



Environmental

Geotechnical

Highways

Structural

Civil

27 Willaston Close, Chorlton

Planning Ref: 127222/FO/2020

Surface Water Drainage Strategy

For: Mr Chris Barton

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Date: Nov 2020

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1.0 INTRODUCTION

The present document has been prepared on behalf of Mr Chris Barton and includes the surface water drainage strategy and associated management/maintenance plan for the proposed two-storey new build property on the land at 27 Willaston Close, Chorlton-cum-hardy. The site postcode is M21 8BJ. The site location plan is presented in Appendix 1.

2.0 STANDARDS AND LIMITATIONS

This report has been prepared solely for use by Mr. Chris Barton.

It shall not be relied upon or transferred to any other party without the prior written authorisation of Integra Consulting.

The findings and opinions in the report are based on information derived from a variety of different sources. Integra Consulting do not accept any liability for the accuracy or otherwise of any information provided by third parties.

It should be noted that some of the aspects considered in this study may be subject to change with time. Therefore, if the development is delayed or postponed, consideration may need to be given to reviewing such issues to confirm that no changes have taken place, either at the site or within relevant legislation.

Further consultations with statutory bodies are likely as the scheme progresses. It should be noted that even where responses have been received from Regulators, these could be subject to change at a later date.

3.0 CURRENT SITUATION

3.1 Site Location & Description

The existing site is triangular in shape, covering an area of approximately 460m². It is bound by third party land to the North and west and by Willaston Close to the south and East. Chorlton Brook lies directly south of the site beyond, flowing West to East. Refer to Appendix 2 for the proposed site plan.

The current situation at the site includes an existing building (27 Willaston Close) with external hardstanding to the east and south. To the North edge of the development site lies overgrown landscaping.

3.2 Existing Surface Water Drainage

United Utilities (UU) Sewer plans have been obtained to identify the current surface and foul water sewer infrastructure in the area. Inspection of the sewer plans indicates the presence of two existing manholes and pipe runs within the proposed development boundary (UU Manhole references 5200 & 5201 – Foul water and surface water respectively). Instruction of a topographical survey of the site development extents confirmed the presence, and exact location of the manholes. Reference to the UU sewer plans shows that the surface water drainage infrastructure serving all properties on Willaston Close discharges directly into Chorlton Brook approximately 90m west of the proposed development boundary. The UU sewer plan and topographical survey of the site are contained within Appendix 3 & Appendix 4 respectively.

4.0 Proposed Surface Water Drainage Strategy

The issue of surface water drainage to the proposed development has been considered with reference to the hierarchy of surface water disposal as noted in the Building Regulations H3:

- i) Sustainable Urban Drainage Systems (SUDS).
- ii) Discharge of surface water off site direct to watercourse.
- iii) Discharge to adopted sewer.

SUDS are made up of one or more structures built to manage surface water runoff. They are used in conjunction with good management of the site to prevent flooding and pollution. There are four general methods of control:

- Filter strips and swales.
- Filter drains and permeable surfaces.
- Infiltration devices.
- Basins and Ponds.

A study of the available Geological data for the site notes the presence of clay strata at shallow depth below the proposed development site. Given these ground conditions SUDS measures in the form of infiltration techniques are deemed unsuitable at this site.

Based upon the presence of Chorlton Brook immediately to the southern site boundary, along with the established existing connectivity it is proposed to discharge surface water from the development site to Chorlton Brook via existing United Utilities infrastructure below the highway.

Prior to discharge, consideration has been given to flow control through appropriate SUDS measures in order to appropriately manage the surface water runoff from the proposed development. However, given the extremely

low site flow rate calculated as a result of the very small net area of impermeable areas associated with the new development (new roof area of 60m² only), flow control has been deemed impractical and unnecessary. As example, the 1 in 2 year flow rate associated with a roof area of 60m² is 0.8 l/s. Practically, flow control devices require a minimum flow rate of 2 l/s, which if implemented, would be greater than the suite runoff rate. Furthermore, there is no net increase in surface water runoff from the current predevelopment scenario, given that the proposed dwelling sits over an existing positively drained parking area.....

In terms of water quality – the impermeable areas associated with the new development consist of residential roof only. In accordance with Ciria C753, the SUDS Guide – table 26.2 indicates the pollution hazard level associated with residential roofs as 'Very Low'. This in itself is a betterment to the existing parking area, which is classed as 'Low'. Thus in summary, SUDS measures to improve water quality prior to off-site discharge are deemed not to be required.

The proposed surface and foul water drainage strategy is illustrated on Integra Drawing 501, enclosed in Appendix 5.

5.0 Proposed Surface Water Maintenance and Management Plan

Under the proposals for the new foul and surface water drainage system serving the proposed development, it is noted that this is to be a private drainage system which connects into the surrounding off site public sewer network. In this regard adoption of the drainage assets by either a public body or statutory undertaker are not applicable for the development.

