	14.0	0.80	15.0	OAK
25195	9.0	0.80	15.0	OAK
25196	7.0	0.60	14.0	OAK
25199	10.0	0.90	16.0	OAK
25209	8.0	0.50	12.0	TREE UNKNOWN
25210	11.0	0.60	13.0	OAK
25211	11.0	0.70	10.0	ASH
25212	14.0	0.80	17.0	OAK
25213	7.0	0.30	13.0	ASH
25214	7.0	0.30	13.0	ASH
25215	12.0	0.80	14.0	OAK
25277	13.0	0.90	16.0	OAK
25283	14.0	0.90	16.0	OAK
25284	14.0	0.90	16.0	ASH
25291	11.0	0.70	10.0	OAK
25292	14.0	0.80	17.0	OAK
25306	13.0	0.80	14.0	OAK
25307	10.0	1.20	16.0	OAK
25308	10.0	1.20	16.0	OAK
25308	5.0	0.20	6.0	CHERRY
25309	8.0	0.40	11.0	OAK
25312	8.0	0.70	14.0	OAK
25362	15.0	0.90	16.0	OAK
25363	15.0	0.90	16.0	OAK
25388	15.0	1.10	17.0	OAK
25389	13.0	0.80	17.0	OAK
25390	12.0	0.70	17.0	OAK
25391	15.0	0.90	14.0	OAK
25392	14.0	0.80	17.0	OAK
25393	7.0	0.30	10.0	ASH

Notes:

All information contained in this drawing
(including digital data) should be checked and
verified prior to any fabrication or construction.

[illegible]

Sheet Layout



A	27.08.25	ARL	Additional data added to survey						
Rev. Suffix	Date	Initial	Revision Details						
Surveyor	LWLH	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	25.08.22
Levelling		GNSS		Datum		OSGB36			

Datum

Client

gleeson^{land}

Location

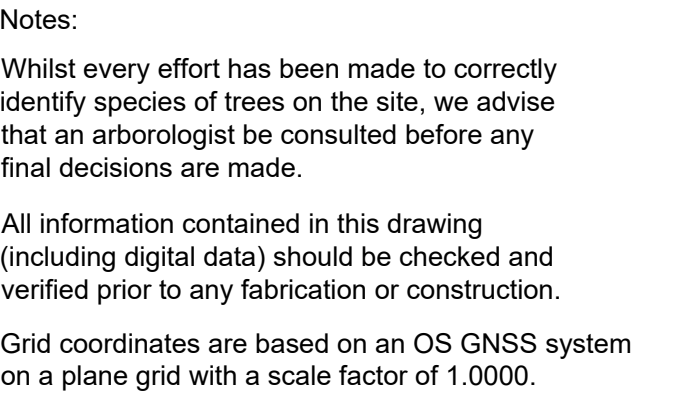
Newland Farm
Arborfield

Drawing Title

Topographical Survey
Sheet 3 of 19

Job No. 2205063	Old Job No.
Drawing Number GSL/2205063/3	Revision Suffix A
Scale 1:200m (A0)	Date August 2022





A 4x4 grid of numbers 1 through 16. The numbers are arranged in a 4x4 grid. The numbers 1 through 12 are in the top three rows, and 13 through 16 are in the bottom row. The numbers 5, 6, 8, and 9 are highlighted in a red 2x2 subgrid.

1	2	3	4
4	5	6	7
7	8	9	10
10	11	12	13

A	27.08.25	ARL	Additional ditch added to survey						
Rev. Suffix	Date	Initial	Revision Details						
Surveyor	LWLH	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	26.08.22
Levelling		GNSS		Datum			OSGB36		

Client

Location

Topographical Survey
Sheet 6 of 19

Job No. 2205063	Old Job No.
Drawing Number GSL/2205063/6	Revision Suffix A
Scale 1:200m (A0)	Date August 2022

CD **CD SURVEYS LTD**
LAND, BUILDING & SITE ENGINEERING
 PENTIRE - STABLE 1 Tel (01932) 761196
 FORDBRIDGE ROAD, Fax (01932) 786419
 SUNBURY-ON-THAMES Email: mail@cdsurveys.com
 MIDDLESEX, TW16 6AX Visit us at: www.cdsurveys.com

Notes:

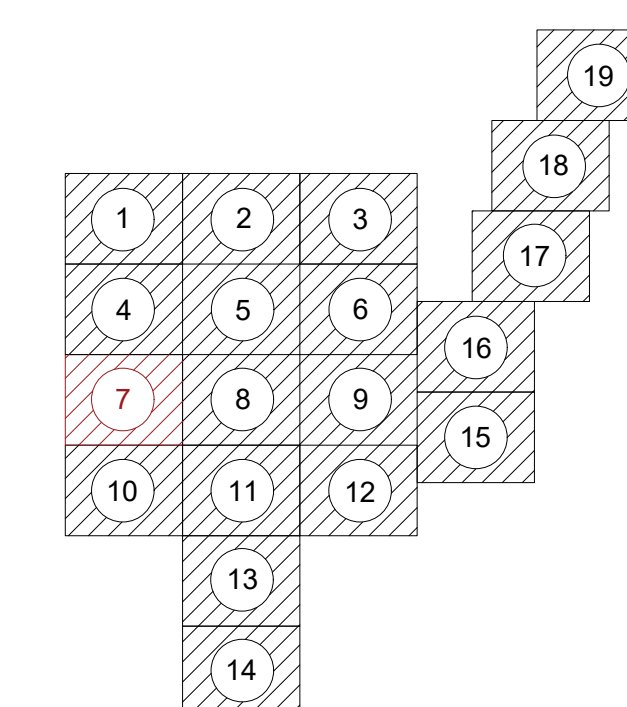
Whilst every effort has been made to correctly identify species of trees on the site, we advise that an arborologist be consulted before any final decisions are made.

All information contained in this drawing
(including digital data) should be checked and
verified prior to any fabrication or construction

Grid coordinates are based on an OS GNSS system on a plane grid with a scale factor of 1.0000.

[illegible]

Sheet Layout



Rev. Suffix	Date	Initial	Revision Details						
Surveyor	LWL/H	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	25.08.2
Levelling	GNSS		Datum		OSGB36				

To an OS G

Client

gleeson

Location

Newland Farm
Arborfield

Drawing Title

Topographical Survey
Sheet 7 of 19

Job No.	2205063	Old Job No.
Drawing Number		Revision Suffix

Scale 1:200m (A0)	Date August 2022
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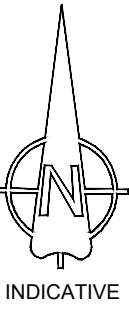


Notes:

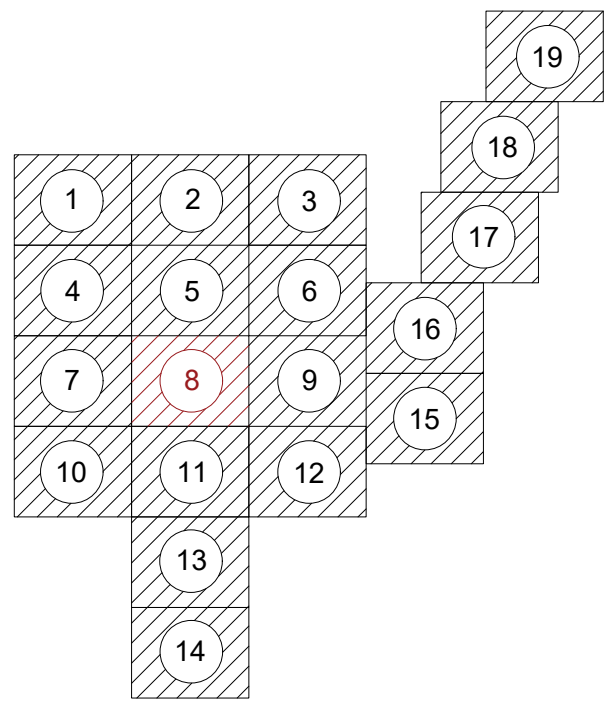
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(including digital data) should be checked and
verified prior to any fabrication or construction

Grid coordinates are based on an OS GNSS system on a plane grid with a scale factor of 1.0000.

[illegible]

Sheet Layout



Rev. Suffix		Date		Initial		Revision Details				
Surveyor	LWLH	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	25.08.2	
Levelling		GNSS			Datum		OSGB36			

To an OS GNSS Datum

Client

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Location

Newland Farm
Arborfield

Drawing Title

Topographical Survey
Sheet 8 of 19

Job No. 2205063	Old Job No.
Drawing Number GSL/2205063/8	Revision Suffix
Scale 1:200m (A0)	Date August 2022

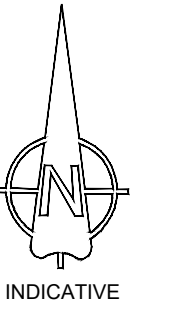


Notes:

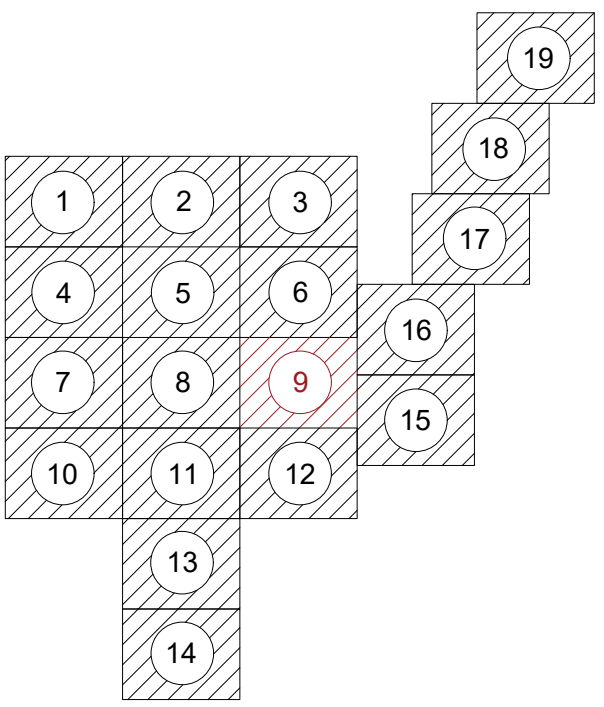
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verified prior to any fabrication or construction.

Grid coordinates are based on an OS GNSS system on a plane grid with a scale factor of 1.0000.

