

**SURFACE WATER AND FOUL WATER
DRAINAGE SCHEME**

for

JOYCE HINDLE

SINGLE RESIDENTIAL DWELLING

on

**LAND TO THE REAR OF 16 WHITEACRE LANE
BARROW, BB7 9BJ**

DECEMBER 2022

REFORD

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- B Existing surface water drain and watercourse
- C Proposed drainage layout

1. INTRODUCTION

- 1.1 This surface water and foul water drainage scheme has been produced on behalf of Joyce Hindle to discharge Condition 5 of the planning approval from Ribble Valley Borough Council (Reference 3/2021/1042) for the erection of single residential dwelling on land to the rear of 16 Whiteacre Lane, Barrow, BB7 9BJ. A location plan is included within Appendix A.
- 1.2 Condition 5 states the following:

Prior to the commencement of development (excluding demolition) details of a sustainable surface water drainage scheme and a foul water drainage scheme shall be submitted to and approved in writing by the Local Planning Authority. The drainage schemes must include:

- (i) *An investigation of the hierarchy of drainage options in the National Planning Practice Guidance (or any subsequent amendment thereof). This investigation shall include evidence of an assessment of ground conditions, the potential for infiltration of surface water in accordance with BRE365;*
- (ii) *A restricted rate of discharge of surface water agreed with the local planning authority (if it is agreed that infiltration is discounted by the investigations). In the event of surface water discharging to the public surface water sewer, the rate of discharge shall be restricted to 5 l/s;*
- (iii) *Levels of the proposed drainage systems including proposed ground and finished floor levels in AOD;*
- (iv) *Incorporate mitigation measures to manage the risk of sewer surcharge;*
- (v) *Foul and surface water shall drain on separate systems within the site.*

The approved schemes shall also be in accordance with the Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) or any subsequent replacement national standards.

Prior to occupation of the proposed development, the drainage schemes shall be completed in accordance with the approved details and retained thereafter for the lifetime of the development.

- 1.3 This drainage scheme is to discharge Condition 5 of the planning approval. It 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 land to the rear of 16 Whiteacre Lane, Barrow, BB7 9BJ.
- 2.2 The site is approx. 0.14 hectare, is bounded by existing residential development on all sides and comprises an area of maintained grassland.
- 2.3 Phase 3 of the adjacent residential development is being constructed on the adjoining plot of land to the west (see planning permission 3/2018/0500).

Site geology

- 2.4 The online Soilscapes Viewer has identified the site lying in a region characterised by slowly permeable seasonally wet acid loamy and clayey soils, which are not conducive to infiltration.
- 2.5 This has been demonstrated when constructing the residential dwellings within Phase 3 of the adjacent residential development, the nature of the soils being found comprising clayey soils. Infiltration of surface water runoff into the ground is therefore not possible on this site.

Understanding of existing drainage local to the site

- 2.6 A watercourse lies approx. 50m to the south of the development site. The watercourse flows to the southwest to ultimately discharge into the River Calder.
- 2.7 A surface water drain crosses the development site in a southerly direction to discharge into the watercourse. The location of the watercourse and surface water drain is shown in Appendix B.
- 2.8 Existing surface water and foul water drainage lies within Phase 3 of the adjacent residential development that is being constructed on the adjoining plot of land to the west. If it is needed to do so, the applicant has permission from the developer to discharge surface and foul water into the existing drainage systems within Phase 3 of the adjacent residential development.

- 2.9 Surface water from Phase 3 of the adjacent residential development discharges into the watercourse.
- 2.10 Foul water from Phase 3 of the adjacent residential development discharges into the 150mm diameter public foul sewer within Bramley View to the south of the site.

Proposed development

- 2.11 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 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 Infiltration of surface water back into the ground is not feasible on this site.

3.5 A surface water drain crosses the development site in a southerly direction to discharge into the watercourse that lies approx. 50m to the south of the development site. The watercourse flows to the southwest to ultimately discharge into the River Calder.

3.6 It is therefore intended that surface water runoff from the proposed single residential dwelling will discharge into the surface water drain that crosses the development site and the watercourse.

3.7 The development is for a single residential dwelling and as such is not likely to generate 5 l/s surface water runoff from it.

3.8 To reduce further the area of impermeable surfaces draining to the positive drainage network from the developed site, surface water from paths and patios will be allowed

to runoff to channel drains or to adjacent areas of gravel filter strips or planted beds where it will be taken up by plants or evaporated.

Foul Water Drainage

- 3.9 United Utilities sewer records show a 150mm diameter foul sewer lying to the south of the site within Bramley View.
- 3.10 Foul water from Phase 3 of the adjacent residential development discharges into the 150mm diameter public foul sewer within Bramley View to the south of the site.
- 3.11 It is intended that foul water from the single residential dwelling will discharge into the existing foul water drainage system serving Phase 3 of the adjacent residential development.