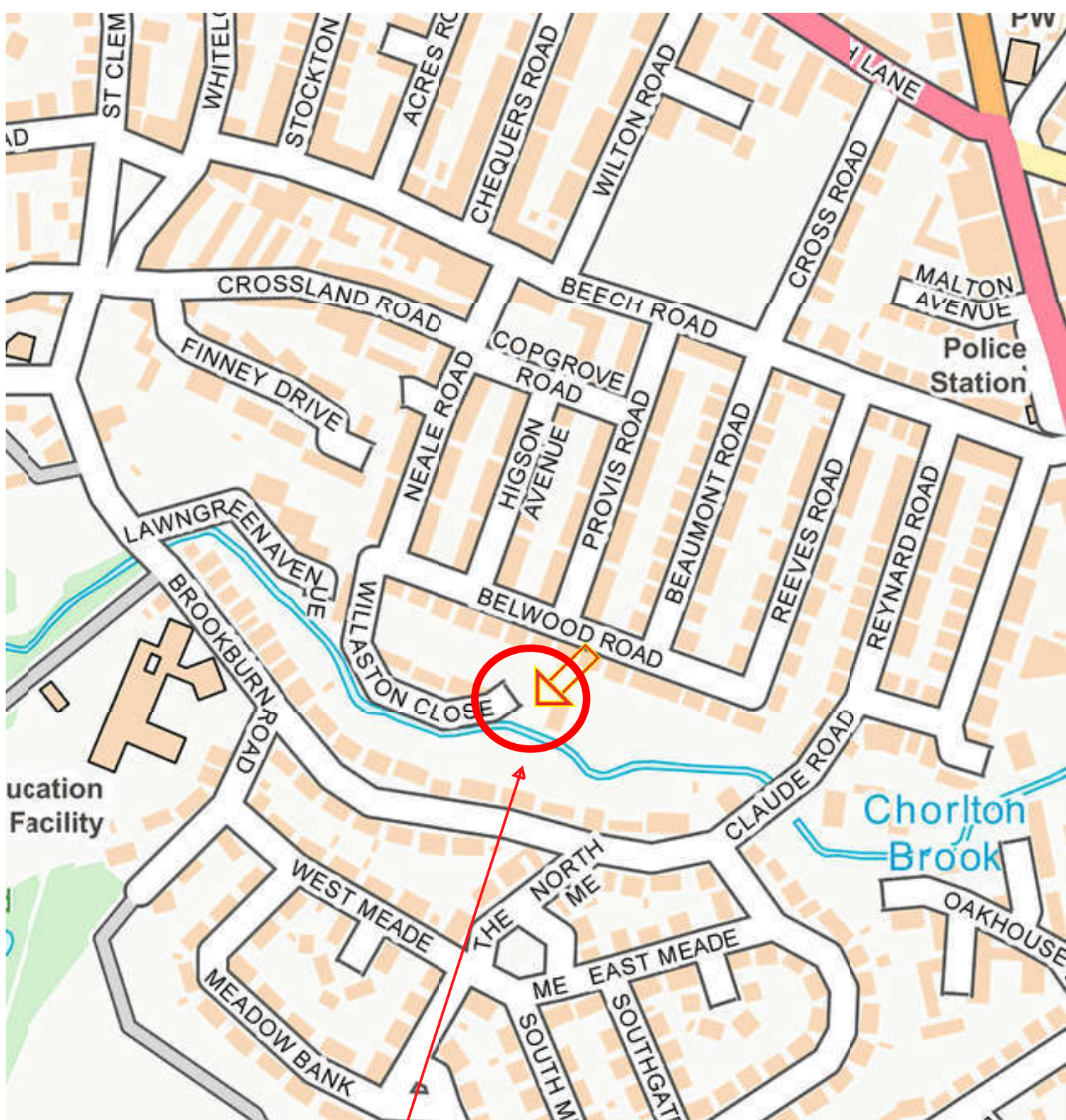
However, there will be a requirement for the drainage network to be properly maintained periodically for the lifetime of the proposed development. To account for this, it is proposed that the drainage system will fall under the responsibility of the owner of the property.

It is recommended that the most effective management and maintenance method applicable to the drainage features to be adopted is **monthly debris removal** of private gutters / driveways / hardstanding areas to prevent blocking of the network and diversion of catchment surface flows.

APPENDICES

APPENDIX 1

SITE LOCATION PLAN



Site - M21 8BJ

APPENDIX 2

PROPOSED DEVELOPMENT BOUNDARY



-  DEVELOPMENT SITE BOUNDARY
-  PROPOSED NEW DWELLING
-  OTHER LAND OWNED BY APPLICANT

REV B - 04/16
No 21 INCLUDED
IN OWNERSHIP.
REV C - 06/16
No 21 REMOVED
FROM OWNERSHIP.