[illegible]

Sheet Layout



Rev. Suffix	Date		Initial	Revision Details					
Surveyor	LWLH	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	26.06.22
Levelling		GNSS		Datum		OSGB36			

To an OS GNSS
Datum

Client

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Location

Newland Farm
Arborfield

Drawing Title

Topographical Survey
Sheet 9 of 19

Job No. 2205063

Old Job No. _____

Drawing Number

Revision Suffix

Scale	
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Date _____

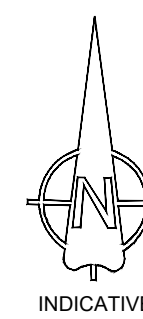


Notes:

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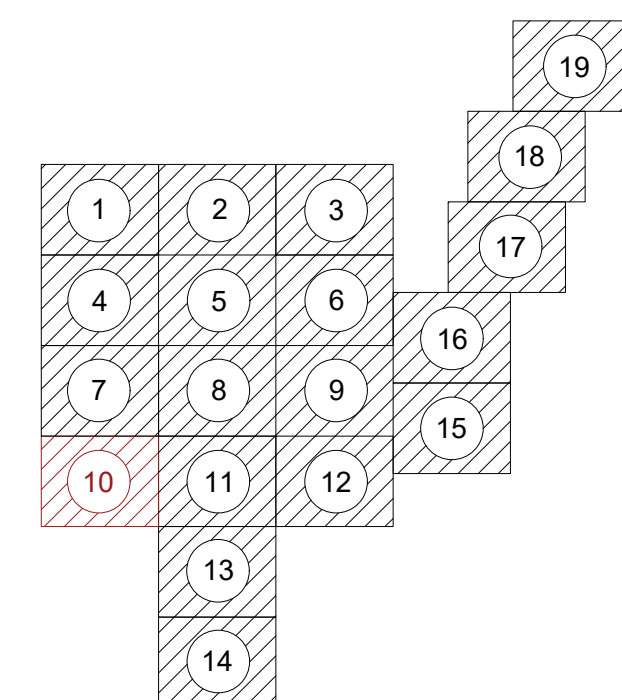
Legend:

	Fences		Buildings		Fences	
	Walls		Overhead Electric		Barbed Wire Fence	W/W
	Hedges		Overhead Phone		Control Fence	C/F
	Trees		Overhead Water		Post and Rail Fence	P/R
			Overhead Gas		Split Rail Fence	S/R
			Gate		Chain Link Fence	C/L
					Wire Mesh Fence	W/M

Abbreviations:

	BOLLARD	B		MARKED	M
	BARRIER BEHIND CURB	BB		PARALLEL MARKER	PM
	CORNERS	C		ROAD SIDE FLUKE	RSF
	CORNERS WITH FLARING SLABS	CFS		ROAD SIDE MARKER	RS
	CORNERS WITH FLARING SLABS AND FLARE	CFSF		ROAD SIDE MARKER WITH FLARE	RSF
	ELECTRIC POLE	E		RETAINING WALL	RW
	FLARE	F		ROAD SIDE MARKER WITH FLARE	RSF
	FOOTING	F		SIDEWALK	SW
	FOOTING WITH FLARE	FF		SIDEWALK WITH FLARE	SWF
	GAS POLE	G		SIDEWALK WITH FLARE AND FLARE	SWFF
	GAS POLE WITH FLARE	GF		SIDEWALK WITH FLARE AND FLARE	SWFF
	RESISTION COVER	R		UNDERPASS TO LEFT	UL
	ROAD SIDE FLARE	RSF		UNDERPASS TO RIGHT	UR
	MAN HOLE	M		WATER MARKER	WM

Sheet Layout



Rev. Suffix		Date		Initial		Revision Details				
Surveyor	LWLH	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	26.06.	
Levelling		GNSS		Datum		OSGB36				

To an OS GNSS Datum

Client

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Location

Newland Farm
Arborfield

Drawing Title

Topographical Survey
Sheet 10 of 19

Job No. 2205063	Old Job No.
Drawing Number	Revision Suffix

Scale 1:200m (A0)	Date August 2022
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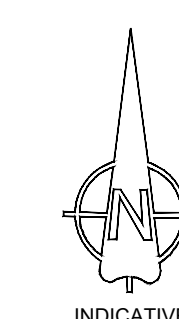


Notes:

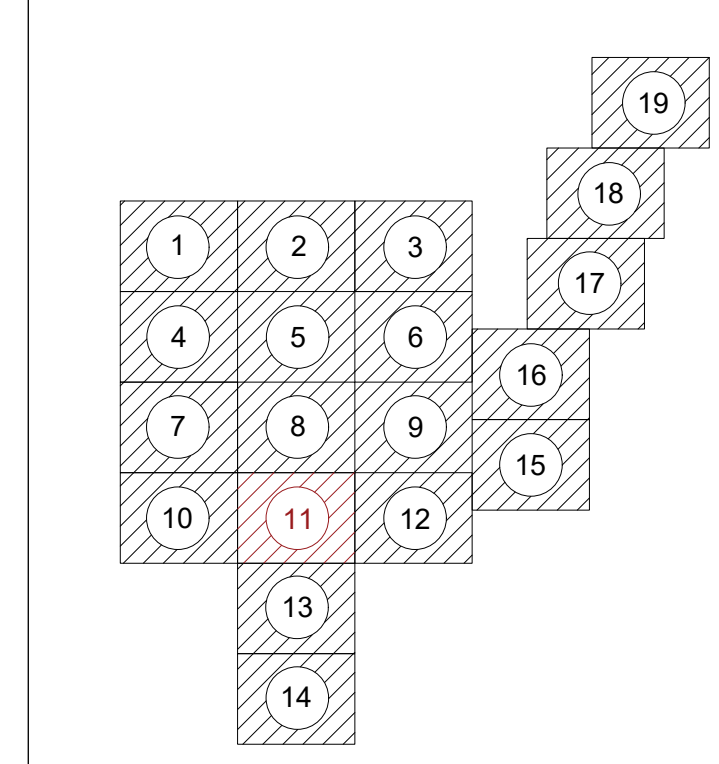
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[illegible]

Sheet Layout



Rev. Suffix	Date	Initial	Revision Details						
Surveyor	LWLH	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	25.05.20
Levelling		GNSS		Datum		OSGB36			

To an OS GNSS Datum

Client	
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gleesonland

Figure 1

Location
Newland Farm
Arborfield

Drawing Title

Topographical Survey
Sheet 11 of 19

Job No. 2205063	Old Job No.
Drawing Number GSL/2205063/11	Revision Suffix
Scale 1:200m (A0)	Date August 2022

CD SURVEYS LTD
LAND, BUILDING & SITE ENGINEERING

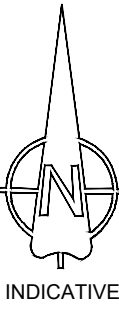
PENTIRE - STABLE 1 Tel (01932) 761118
FORDBRIDGE ROAD, Fax (01932) 78641
SUNBURY-ON-THAMES Email: mail@cdsurveys.co.uk
MIDDLESEX, TW16 6AX Visit us at: www.cdsurveys.co.uk

Notes:

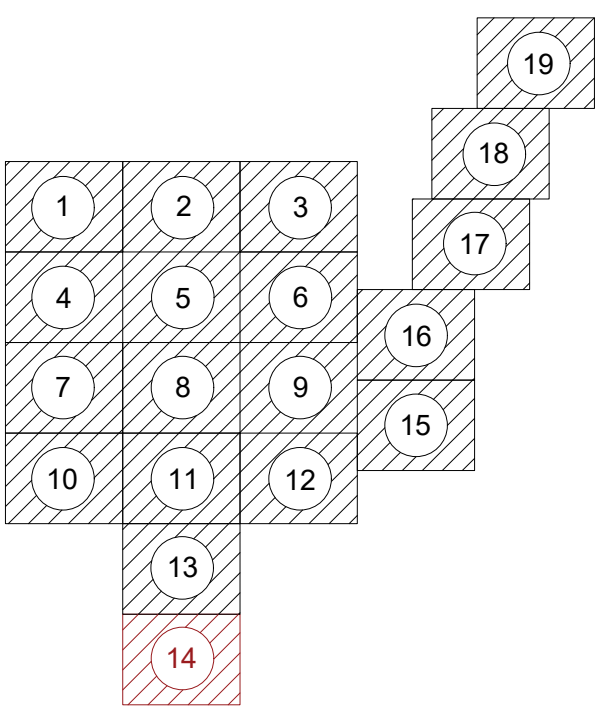
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on a plane grid with a scale factor of 1.0000.

[illegible]

Sheet Layout



Rev. Suffix	Date	Initial	Revision Details						
Surveyor	LWLM	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	26.08.22
Levelling	GNSS		Datum		OSGB36				

To an OS GNSS
Datum

Client

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Location

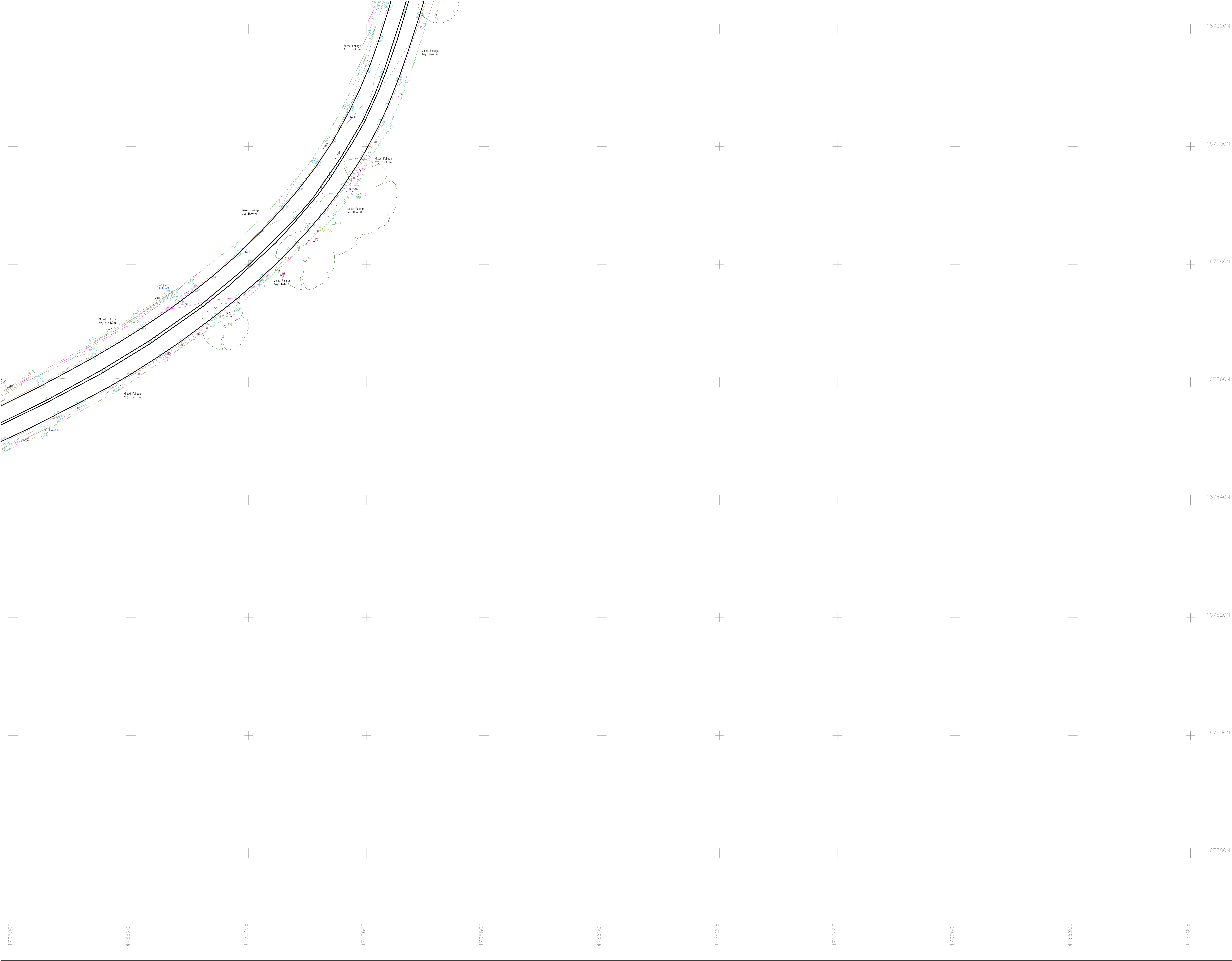
Newland Farm
Arborfield

Drawing Title

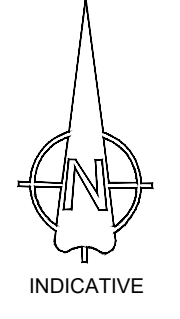
Topographical Survey
Sheet 14 of 19

Job No. 2205063	Old Job No.
Drawing Number GSL/2205063/14	Revision Suffix
Scale 1:200m (A0)	Date August 2022



