

**SURFACE WATER AND FOUL WATER
DRAINAGE SCHEME**

for

WILLIAM THOMPSON HOMES LIMITED

PROPOSED RESIDENTIAL DWELLING

at

**52A NEW CUT LANE
SOUTHPORT, PR8 3DW**

FEBRUARY 2023

REFORD

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1. INTRODUCTION

- 1.1 This surface water and foul water drainage scheme has been produced on behalf of William Thompson Homes Limited in support of a planning application for a single residential dwelling at 52A New Cut Lane, Southport, PR8 3DW. A location plan is included within Appendix A.

- 1.2 This drainage scheme describes the existing site conditions and proposed development. It assesses the potential impact of proposals on existing drainage and includes a proposed scheme for the provision of new drainage to serve the proposed development.

2. BASE INFORMATION

Existing site

- 2.1 The proposal relates to an area of land that lies within the curtilage of 52A New Cut Lane, Southport. Access to the site is from a private drive from New Cut Lane.
- 2.2 The total area of the site is approx. 2,500m². The site is at a lower level than New Cut Lane.

Site geology

- 2.3 The online Soilsmap Viewer has identified the site lying in a region characterised by raised bog peat soils.

Understanding of existing drainage local to the site

- 2.4 The site lies within an area of Southport where a drainage ditch network takes surface water runoff from the surrounding land. A drain in open ditch lies along the western boundary of the site. The drain flows to the south and east to discharge into Fine Jane's Brook that lies approx. 200m to the east of the site.
- 2.5 United Utilities sewer records identify a public combined sewer flowing to the west within New Cut Lane, and surface water watercourses within the north and south footways to New Cut Lane flowing to the east. The sewer records are included within Appendix B.

Private drainage

- 2.6 The existing property 52A New Cut Lane is drained by separate surface water and foul water systems. Foul water is pumped to the United Utilities public combined sewer that lies within New Cut Lane along the private drive by a private foul pumping station that lies within the curtilage of the existing building.

Proposed development

- 2.7 The development is to comprise a single residential dwelling.

3. PROPOSED DRAINAGE SCHEME

3.1 The proposed drainage layout is included within Appendix C.

Surface water drainage

3.2 In accordance with the National Standards for Sustainable Drainage, the drainage scheme should incorporate the use of Sustainable Drainage (SUDS) where possible. The approach promotes the use of infiltration features in the first instance. If drainage cannot be achieved solely through infiltration due to site conditions or contamination risks, the preferred options are (in order of preference):

- (i) a controlled discharge to a local waterbody or watercourse, or
- (ii) a controlled discharge into the public sewer network (depending on availability and capacity).

3.3 The rate and volume of discharge should strive to provide betterment and be restricted to the pre-development values as far as practicable.

3.4 The online Soilsmap Viewer has identified the site lying in a region characterised by raised bog peat soils. As such it is unlikely that infiltration of surface water back into the ground will be viable, particularly as within this area of Southport is a drainage ditch network that takes surface water runoff from the surrounding land.

3.5 A drain in open ditch lies along the western boundary of the site. The drain flows to the south and east to discharge into Fine Jane's Brook that lies approx. 200m to the east of the site.

3.6 The development is for a single residential dwelling and as such the developed site is not likely to generate 5 l/s surface water runoff from it. It is therefore intended that surface water runoff from the building roof and paved areas will be collected by a piped system and will discharge into the drain that lies in open ditch along the western boundary of the site.

3.7 Surface water falling onto the undrained soft landscaped areas will be retained on site with attenuation storage being provided by the topsoil layer, which will allow water

to percolate into it where it will either be taken up by the vegetation or evaporate. The surface water within these areas of the site will therefore be dealt with close to where it falls, at source. There may, potentially, be periods where the topsoil layer may become saturated and surface ponding may occur but this will be shallow in depth and will disappear over a short period of time