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Key Plan &
Northpoint

Client Chris Barton
Project **27 Willaston Close**
Chorlton-cum-Hardy

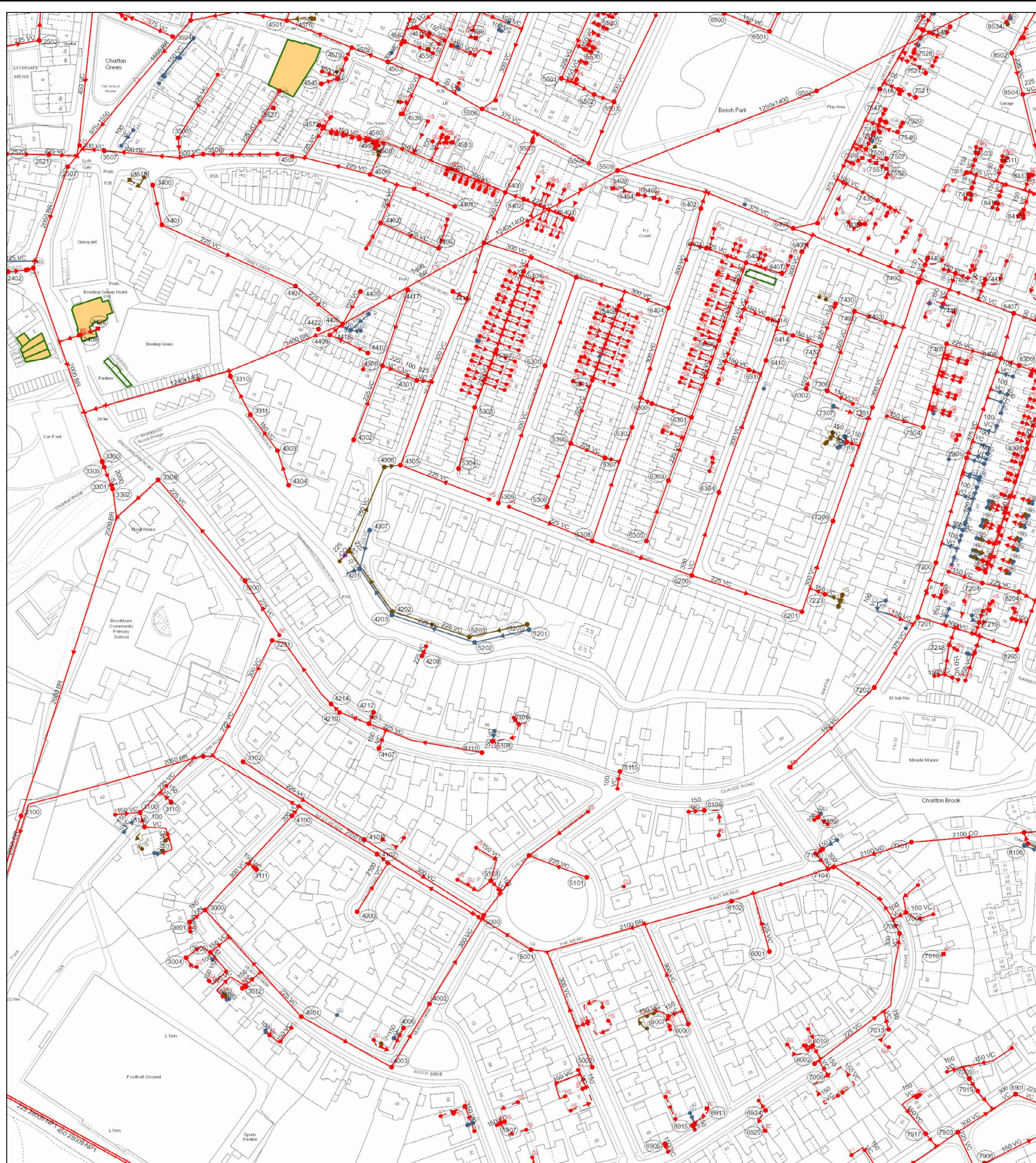
Document **Proposed New Dwelling**
Location Plan
Status For information

Scale & Date 1:500 @ A3 April 2016

Doc Ref	211	PD	2700	C
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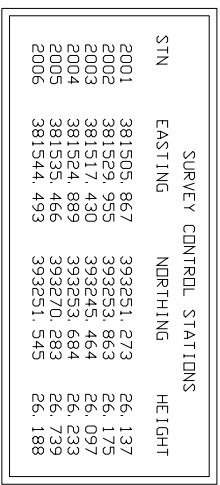
APPENDIX 3

UNITED UTILITIES SEWER PLAN



APPENDIX 4

SITE TOPOGRAPHICAL SURVEY



STN	SURVEY CONTROL STATIONS			HEIGHT
	EASTING	NORTHING		
2001	381595.867	393251.273	26.137	
2002	381297.950	393283.863	26.175	
2003	381217.450	393252.464	26.197	
2004	381217.450	393252.464	26.233	
2005	381254.869	393251.273	26.189	
2006	381344.493	393251.273	26.188	

[illegible]

APPENDIX 5

PROPOSED DRAINAGE LAYOUT



Scales As indicated @ A0		Date 08/23	
Drawn SB		Checked RH	
Contract No 3264		Drawing No 0501	Rev P01