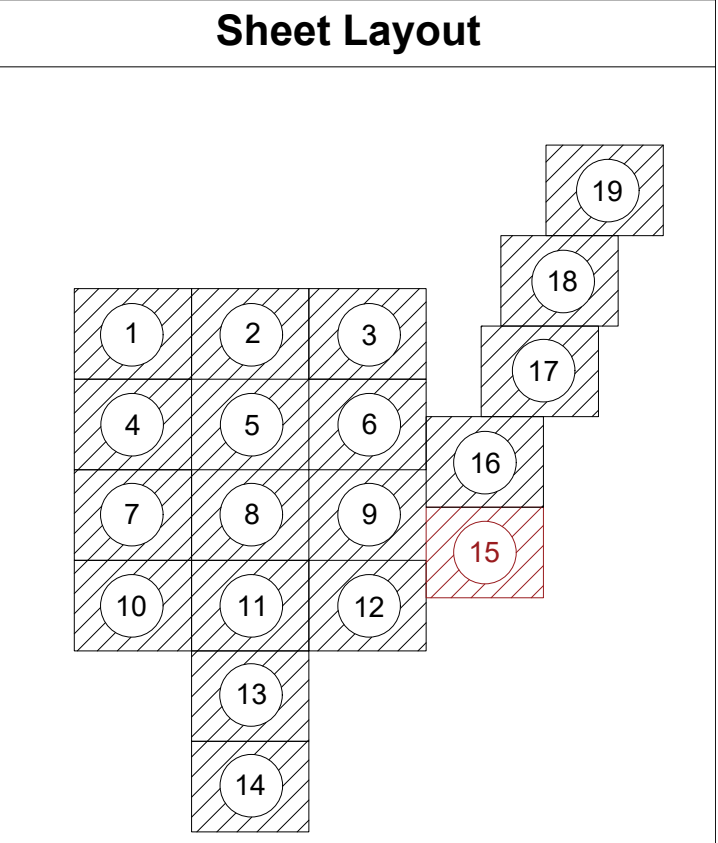


Notes:
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Grid coordinates are based on an OS GNSS system on a plane grid with a scale factor of 1.0000.



Legend:

Fences	Buildings	Fences	Electric
Overhead Electric	Overhead Electric	Overhead Electric	Overhead Electric
Overhead Phone	Overhead Phone	Overhead Phone	Overhead Phone
Overhead Cable	Overhead Cable	Overhead Cable	Overhead Cable
Overhead Gas	Overhead Gas	Overhead Gas	Overhead Gas
Overhead Water	Overhead Water	Overhead Water	Overhead Water
Overhead Sewer	Overhead Sewer	Overhead Sewer	Overhead Sewer
Overhead Storm	Overhead Storm	Overhead Storm	Overhead Storm
Overhead Drain	Overhead Drain	Overhead Drain	Overhead Drain
Overhead Vent	Overhead Vent	Overhead Vent	Overhead Vent
Overhead Light	Overhead Light	Overhead Light	Overhead Light
Overhead Sign	Overhead Sign	Overhead Sign	Overhead Sign
Overhead Pole	Overhead Pole	Overhead Pole	Overhead Pole
Overhead Bracket	Overhead Bracket	Overhead Bracket	Overhead Bracket
Overhead Arm	Overhead Arm	Overhead Arm	Overhead Arm
Overhead Wire	Overhead Wire	Overhead Wire	Overhead Wire
Overhead Cable	Overhead Cable	Overhead Cable	Overhead Cable
Overhead Gas	Overhead Gas	Overhead Gas	Overhead Gas
Overhead Water	Overhead Water	Overhead Water	Overhead Water
Overhead Sewer	Overhead Sewer	Overhead Sewer	Overhead Sewer
Overhead Storm	Overhead Storm	Overhead Storm	Overhead Storm
Overhead Drain	Overhead Drain	Overhead Drain	Overhead Drain
Overhead Vent	Overhead Vent	Overhead Vent	Overhead Vent
Overhead Light	Overhead Light	Overhead Light	Overhead Light
Overhead Sign	Overhead Sign	Overhead Sign	Overhead Sign
Overhead Pole	Overhead Pole	Overhead Pole	Overhead Pole
Overhead Bracket	Overhead Bracket	Overhead Bracket	Overhead Bracket
Overhead Arm	Overhead Arm	Overhead Arm	Overhead Arm
Overhead Wire	Overhead Wire	Overhead Wire	Overhead Wire



Rev. Suffix	Date	Initial	Revision Details
1	20.08.22	AL	Initial

Client

gleeson LAND

Location

Newland Farm
Arborfield

Drawing Title

Topographical Survey
Sheet 15 of 19

Job No.	2205063	Old Job No.
Drawing Number	GSL/2205063/15	Revision Suffix
Scale	1:200m (A0)	Date
		August 2022

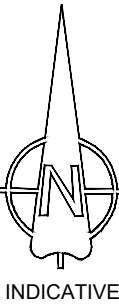
CD SURVEYS LTD
LAND, BUILDING & SITE ENGINEERING
PENTIRE - STABLE 1
FORDBRIDGE ROAD,
SUNBURY-ON-THAMES
MIDDLESEX, TW16 6AX
Tel (01932) 761196
Fax (01932) 766419
Email: mail@cdsurveys.com
Visit us at: www.cdsurveys.com

Notes:

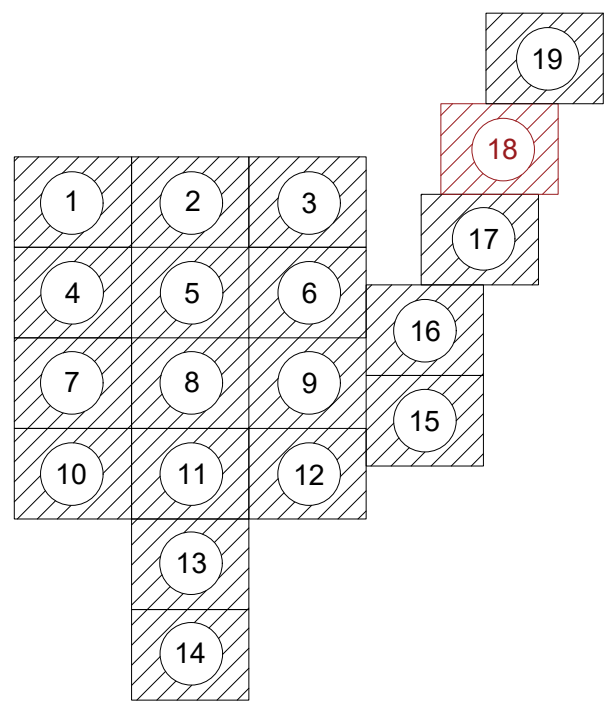
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Grid coordinates are based on an OS GNSS system on a plane grid with a scale factor of 1.0000.

[illegible]

Sheet Layout



Rev. Suffix	Date		Initial		Revision Details				
Surveyor	LW/LH	Verified By	LW	CAD Operator	EG	Approved By	AL	Date	26.06.22
Levelling		GNSS			Datum		OSGB36		

To an OS GNSS
Datum

Client

gleeson land

Location

Newland Farm
Arborfield

Drawing Title

Topographical Survey
Sheet 18 of 19

Job No.	2205063
---------	---------

Old Job No

Drawing Number

Revision S

GSL/2205063

Scale

Date _____





Abley Letchford Partnership
ABLEY LETCHFORD PARTNERSHIP LT
HUNGERFORD
RG17 0YT

Search address supplied 1 Woodlands Cottages
School Road
Arborfield Cross
Reading
RG2 9NY

Your reference A392 Loddon Garden Village RF

Our reference ALS/ALS/24/2025_5137033

Search date 19 March 2025

Keeping you up-to-date

We have a new website and email address

Website URL: thameswater.co.uk/propertysearches

Email address: property.searches@thameswater.co.uk

Please do get in contact with us if you have any questions.



Thames Water Utilities Ltd
Property Searches,
Clearwater Court, Vastern Road, Reading RG1 8DB



property.searches@thameswater.co.uk
thameswater.co.uk/propertysearches



0800 009 4540

Search address supplied: 1 Woodlands Cottages, School Road, Arborfield Cross, Reading, RG2 9NY

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This search provides maps showing the position and size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

Contact Us

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0800 009 4540, or use the contact details below:

Thames Water Utilities Ltd
Property Searches
Clearwater Court
Vastern Road
Reading
RG1 8DB

Email: property.searches@thameswater.co.uk

Web: thameswater.co.uk/propertysearches

Waste Water Services

Please provide a copy extract from the public sewer map.

The following quartiles have been printed as they fall within Thames' sewerage area:

SU7667SE

Enclosed is a map showing the approximate lines of our sewers. Our plans do not show sewer connections from individual properties or any sewers not owned by Thames Water unless specifically annotated otherwise. Records such as "private" pipework are in some cases available from the Building Control Department of the relevant Local Authority. Where the Local Authority does not hold such plans it might be advisable to consult the property deeds for the site or contact neighbouring landowners. The public sewer map relates only to sewerage apparatus of Thames Water Utilities Ltd, it does not disclose details of cables and or communications equipment that may be running through or around such apparatus. The sewer level information contained in this response represents all of the level data available in our existing records. Should you require any further Information, please refer to the relevant section within the 'Further Contacts' page found later in this document.

The following quartiles have not been printed as they contain no assets:

SU7667NW
SU7667NE
SU7668SE
SU7767NW

For your guidance:

- The Company is not generally responsible for rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the developer.

Clean Water Services

Please provide a copy extract from the public water main map.

The following quartiles have been printed as they fall within Thames' water area:

SU7667NW
SU7668SE

Enclosed is a map showing the approximate positions of our water mains and associated apparatus. Please note that records are not kept of the positions of individual domestic supplies.

For your information, there will be a pressure of at least 10m head at the outside stop valve. If you would like to know the static pressure, please contact our Customer Centre on 0800 316 9800. The Customer Centre can also arrange for a full flow and pressure test to be carried out for a fee.