Foul Water Drainage

- 3.8 United Utilities sewer records identify a public combined sewer flowing to the west within New Cut Lane. Foul water from the existing property 52A New Cut Lane is drained by a separate foul drainage system and is pumped to the United Utilities public combined sewer that lies within New Cut Lane along the private drive by a private foul pumping station that lies within the curtilage of the existing building.
- 3.9 The rising main leaving the pumping station under the drive to the public sewer is 75mm OD.
- 3.10 It is therefore intended that foul water from the proposed residential dwelling will discharge into the existing pumping station within the site and be pumped to the public combined sewer that lies within New Cut Lane. The existing pumping station is to be checked to ensure that it has the capacity to discharge foul water from both properties at the completion of the development. It may be necessary for the pump(s) to be updated or for a new pumping station to be installed to replace the existing.

4. SUMMARY AND CONCLUSIONS

- 4.1 This surface water and foul water drainage scheme has been produced on behalf of William Thompson Homes Limited in support of a planning application for a single residential dwelling at 52A New Cut Lane, Southport, PR8 3DW.
- 4.2 It is unlikely that infiltration of surface water back into the ground will be viable, particularly as within this area of Southport is a drainage ditch network that takes surface water runoff from the surrounding land.
- 4.3 A drain in open ditch lies along the western boundary of the site. The drain flows to the south and east to discharge into Fine Jane's Brook that lies approx. 200m to the east of the site.
- 4.4 It is intended that surface water runoff from the building roof and paved areas will be collected by a piped system and will discharge into the drain that lies in open ditch along the western boundary of the site.
- 4.5 It is intended that foul water from the proposed residential dwelling will discharge into the existing pumping station within the site and be pumped to the public combined sewer that lies within New Cut Lane.