4. SUMMARY AND CONCLUSIONS

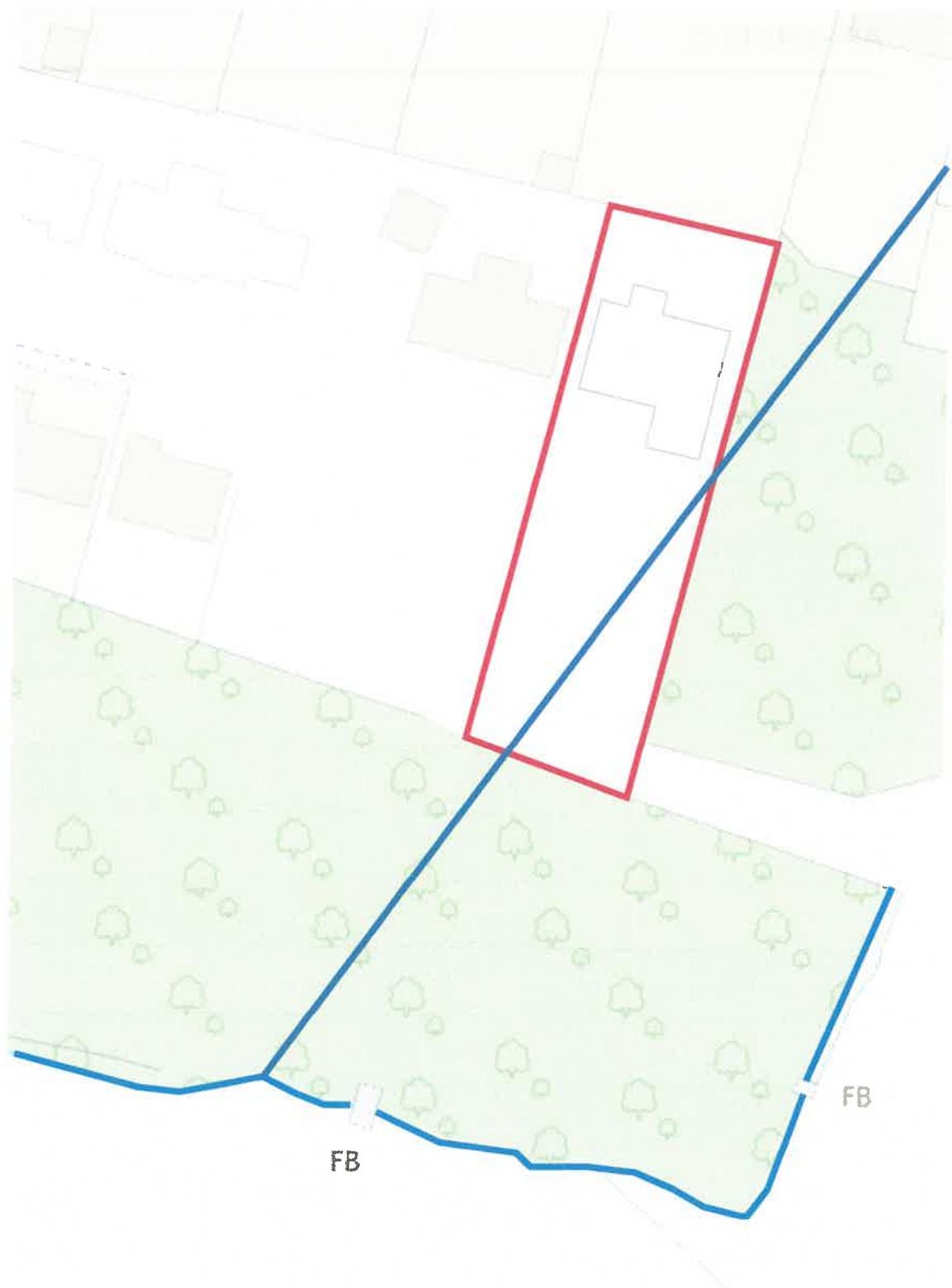
- 4.1** This surface water and foul water drainage scheme has been produced on behalf of Joyce Hindle to discharge Condition 5 of the planning approval from Ribble Valley Borough Council (Reference 3/2021/1042) for the erection of single residential dwelling on land to the rear of 16 Whiteacre Lane, Barrow, BB7 9BJ.
- 4.2** Infiltration of surface water back into the ground is not feasible on this site.
- 4.3** Surface water runoff from the proposed single residential dwelling will discharge into the surface water drain that crosses the development site and the watercourse.
- 4.4** Foul water from the proposed single residential dwelling will discharge into the existing foul water drainage system serving Phase 3 of the adjacent residential development.

APPENDIX A

LOCATION PLAN



APPENDIX B



EXISTING SURFACE WATER
DRAIN AND WATERCOURSE

APPENDIX C

PROPOSED DRAINAGE LAYOUT