The following quartiles have not been printed as they contain no assets:

SU7667SE
SU7667NE
SU7767NW

For your guidance:

- Assets other than vested water mains may be shown on the plan, for information only.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

Further contacts:

Waste Water queries

Should you require verification of the invert levels of public sewers, by site measurement, you will need to approach the relevant Thames Water Area Network Office for permission to lift the appropriate covers. This permission will usually involve you completing a TWOSA form. You can do this by emailing customer.feedback@thameswater.co.uk with the email subject header 'Enquiry – TWOSA', along with details of the request.

If you have any questions regarding sewer connections, budget estimates, diversions or building over issues please direct them to our service desk which can be contacted by writing to:

Developer Services (Waste Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

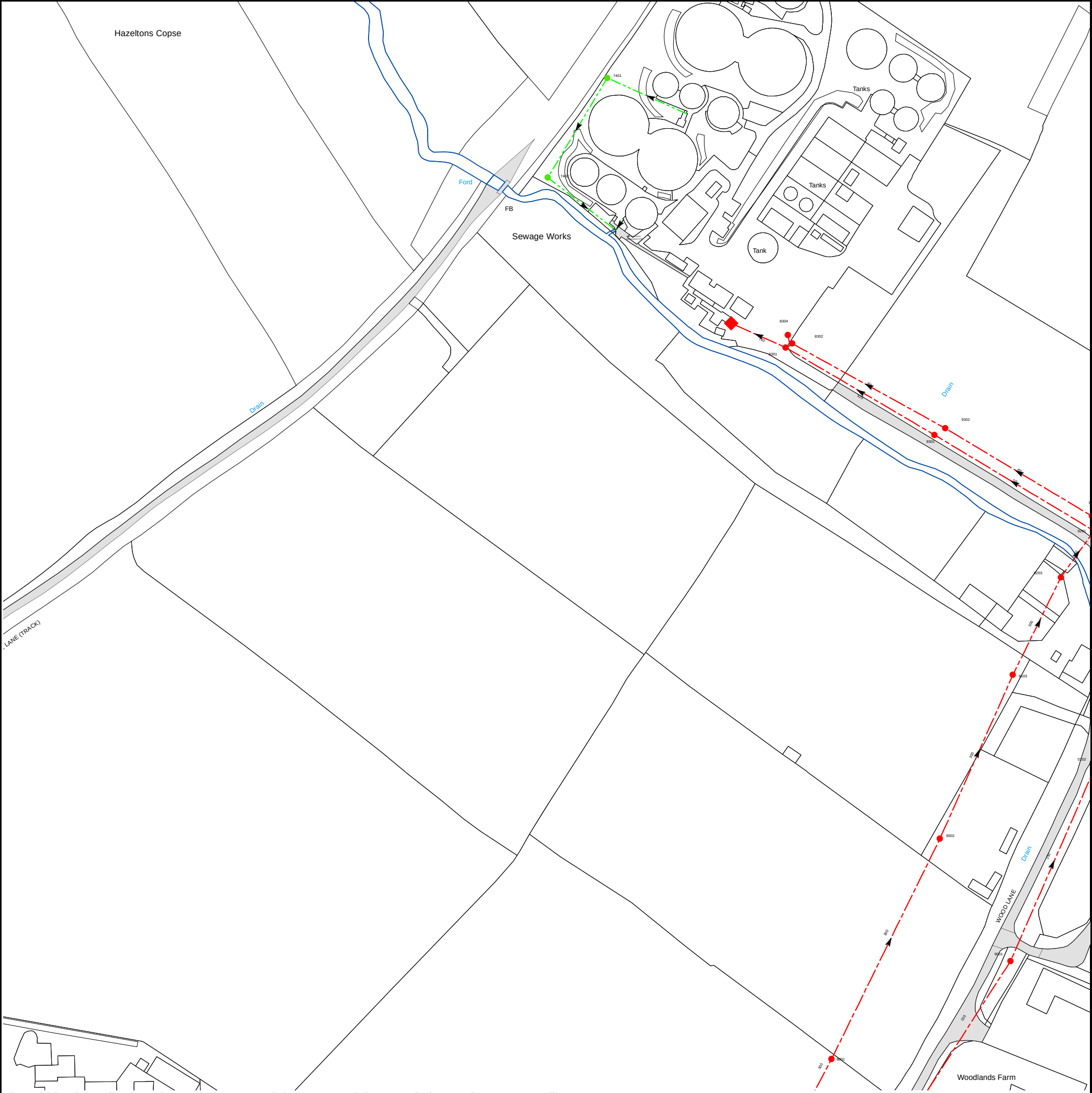
Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Clean Water queries

Should you require any advice concerning clean water connections, please contact:

Developer Services (Clean Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 476750,167250

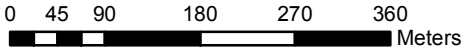
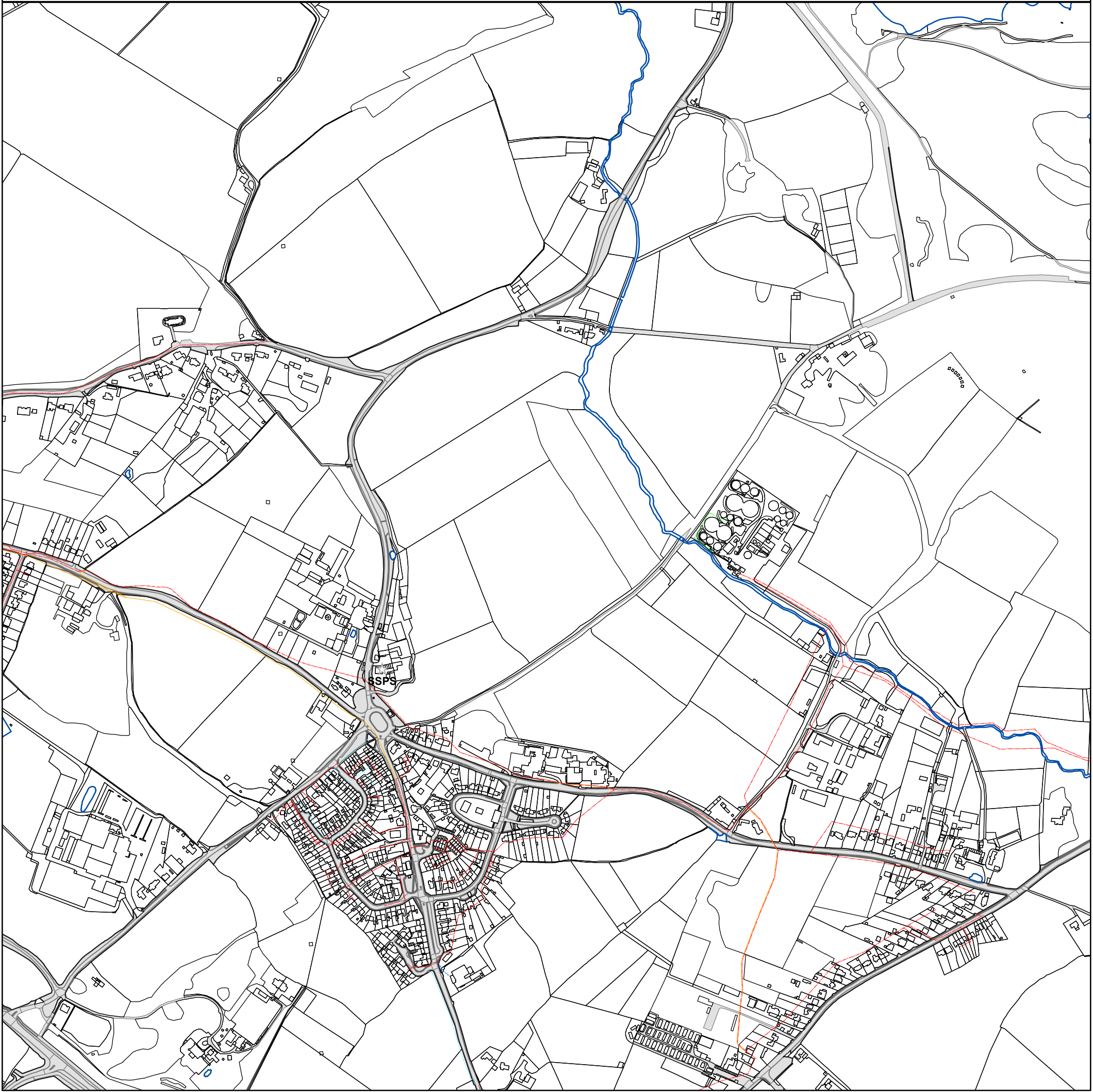
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

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NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
8001	48.34	45.78
9001	46.85	45.41
9002	47.54	44.97
0102	n/a	n/a
9103	45.7	43.93
9203	45.64	43.35
9201	46.007	43.287
9202	46.142	43.232
9301	45.85	43.17
9302	46.019	43.119
8301	45.55	43.1
8302	45.66	43.04
8304	n/a	n/a
7402	n/a	n/a
7401	n/a	n/a

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.



The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified before any works are undertaken. Crown copyright Reserved

Scale: 1:7160
Width: 2000m
Printed By: SEswara1
Print Date: 19/03/2025
Map Centre: 476477,167401
Grid Reference: SU7667SW

Comments:

ALS/ALS/24/2025_5137033

NB: Level quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates no Survey information is available.

REFERENCE	COVER LEVEL	INVERT LEVEL
8401		
4903	63.05	60.94
3002	46.61	43.97
5301	50.32	47.56
0904	60.78	59.4
0906	61.25	60.17
4801	61.86	60.93
0905	61.66	60.22
4003	47.41	44.31
3806	65.31	64.06
3452	64.04	62.63
3805		
2802	66.52	65.45
2803	66.78	66.12
2601	68.1	66.69
3809	66.73	65.82
3705	67.72	66.24
3601	67.83	66.28
1101	46.49	
3702	66.04	65.06
1802		
1001	46.27	43.75
0801	53.21	52.54
2001	47.03	
8601	50.47	49.02
8402	52.82	51.02
8302	45.66	43.04
8701	49.69	48.53
5902	63.53	60
4901	62.73	60.45
6701	54.19	52.58
7701	57.63	56.03
8702	59.71	57.49
3004	46.74	44.09
0955	61.6	60.09
0804	63.91	62.21
0901	61.99	61.01
0851	63.46	61.55
5903	63.49	60.25
2807	66.61	66.14
0103	46	43.43
3451	62.27	60.29
2603	67.82	66.92
2804	67.21	66.5
3801	63.3	62
2809	68.14	67.39
2605	67.73	67.29
2810	66.7	64.86
2650	67.38	65.69
9203	45.64	43.35
0102		
0101	45.99	43.4
1952	67.23	66.09
1901	67.38	66.19
1701	73.66	72.29
7402		
9001	46.85	45.41
9804		
3901	62.62	61.38
1703	55.98	54.9
2002	46.45	43.82
2003	47.45	43.92
1953	65.26	64.08
1807	67.5	66.09
2816		
2814	67.57	66.23
2811	67.59	65.24
1903	66.53	64.58
1702	70.15	69.03
6901	58.14	56.3
1803	67.65	65.59
2902	67.91	66.02
0853	65.39	63.02
0956	63.69	62.85
2702	70.59	69.12
2901	67.62	65.7
8001	48.34	45.78
6902	61.5	59.21
0806	65.32	62.9
0001	64.13	62.55
1850	64.58	62.41