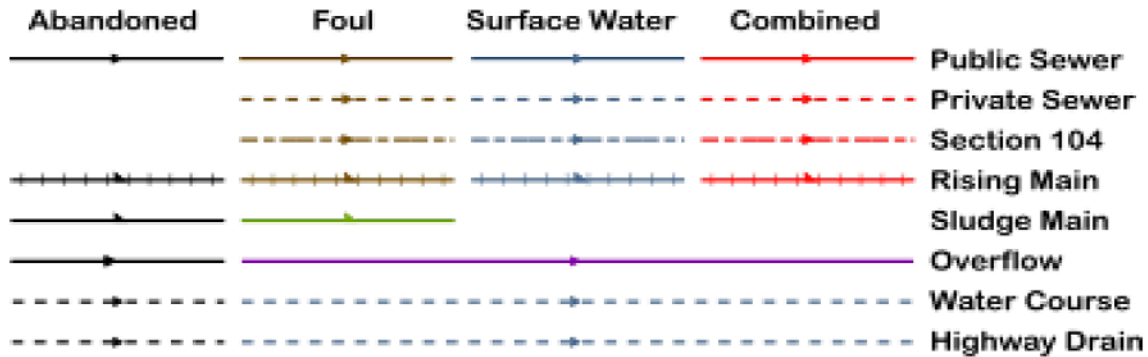
APPENDIX A



LOCATION PLAN

APPENDIX B

Wastewater Symbology

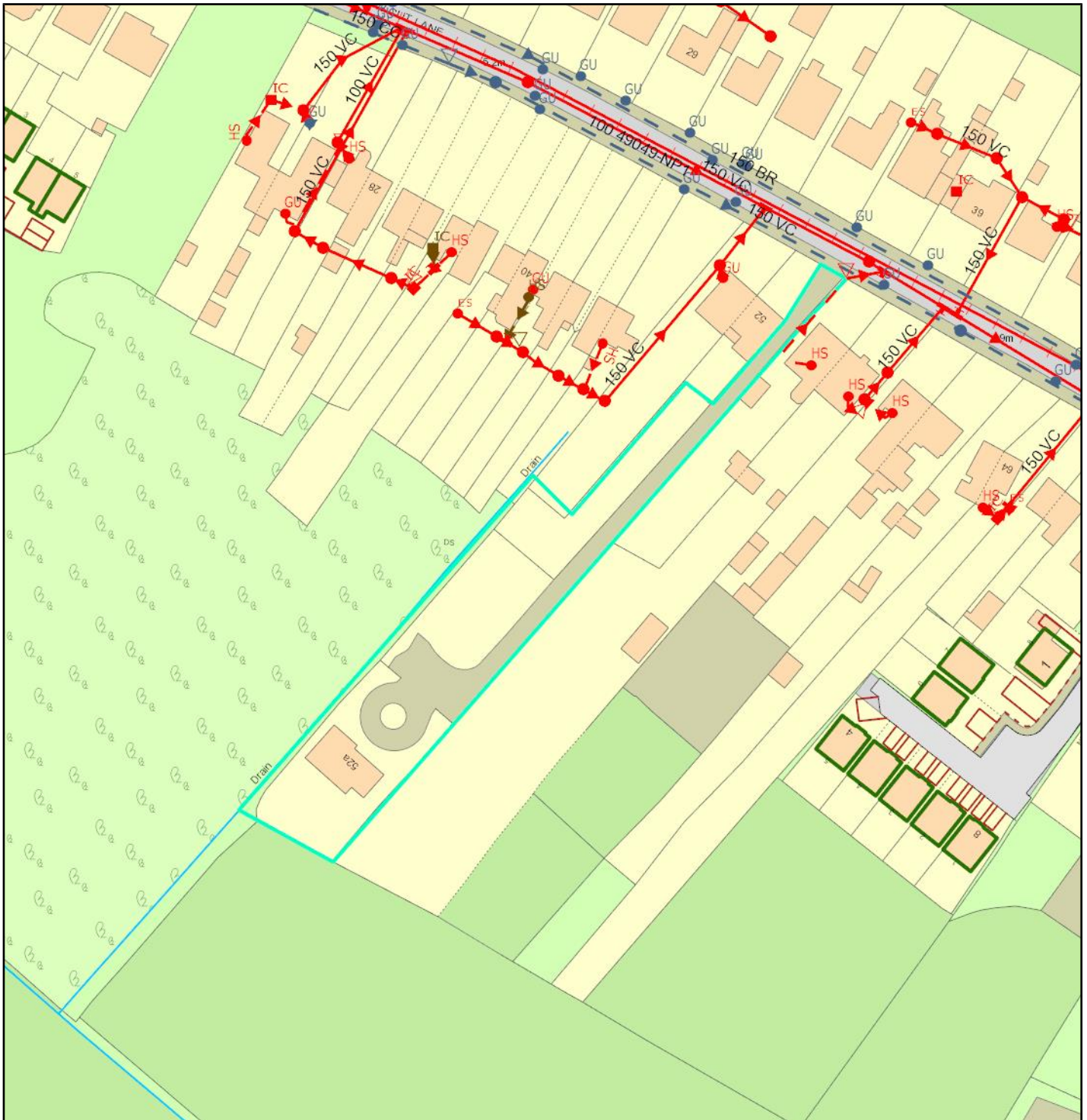


All point assets follow the standard colour convention: **red** – combined **brown** - foul
blue – surface water **purple** - overflow

- | | |
|------------------|--------------------------|
| Manhole | Side Entry Manhole |
| Head of System | Outfall |
| Extent of Survey | Screen Chamber |
| Rodding Eye | Inspection Chamber |
| Inlet | Bifurcation Chamber |
| Discharge Point | Lamp Hole |
| Vortex | T Junction / Saddle |
| Penstock | Catchpit |
| Washout Chamber | Valve Chamber |
| Valve | Vent Column |
| Air Valve | Vortex Chamber |
| Non Return Valve | Penstock Chamber |
| Soakaway | Network Storage Tank |
| Gully | Sewer Overflow |
| Cascade | Ww Treatment Works |
| Flow Meter | Ww Pumping Station |
| Hatch Box | Septic Tank |
| Oil Interceptor | Control Kiosk |
| Summit | |
| Drop Shaft | Change of Characteristic |
| Orifice Plate | |

