



- Legend**
- Indicative site boundary
  - Indicative plot finished floor level (FFL)
  - Proposed surface water sewer
  - Proposed foul water sewer
  - Proposed foul water rising main
  - Proposed public foul water sewer
  - Existing public foul water sewer
  - Existing public foul water rising main
  - Proposed previous pavement / permeable construction
  - Extent of potentially adoptable road, discharging directly to adjacent sewer or filter drain, subject to consultation with the highways authority
  - Proposed swale, 500mm wide base channel, banks max. 1:3
  - Proposed filter drain
  - Proposed detention basin, Banks vary, max. 1 in 3, to landscape architect's design
  - Basin low flow channel
  - Basin top of water level
  - Basin maintenance buffer (3m offset)
  - Indicative extent of 1 in 3 banking from development down to existing ground
  - Bioretention system / raingarden

- Design Notes**
- Proposals on this drawing are indicative only and subject to detailed design
  - Design in accordance with the Oxfordshire County Council Local Standards and Guidance for Surface Water Drainage on Major Development in Oxfordshire.
  - Existing ground levels in accordance with CD Surveys Ltd's drawing WD1908073 (October 2019).
  - Proposed layout in accordance with ACG Architects' drawing 353\_SKE\_220520\_02 (September 2022).
  - The total area made impermeable by the proposed development is estimated at 2.954 Ha, including 1.596 Ha of adopted and private roads and 1.358 Ha of roofs and private driveways.
  - As per the OGC Local Standards, a 10% allowance should be made for urban creep, to take account of potential increases in impermeable area that do not require consent, such as paving of gardens or small external areas. The 10% allowance has been applied to the area of the roofs and private driveways. Therefore the total area made impermeable by the proposed development is estimated at 3.134 Ha.
  - The greenfield Q<sub>10</sub> discharge rate was calculated using the IAH124 methodology with the ICP SuDS correction for small catchments. The HR Wallingford maps indicate the site has a WRAP class of 3 more appropriate for the site, representing permeable soils with shallow groundwater in low lying areas.
  - The resulting greenfield Q<sub>10</sub> discharge rate was 0.4 L/s/ha.
  - The intrusive ground investigation carried out at the site (refer to C86354-JNP-92-XX-RP-G-1004), found that shallow groundwater was present across the site. Therefore the WRAP class of 3 is more appropriate for the site, representing permeable soils with shallow groundwater in low lying areas.
  - Therefore, an increased discharge rate of 2.0 L/s/ha has been selected and agreed with the LFA by email, dated 27/04/2022.
  - For a total impermeable area of 3.134 Ha (including urban creep), the maximum site discharge rate is 6.3 L/s.
  - The proposed drainage network has been preliminarily designed to current adoptable standards where practical, using MicroDrainage's Network. The indicative cover levels provided in roads are based on minimum cover depths of 1.2 m. In landscaped areas, a minimum cover level of 0.6m has been applied.
  - Proposed ground levels are defined by the monitored groundwater levels, with the base of the basins set at minimum of 300mm above the monitored seasonal highest groundwater level. Proposed ground levels in parcels are largely defined by cover to surface water sewers, working back from the basins.
  - Private drains have been routed through back gardens to discharge directly into the SuDS features to lower cover levels and minimise levels raising. These drains and detention basins are unlikely to be adopted by Thames Water.

- General Notes**
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**Health & Safety Note**

The details on this drawing have been prepared on the assumption that a competent contractor will be carrying out the works. If the contractor/s considers that there is insufficient Health and Safety information on this drawing, this should immediately be brought to the attention of the designer.

**HAZARD IDENTIFICATION BOX**

This table is provided to assist the Principal Contractor to fulfil their obligations under the CDM Regulations 2015

Hazard Ref	Hazard Type	Hazard Description	Mitigation Measures/Residual Risk
P03	Construction	Shallow groundwater (UK wells)	Contractor to follow appropriate construction methodology to shallow groundwater. Appropriate construction types for buried structures should be used.
P01	Construction/ Maintenance/Cleaning	Detention basins	Detention basins have been sized to be visible to the public, with banks no greater than 1 in 3. The basins should be unroofed and any planting should be limited to earth that will not obstruct visibility into the basin.

Wates Developments  
Land South of Green Lane, Chesterton

Drainage Strategy  
Sheet 1 of 2

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Scale: FL 60, 20  
Date: 15/02

S2 - Suitable for Information

C86354 - JNP - 92-XX-DR-C-2003 P03