REFERENCE	COVER LEVEL	INVERT LEVEL
5601	52.62	51
4803		
4301	49.86	48.17
9701	60.25	58.12
0954	60.88	59.24
4804		
4001	46.86	
5802	61.97	60.53
4002	47.19	
3703	67.77	65.84
3804	65.12	63.56
3810	65.84	64.58
2001	64.57	63.01
2801	65.49	64.43
3807	65.75	64.54
3602	67.5	66.63
3808	65.25	64.13
3704	67.22	65.99
3701	66.34	64.8
1601	56.77	55.16
1702	56.81	55.86
0601	54.55	53.48
1103	46.2	43.56
8502	51.11	49.75
8404	52.19	50.42
8304		
8403	52.11	50.58
8801	48.64	46.93
4802	62.48	61.19
5303	51.93	50.47
6702	55.73	54.14
8701	58.15	56.56
4902	62.71	60.55
0902	61.18	60.62
0803	62.6	61.47
0903	62.11	60.96
5801	63.31	60.2
0852	64.22	61.66
3401	60.81	59.06
2602	67.89	66.73
0802		
3450	61.54	59.53
2701	68.38	67.15
8405	51.9	50.29
2701	57.32	56.14
2651	67.81	65.8
2604	67.86	67.24
2808	67.57	67
2805	67.91	67.21
9802	51.66	50.51
0803		
1051	66.8	64.98
1950	67.54	65.78
1802	69.48	68.1
7901	52.62	50.7
7401		
9103	45.7	43.93
9501	53.98	52.78
1104	46.2	43.64
1102		
2702	56.98	55.79
1902	65.25	64.15
1050	65.87	63.72
1809	64.56	63.6
2815	67.36	65.51
2606		
1851	64.78	63.16
1951	66.67	65.46
1904	66.6	65.04
2801	55.81	54.83
1801		
0805	63.8	62.48
0957		
2903	68	66.12
2004	65.7	63.85
2703	71.75	70.35
5901	62.62	59.67
9002	47.54	44.97
0854	63.93	62.07
1808	63.67	62.81
8501	53.48	52.26

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ALS/ALS/24/2025_5137033

NB: Level quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates no Survey information is available.

REFERENCE	COVER LEVEL	INVERT LEVEL
8702	49.13	47.96
9803	48.66	47.65
9502		
1803	54.2	53.11
1905	68.22	66.8
1701	56.76	55.11
8802	49.76	47.34
4602	49.43	47.7
0602	54.04	52.95
1801	55.86	
8902	48.86	46.4
3001	47.14	43.8
171A		
291A		
201A		
3550	66.15	64.48
2002	65.75	63.75
061A		
261A		
261C		
261E		
381D		
381A		
1805	67.21	65.85
771A		
531A		
9202	46.142	43.232
0201	46.11	43.33
8301	45.55	43.1
9302	46.019	43.119
191B		
991A		
081A		
0801	67.24	66.39
381E		
2812		
281B		
951A		
061B		
091B		
161B		
161D		
841A		
271B		
071B		
171D		
981A		

REFERENCE	COVER LEVEL	INVERT LEVEL
9801	48.64	47.48
9901	47.55	46.09
3802	63.37	62.35
1001	67.08	65.55
1806	67.28	65.88
3001	63.56	62.25
8508	50.83	49.58
5302	50.77	48.98
3003	46.94	44.05
0850	62.77	61.05
2601	57.16	55.52
1703	70.62	69.41
171C		
201C		
201B		
1105	46.47	43.72
161A		
891A		
261B		
261D		
261F		
381C		
381B		
1804	67.17	65.71
771B		
0202	46.101	43.311
9201	46.007	43.287
8901	48.272	46.592
9301	45.85	43.17
191A		
2806	66.71	65.76
071A		
0802	67.52	66.56
3803		
2813	67.49	65.47
281A		
291C		
261A		
091A		
091C		
161C		
161E		
271A		
291E		
071C		
171E		



Asset Location Search - Sewer Key

Public Sewer Types (Operated and maintained by Thames Water)

	Foul Sewer: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
	Surface Water Sewer: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
	Combined Sewer: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
	Storm Sewer
	Sludge Sewer
	Foul Trunk Sewer
	Surface Trunk Sewer
	Combined Trunk Sewer
	Foul Rising Main
	Surface Water Rising Main
	Combined Rising Main
	Vacuum
	Thames Water Proposed
	Vent Pipe
	Gallery

Other Sewer Types (Not operated and maintained by Thames Water)

	Sewer
	Culverted Watercourse
	Proposed
	Decommissioned Sewer
	Content of this drainage network is currently unknown
	Ownership of this drainage network is currently unknown

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plan are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

	Air Valve		Meter
	Dam Chase		Vent
	Fitting		

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

	Ancillary		Drop Pipe
	Control Valve		Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol. Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

	Inlet		Outfall
	Undefined End		

Other Symbols

Symbols used on maps which do not fall under other general categories.

	Change of Characteristic Indicator		Public / Private Pumping Station
	Invert Level		Summit

Areas

Lines denoting areas of underground surveys, etc.

	Agreement
	Chamber
	Operational Site

Ducts or Crossings

	Casement	Ducts may contain high voltage cables. Please check with Thames Water.
	Conduit Bridge	
	Subway	
	Tunnel	

5) 'na' or '0' on a manhole indicates that data is unavailable.

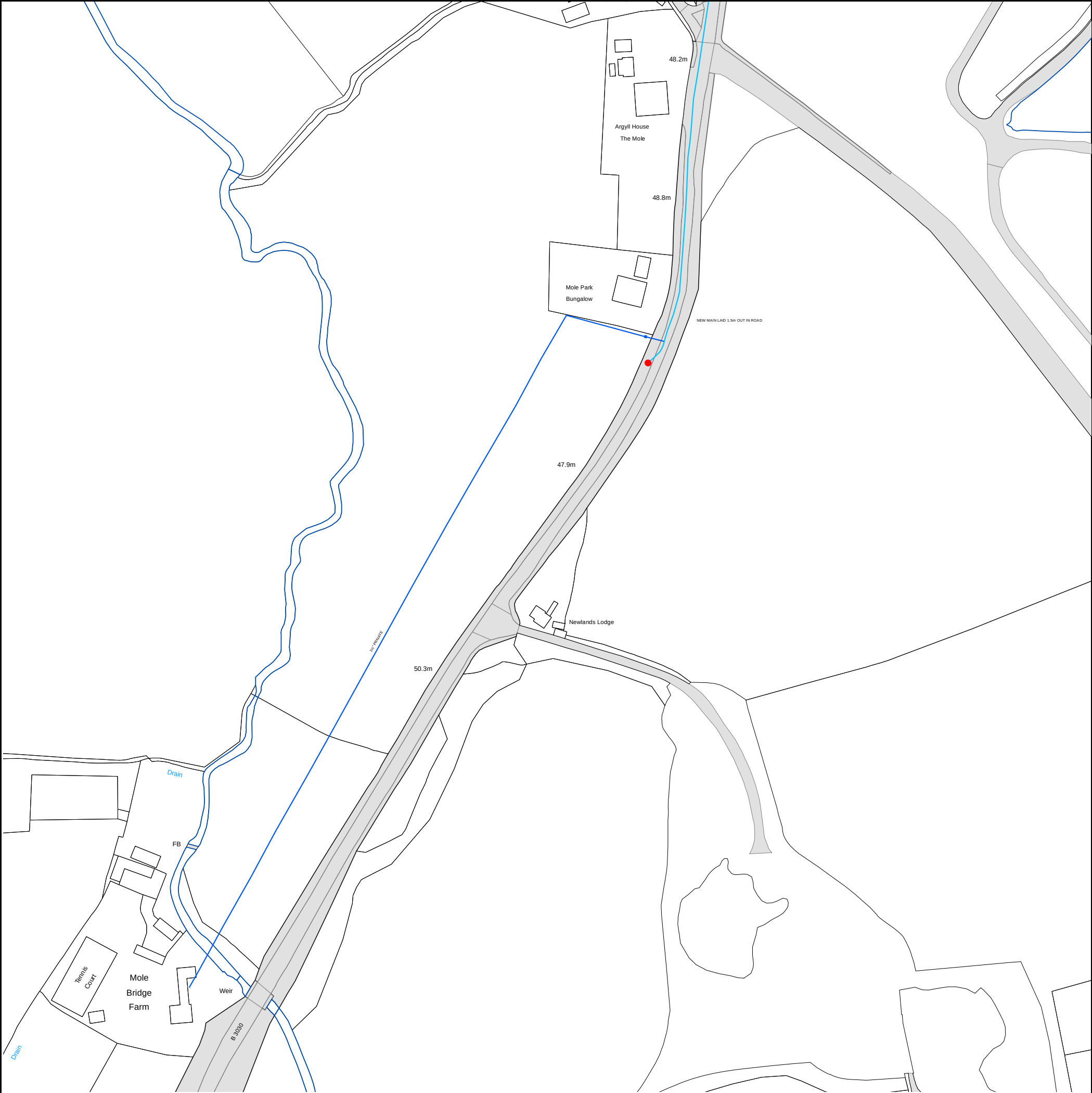
6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 476250,167750