SEWER RECORD

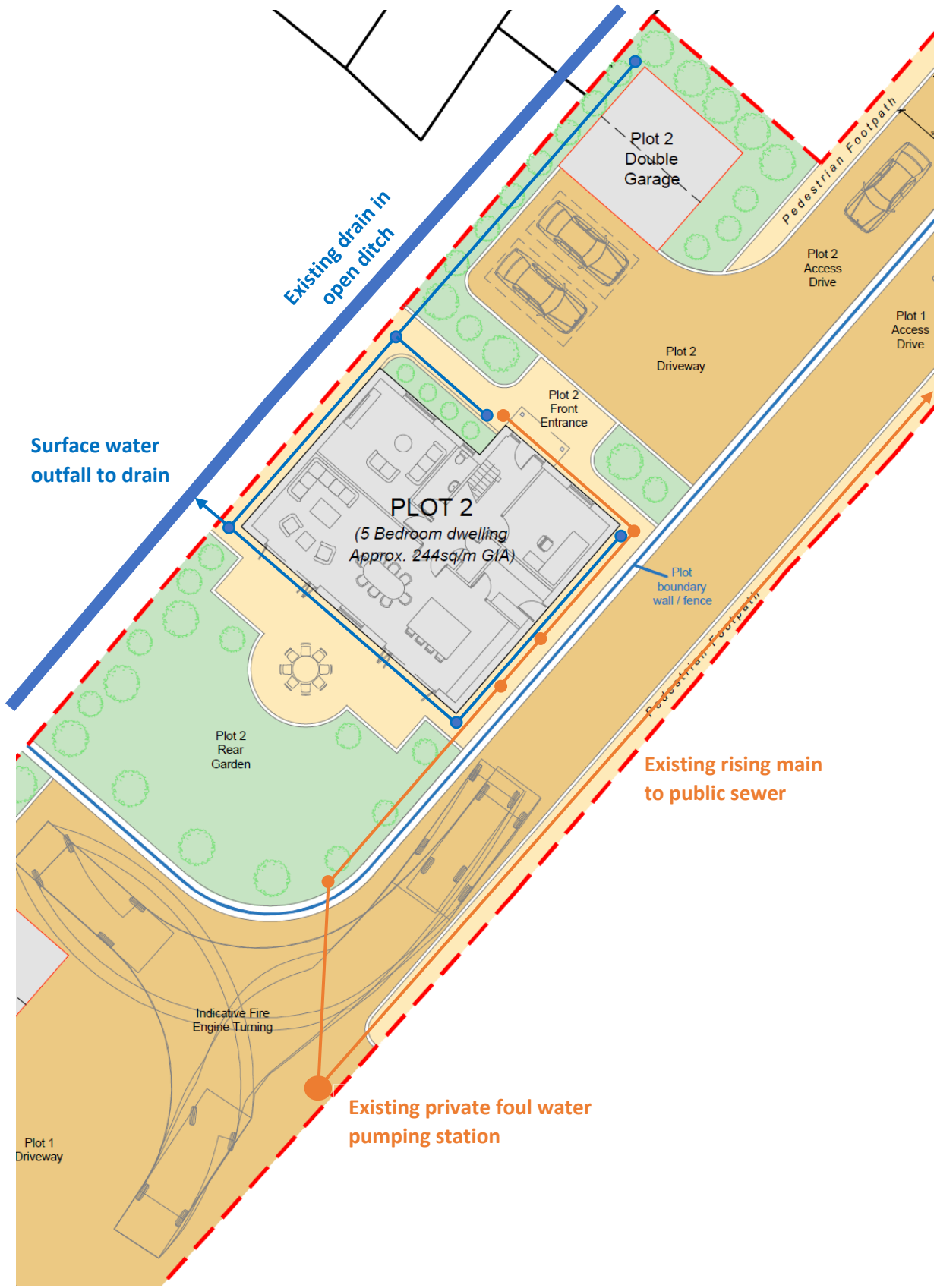
52A NEW CUT LANE, SOUTHPORT, PR8 3DW



The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded. United Utilities Water PLC will not accept any liability for any damage caused by the actual positions being different from those shown.

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APPENDIX C



PROPOSED DRAINAGE LAYOUT