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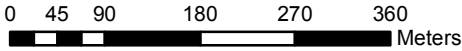
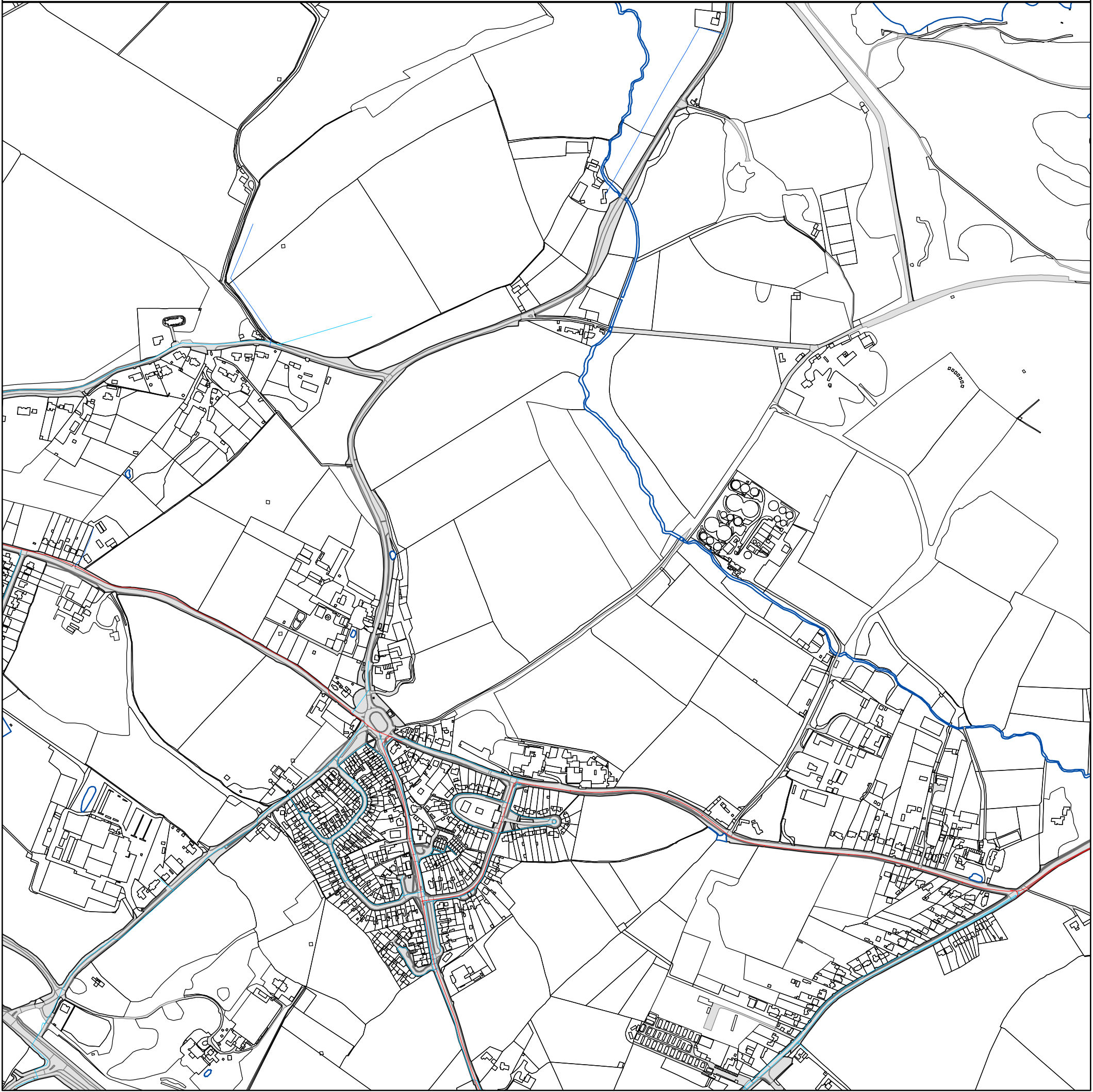
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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 476750,168250

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Scale: 1:7160
Width: 2000m
Printed By: SEswara1
Print Date: 19/03/2025
Map Centre: 476477,167401
Grid Reference: SU7667SW

Comments:



Asset Location Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

- 4"** **Distribution Main:** The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
- 16"** **Trunk Main:** A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.
- 3" SUPPLY** **Supply Main:** A supply main indicates that the water main is used as a supply for a single property or group of properties.
- 3" FIRE** **Fire Main:** Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
- 3" METERED** **Metered Pipe:** A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.
- Transmission Tunnel:** A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.
- Proposed Main:** A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Valves

- General Purpose Valve
- Air Valve
- Pressure Control Valve
- Customer Valve

Hydrants

- Single Hydrant

Meters

- Meter

End Items

Symbol indicating what happens at the end of a water main.

- Blank Flange
- Capped End
- Emptying Pit
- Undefined End
- Manifold
- Customer Supply
- Fire Supply

Operational Sites

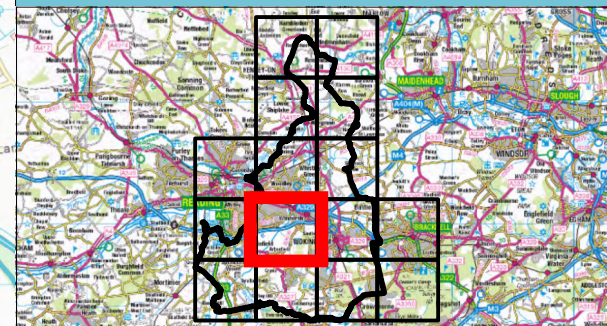
- Booster Station
- Other
- Other (Proposed)
- Pumping Station
- Service Reservoir
- Shaft Inspection
- Treatment Works
- Unknown
- Water Tower

Other Symbols

- Data Logger
- Casement:** Ducts may contain high voltage cables. Please check with Thames Water.

Other Water Pipes (Not Operated or Maintained by Thames Water)

- Other Water Company Main:** Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.
- Private Main:** Indicates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.



Legend

Wokingham Borough Council boundary

Watercourses

Main Rivers
 All Watercourses

Fluvial Flood Zones

Indicative Flood Zone 3b
 Flood Zone 3b
 Flood Zone 3a
 Flood Zone 2

Fluvial Flood Extent with Climate Change

1% AEP with Central Climate Change allowance
 1% AEP with Higher Central Climate Change allowance

Arborfield Fluvial Flood Extent with Climate Change

1% plus 25% Climate Change
 1% plus 40% Climate Change

Risk of Flooding from Surface Water

3.3% AEP
 1% AEP
 0.1% AEP

Surface Water Extent plus climate change

3.3% AEP plus 35% Climate Change
 1% AEP plus 40% Climate Change

Risk of Groundwater Flooding

EA Areas Susceptible to Groundwater Flooding ☒

< 25%
 >= 25% < 50%
 >= 50% < 75%
 >= 75%

JBA Groundwater Emergence Map (5m Resolution)

Depth below ground surface
 Less than 0.025m below surface

Between 0.025m - 0.5m below surface

Between 0.5m - 5m below surface

At least 5m below surface

No risk

Risk of Flooding from Reservoirs

Wet Day
 Dry Day

Flood Defences

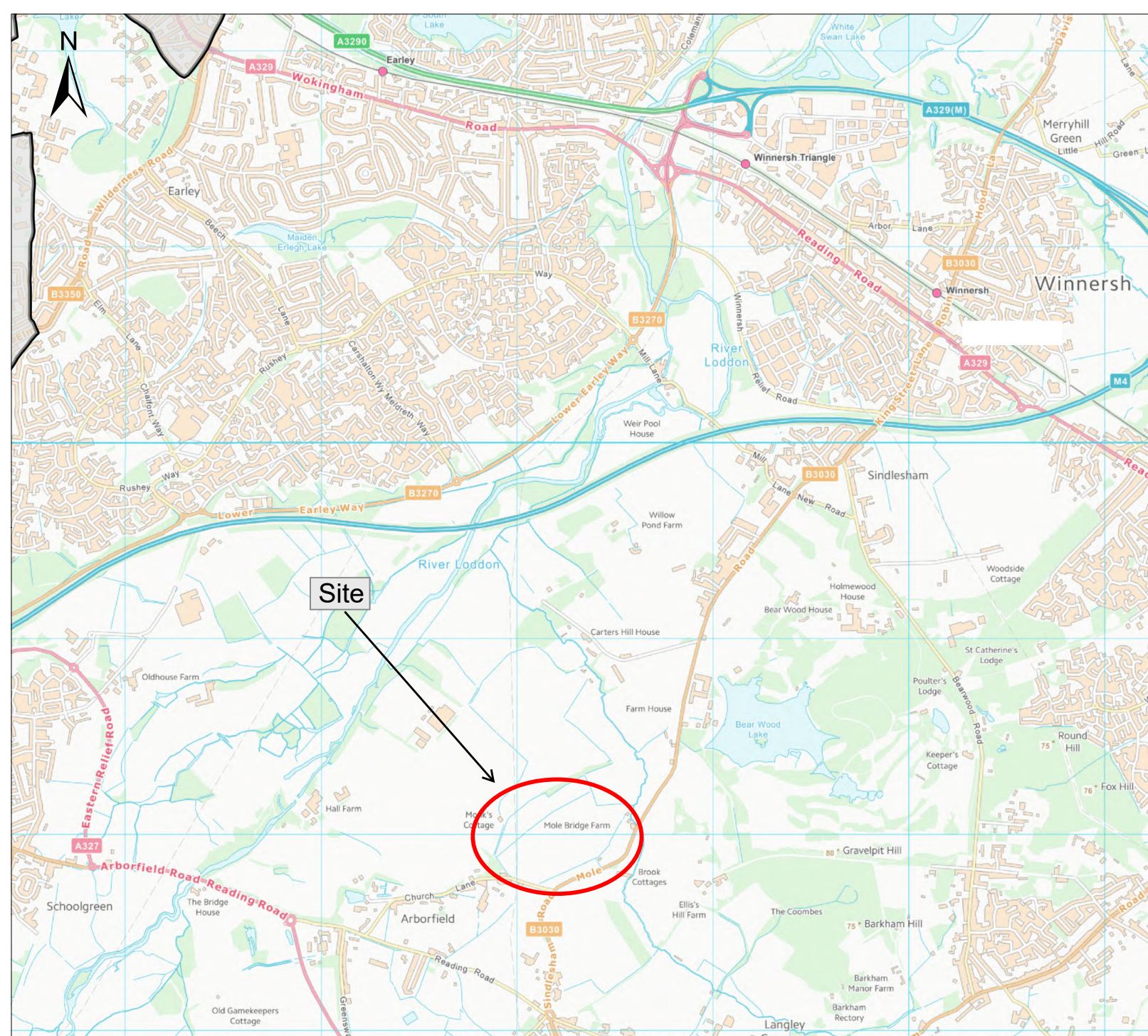
Demountable Defence
 Embankment
 Wall
 Natural High Ground

Flood Mitigation

Flood Alert Areas
 Flood Warning Areas

Flood History

EA Historic Flood map



Notes

Please see the accompanying user guide of the SFRA report for further guidance on the sources of data included within the map. This map should be opened using Adobe Acrobat Reader.



Appendix B – LLFA Developer Checklist

Wokingham Borough Council Planning Application Drainage Checklist

Planning Application Drainage Checklists

Major Development Outline Applications

Outline planning applications for Major Developments must include the following information and details on the proposed drainage strategy and system(s).

Ref.	Documentation required	Requirement met/included
	The applicant shall submit a description of the proposed drainage system(s) with an explanation of key operating principles and design decisions including but not necessarily limited to: ■ Identification of the destination of discharge (in accordance with Building Regulation Part H hierarchy) with appropriate justification for the selection; ■ Identification of proposed points of connection(s) to water bodies, sewers, public surface water sewers or highway drains etc.; ■ Evidence of agreement in principal from key third parties whose systems the proposed drainage system will need to connect / impact (Environment Agency, Lead Local Flood Authority, Thames Water or adjacent landowner); ■ Identification of the SuDS techniques that will be applied at the site with appropriate justification for the selection; ■ A description of how water will be collected and dealt with across the site by the proposed SuDS techniques including what volumes are to be stored where; ■ A description of the water quality treatment measures applied to surface water as it drains the site; ■ Where necessary a description of how the proposed system(s) will deal with surface water overland flow flooding originating from off-site areas; ■ Where necessary, an explanation of why it is not reasonably practicable to achieve any of the non-statutory technical standards for sustainable drainage systems (March 2015); ■ Where proposing discharge to ground; evidence to support proposed infiltration rates used in initial calculations. This should include nearby borehole logs, geological mapping and if available any geotechnical investigations, infiltration tests and records of groundwater monitoring. Consideration shall also be given to the implications of any local Source Protection Zones; ■ Where necessary, identification of any mechanical or electrical features necessary for the effective operation of the drainage strategy; and; ■ Proposals for the adoption and maintenance of the entire drainage system(s), including a schedule, with written agreement in principal from the adopting/maintaining body.	ii ii ii ii ii n/a n/a n/a n/a
	Plans & Drawings Required	

	The applicant shall submit plans defining the proposed drainage system including but not necessarily limited to: ■ Topographic survey of the site including local surface water drainage features; ■ Position of the site relative to surrounding flood sources, including where necessary identification of surface water/groundwater flows entering the development from adjacent land; ■ Where necessary definition of sub-catchments within the site; ■ A conceptual plan of the proposed drainage system(s) identifying the proposed point(s) of outfall, position of SuDS techniques / drainage features, the attenuation features, conveyance routes (including exceedence routes) comprising the drainage system(s); and ■ A thematic plan of the existing and proposed developments identifying land uses / coverings significant in informing discharge rates.	ii ii ii ii ii
	Calculations Required	
	Overview design calculations and design parameters to demonstrate conformity with the design criteria for the site. These should include: ■ Demonstration through calculation of the existing and proposed (unmitigated) development discharge rates for the 1, , 30 and 100 year (including allowance for the effects of climate change) design storm events; ■ Demonstration through calculation(s) of the volumes of surface water storage required to attenuate site discharges to pre-development / agreed discharge rates; ■ Demonstration through calculation(s) that the proposed drainage system(s) will not result in flooding off site under the 100 year return period design storm including allowance for climate change; and ■ Demonstration through calculation(s) that provision is made to meet long term storage volumes required for the site, unless discharge rates have been restricted to QBar for all storm events up to and including the 1 in 100 year including allowance for climate change	ii ii ii ii

Additional requirements for a large site or multi-plot development (including Strategic Development Locations).

Ref.	Detail required	Requirement met/included
	■ Plans demonstrating the phasing of drainage infrastructure (in keeping with wider development phasing proposals, demonstrating how flood risks and drainage will be managed throughout and on completion of the development.	



Appendix C – Drainage Strategy

SW Drainage Strategy Plan

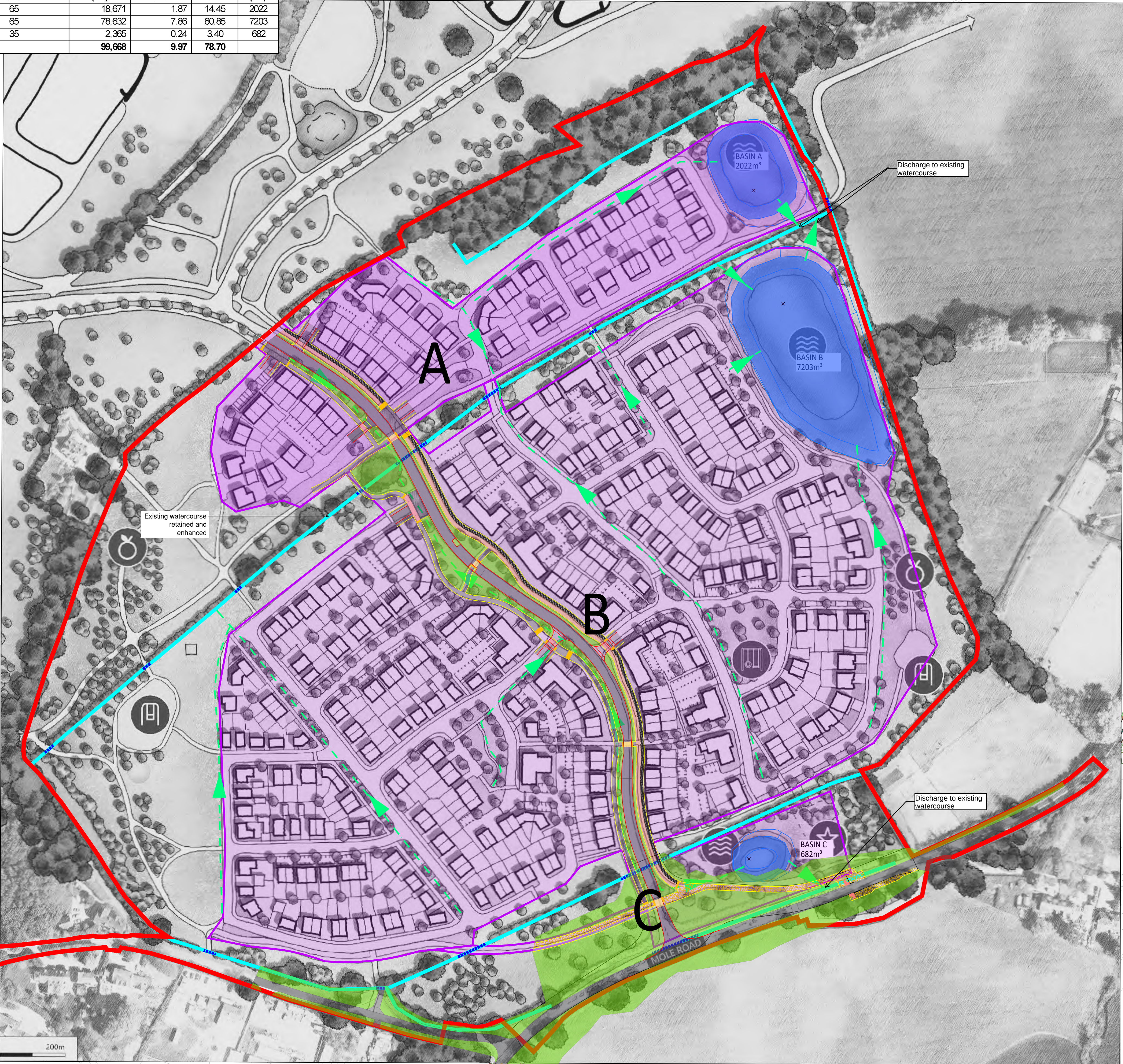
FW Drainage Strategy Plan

Greenfield Runoff Rates

Long Term Storage Calculations

Thames Water Correspondence

Parcel	Total area (m²)	Developed area (m²)	Developed area (ha)	Percentage impermeable of the developed area (%)	Impermeable area (m²)	Impermeable area (ha)	Discharge rate (l/s)	Storage estimate (m³)
A	38,182	28,725	2.87	65	18,671	1.87	14.45	2022
B	125,813	120,973	12.10	65	78,632	7.86	60.85	7203
C	10,081	6,756	0.68	35	2,365	0.24	3.40	682
	174,076	156,454	15.65		99,668	9.97	78.70	



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GENERAL NOTES:
1. Do not scale.
2. Refer to all other Project Drawings and supporting notes

KEY:

- Redline Boundary
- Development Parcel
- Existing Watercourses
- Proposed culvert
- Proposed basin
- Indicative main drainage route

P1	10.25	FIRST ISSUE	RG	RF
Rev	Date	Description	Drawn	Checked

www.ableletchford.co.uk

Client
GLEESON HOMES

Project
NEWLANDS FARM
LODDON VALLEY
GARDEN VILLAGE

Title
SURFACE WATER
DRAINAGE STRATEGY

Status

Scale	Date	Drawn	Checked
1:1250 @ A1	OCT 2025	RG	RF

Drawing No.	Revision
HD165-OUT-500	P1



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- GENERAL NOTES:
1. Do not scale.
2. Refer to all other Project Drawings and supporting notes

- KEY:
- Redline Boundary
 - Pump Station catchment
 - Existing Watercourses
 - Proposed culvert
 - Proposed pump station compound
 - Indicative primary foul network
 - Indicative rising main route

P1	10.25	FIRST ISSUE	RG	RF
Rev	Date	Description	Drawn	Checked



Client
GLEESON HOMES

Project
**NEWLANDS FARM
LODDON VALLEY
GARDEN VILLAGE**

Title
**FOUL WATER
DRAINAGE STRATEGY**

Status

Scale	Date	Drawn	Checked	RF
1:1250 @ A1	OCT 2025	RG		
Drawing No.		Revision		
HD165-OUT-501		P1		

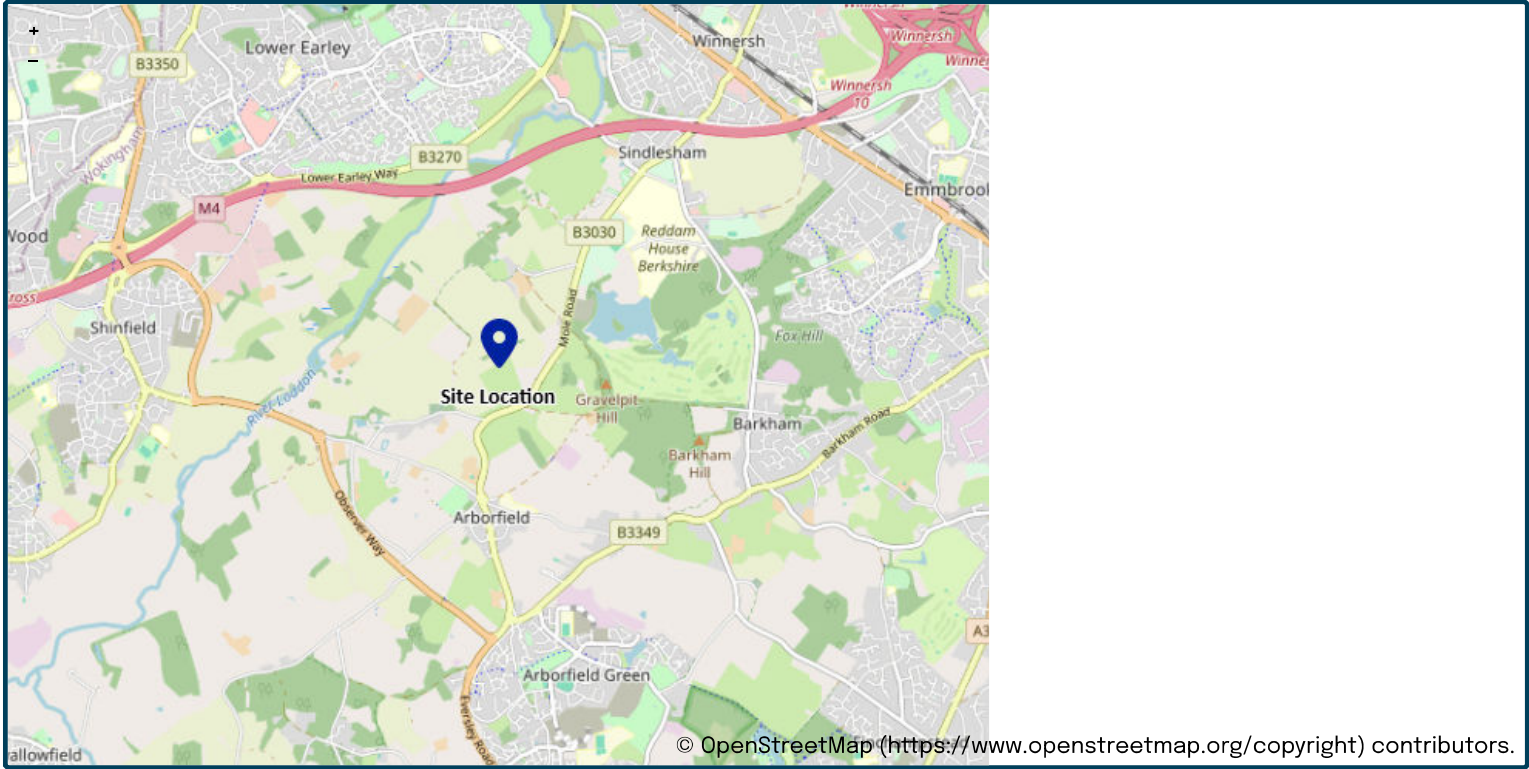
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015).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

Project details

Date	23/10/2025
Calculated by	
Reference	HD165 Mole Road
Model version	2.2.1

Location

Site name	Newlands Farm
Site location	Arborfield



Site easting (British National Grid)	476287
Site northing (British National Grid)	167965

Site details

Total site area (ha)	50	ha
----------------------	---------------------------------	----

Greenfield runoff

Method

Method	IH124		
IH124			
	<u>My value</u>	<u>Map value</u>	
SAAR (mm)	649	mm	651
How should SPR be derived?	Estimate using BFI		
BFIHOST	0.333		
SPR	0.499		
QBar (IH124) (l/s)	251.6	l/s	

Growth curve factors

	<u>My value</u>	<u>Map value</u>	
Hydrological region	6		6
1 year growth factor	0.85		
2 year growth factor	0.88		
10 year growth factor	1.62		
30 year growth factor	2.3		
100 year growth factor	3.19		
200 year growth factor	3.74		

Results

Method	IH124	
Flow rate 1 year (l/s)	213.9	l/s
Flow rate 2 year (l/s)	221.5	l/s
Flow rate 10 years (l/s)	407.6	l/s
Flow rate 30 years (l/s)	578.7	l/s
Flow rate 100 years (l/s)	802.6	l/s
Flow rate 200 years (l/s)	941.0	l/s

4.28l/s/ha

4.43l/s/ha

8.15l/s/ha

11.57l/s/ha

16.05l/s/ha

18.82l/s/ha

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent ‘zero’ figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.2.1) developed by HR Wallingford and available at uksuds.com (<https://www.uksuds.com/>). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Long Term Storage (LTS) Volume Calculation



Project No.	HD165
Project Title	Newlands Farm
Client	Gleeson

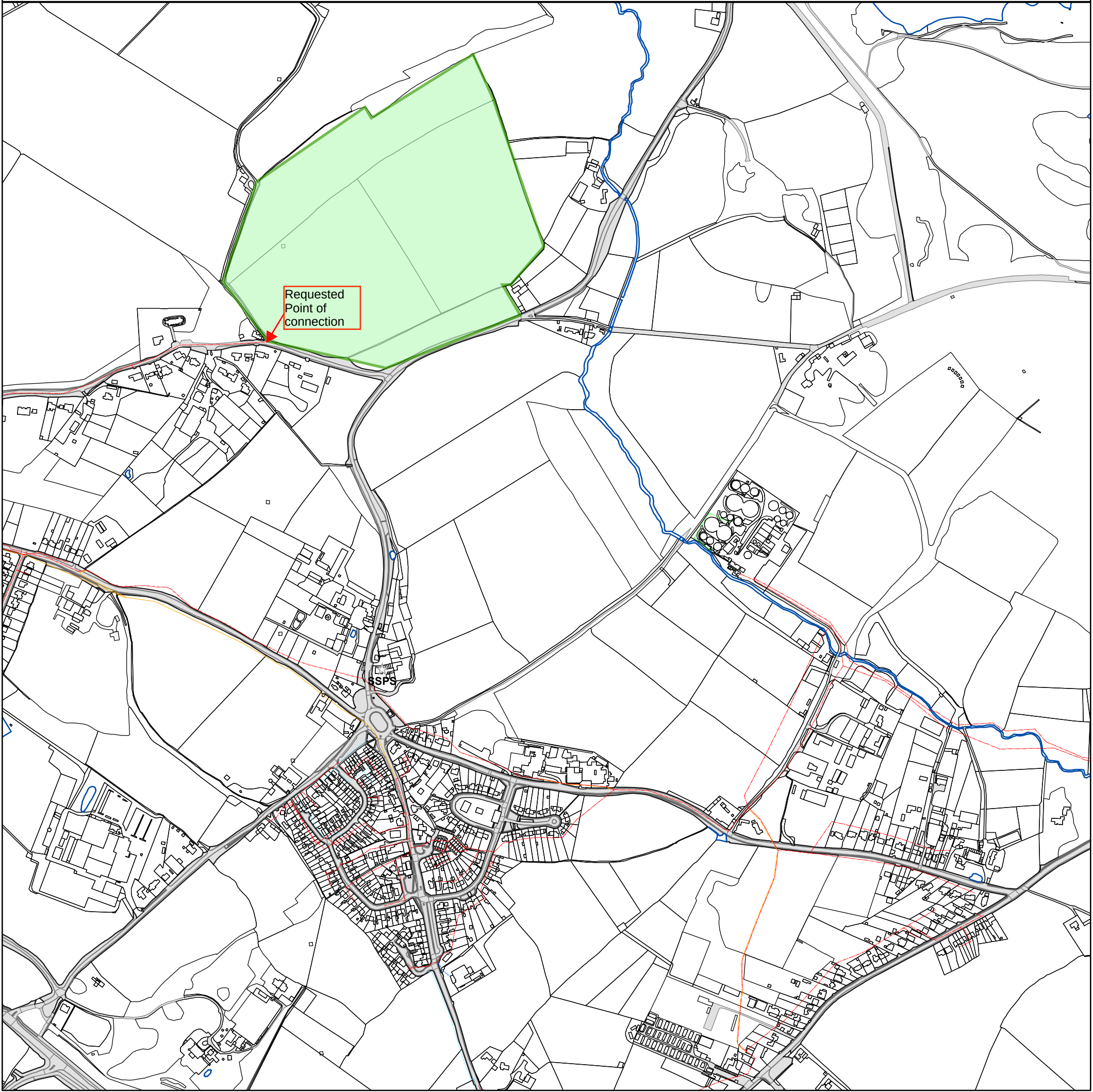
Calcs by	RG
Checked	RF
Date	23/10/2025
Revision	A

LTS volume calculation method based on equation 7.1 from DEFRA report SC030219

Where;	Vol _{xs}	Extra runoff volume from a development site compared to the greenfield equivalent during the 100 yr 6 hr storm		
RD	Rainfall Depth	68.49	mm	(for 100 year 6 hour storm) Taken from FEH website data
PIMP	Percentage Impermeable	65	%	The impermeable area as percentage of the total area
A	Site Area	1	ha	The area of the site
SOIL	the "SPR" value for the relevant FSR soil type	0.499		Taken from UKSuDS website
α	Proportion Impermeable to Network	1		The proportion of paved area draining to the network or directly to the river (values from 0 to 1)
β	Proportion Perm to Network	1.00		The proportion of pervious area draining to the network or directly to the river (values from 0 to 1)
CV	Impermeable Runoff Coefficient	0.8		(The runoff factor for contributing paved surfaces - DEFRA value 0.8)

$$Vol_{xs} = \frac{RD}{100} \times A \times \left(\frac{PIMP}{100} \times \alpha \times CV + (1 - \frac{PIMP}{100}) \times \beta \times SPR \right)$$

Volume_{xs} = 134.00 m³ per ha



The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified before any works are undertaken. Crown copyright Reserved

Scale: 1:7160
Width: 2000m
Printed By: SEswara1
Print Date: 19/03/2025
Map Centre: 476477,167401
Grid Reference: SU7667SW

Comments:



Mrs Rebecca Fletcher – Abley Letchford
6th Floor, Reading Bridge House
George Street
READING
RG1 8LS

27 June 2025



Pre-planning enquiry: Capacity concerns (foul water)

Site address: L/A Mole Road, Arborfield, Reading RG2 9JF

Dear Mrs Fletcher,

Thank you for providing information on your [proposed development of 431 houses with proposed foul water discharge via gravity to the 150 mm Ø foul water sewer via manhole ref. SU75679701 and no surface water discharge to sewer.](#)

We have completed the assessment of the [foul water](#) flows based on the information submitted in your application with the purpose of identifying sewerage capacity within the existing Thames Water sewer network.

As the development is located on a [brownfield](#) site there may be existing sewers or rising mains crossing the site. Where these are to become redundant or to be diverted, the full cost of administering and undertaking the works shall be financed [by the developer](#).

Foul Water

We've assessed your [foul water](#) proposals and unfortunately, we've concluded that our [foul water](#) sewer network may not have sufficient capacity to meet the needs of your development at this time.

In order to ensure that we are able to make the appropriate upgrades—or 'off-site reinforcement'—to serve your development, we'll need to carry out modelling work, design a solution, and build the necessary improvements. This work is done at our cost.

Once we've begun modelling, we may need to contact you to discuss changing the connection point for capacity reasons. Please note that we'll pay the cost of covering any extra distance if the connection needs to be made at a point further away than the nearest practicable point of connection of at least the same diameter.



How long could modelling and reinforcement take?

Typical timescales for a development of your size are:

- Modelling: ≤12 months
- Design: 6 months
- Construction: ≤18 months*
- **Total: ≤36 months**

*dependent on traffic management, local authorities, and third-party landowners

If the time you're likely to take from planning and construction through to first occupancy is **longer** than this, we'll be able to carry out the necessary upgrades in time for your development. If it's **shorter**, please contact me to discuss the timing of our activities.

What do you need to tell us before we start modelling?

We will only carry out modelling once we're confident that your development will proceed. In order to have this confidence, we'll need to know that you own the land, have either outline or full planning permission, and can confirm the build programme to occupancy. Please email this information to us as soon as you have it.

If the modelling shows we need to carry out reinforcement work, then before we start construction, we'll need you to supply us with notification that you've confirmed your F10—Notification of construction project—submission to the Health and Safety Executive.

Foul Water Capacity at the Sewage Treatment Works (STW)

The receiving network is served by Arborfield Sewage Treatment Works and there isn't capacity to serve the development currently. A more detailed assessment will be carried out when the LPA consult our Development Control team and we may require a planning condition to allow us time to upgrade the STW.

Surface Water

In accordance with the Building Act 2000 Clause H3.3, positive connection of surface water to a public sewer will only be consented when it can be demonstrated that the hierarchy of disposal methods have been examined and proven to be impracticable.

Where disposal of surface water is other than to a public sewer, the developer shall ensure that approval for the discharge has been obtained from the appropriate authorities.



What happens next?

Please review your foul water drainage proposal following the requirements and recommendations listed above. You may provide any changes to your design to us for comment.

If you have any queries, please give me a call on 07747 644 979 (9am to 5pm, Monday to Friday) or email developer.services@thameswater.co.uk.

Yours sincerely,



Nicholas Short BSc (Hons)

Adoption & Pre-planning Engineer

Waste Adoptions Thames Valley & Home Counties

Service Delivery