Botley West Solar Farm

Environmental Statement

Volume 3

Annex 10.3: Hydraulic Modelling Report

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Glossary

Term	Meaning
The Applicant	SolarFive Ltd
The Project	The Botley West Solar Farm (Botley West) Project
Main River	A watercourse should be a main river if significant numbers of people and/or properties are liable to flood. This also includes areas where there are vulnerable groups and areas where flooding can occur with limited time for warnings.
Hydraulic Modelling	A Hydraulic model can be defined as a computational representation a river or coastal system -so basically using a computer to do calculations to represent a watercourse.
1D MODELLING	1D models represent a river system using cross sections and in some software packages storage areas (e.g. reservoir units in FMP/ISIS). 1D models can also represent structures e.g. bridges, weirs and culverts.
2D MODELLING	2D models represent a river system using a grid. The grid represents the floodplain topography and channel geometry. 2D model grids can be manipulated to represent some structures.
LINKED 1D 2D MODELS	Utilise the benefits of both 1D and 2D modelling. Most commonly the river channel is represented in 1D and the floodplain in 2D.
2d_bc_ HQ	Where the downstream boundary is not at a well-defined water level (e.g. ocean), a stage-discharge relationship may be specified using a 1D or 2D HQ (water level-flow or stage-discharge) boundary
Point Inflow	A hydrograph is a graph showing the rate of flow (discharge) versus time past a specific point in a river, channel, or conduit carrying flow. The rate of flow is typically expressed in cubic meters or cubic feet per second.
Lateral Inflow	The Uniform Lateral Inflow Hydrograph is used as an internal boundary condition. This option allows the user to bring in a flow hydrograph and distribute it uniformly along the river reach between two user specified cross section locations.
Sluice Gate	The gate that controls a sluice is a valve known as a ‘sluice gate’. These valves are designed to seal in one direction and commonly are used to control water levels and flow rates in rivers and canals.

Term	Meaning
1D_Estry network	TUFLOW models can be configured with Flood Modeller to allow dynamically linked models comprising 1D pipe networks, represented in ESTRY (aka TUFLOW 1D), open channels represented in Flood Modeller Pro and/or ESTRY and the 2D representation of surface flow represented in TUFLOW 2D. This allows full integrated catchment modelling
Orifice unit	The Orifice models flow through an orifice, short culvert, flood relief arch, outfall or inverted syphon using either the equations for weir control or surcharged flow depending on the upstream and downstream water levels.
2d_zsh layer	To represent levees, flood defences, roads, railways and embankment that obstruct flow
HX lines	The terminology used in TUFLOW is a HX type boundary on the 2D cells, with the H indicating that a Head (water level) boundary is used and the X indicating the value is coming from an external model (in this case Flood Modeller). Depending on the water level in the surrounding 2D cells, flow can either enter or leave the HX cells. The volume of water entering or leaving the 2D boundary is added or subtracted from the 1D Flood Modeller model to preserve volume. We must connect the HX lines to the 1D Flood Modeller model.
CN connectors	To connect HX line, CN type lines in the 2d_bc layer, where a CN line is connected to the HX line, the water level from the 1D Flood Modeller nodes is transferred to the HX line. In between 1D nodes, a linear interpolation of water level is applied.
Manning's 'n'	The Manning's n is a coefficient which represents the roughness or friction applied to the flow by the channel.
SX connector	SX points have been used to connect a 1D culvert (FC01.2) with the 2D domain.
Downstream boundary	The 1D downstream boundary assumes a normal depth condition based on the local channel bed gradient of 1:1000

Abbreviations

Abbreviation	Meaning
AEP	Annual Exceedance Probability
AOD	Above Ordnance Datum
CAD	Computer-aided Design
CC	Climate Change
DTM	Digital Terrain Model
EA	Environment Agency
ES	Environmental Statement
FMP	Flood Modeller Pro
FRA	Flood Risk Assessment
IDB	Internal Drainage Board
LiDAR	Light Detection and Ranging
PPG	Planning Practice Guidance
PVDP	Photovolt Development Partners
PEIR	Preliminary Environmental Information Report
TUFLOW	Two-dimensional Unsteady FLOW Finite Volume
1D	1-Dimensional
2D	2-Dimensional

Units

Unit	Description
%	Percentage
km^2	Square kilometres
m	Meter
m/s	Meter per second
°C	Degree Celsius

1 Introduction

1.1 Overview

1.1.1 This Appendix of the Environmental Statement (ES) has been prepared by RPS on behalf of Photovolt Development Partners GmbH. (PVDP) for the Applicant, SolarFive Ltd. (SolarFive). This Appendix supports Environmental Statement Volume 1 Chapter 10: Hydrology and Flood Risk of the ES.

1.1.2 PVDP is proposing to build and operate a new ground mounted solar farm in Oxfordshire. Botley West Solar Farm (the Project) covers approximately 1400 ha (excluding connecting cable routes), within the administrative areas of Cherwell, West Oxfordshire and The Vale of White Horse Districts.

1.1.3 The Project is formed by three separate but related sites, referred hereafter as the Northern, Central and South solar photovoltaic (PV) array land parcels. The parcels are to be connected to the national grid via underground interconnecting cables. The interconnecting cable route will largely follow the public highway, but some parts will cross land controlled by the Applicant. Overall, proposals involve the delivery of approximately 840MWe of power to the National Grid via a new National Grid 400 Kilovolt (kV) substation. As the Project will generate over 50MW it is recognised as a Nationally Significant Infrastructure Project (NSIP), and therefore requires a Development Consent Order (DCO) under the Planning Act 2008.

1.1.4 At this site no prior hydraulic modelling was available to support the Flood Risk Assessment (FRA). The outcomes of the modelling exercise will be used to support the FRA for the Project.

1.1.5 The assessment presented is informed by the following appendices

- Volume 3 Appendix 10.1 Flood Risk Assessment; and,
- Volume 3 Appendix 10.3 Hydrology Report.

1.1.6 The site is adjacent to the main road (A4095) along the north, and Cassington Road (A38) to the south. The downstream location of the site is adjacent to Eynsham road (A40) which is approximately 9.5 km north-west of Oxford City Centre. The majority of the site is part of Oxfordshire County Council and West Oxfordshire District Council and the site is not located within an Internal Drainage Board (IDB) area.

1.1.7 This modelling report describes the modelling approach and presents the baseline model results. It should be noted that the NPPF requires that proposed developments should be safe from flooding and should not increase flood risk elsewhere.

1.1.8 This chapter also draws upon information contained within the Watercourse Survey.

1.2 Site Description

1.2.1 The River Evenlode is conveyed through the centre of the site and the Cotswold railway line bisects the site from north-west to south-east. The River

Evenlode, classified as a Main River, conveys flows southwards within the western extent of the site before converging with the River Thames, at a point 980m south of the site. The site currently comprises agricultural fields, mostly delineated by hedgerows and trees.

1.2.2 The site is at potential flood risk from the watercourses within the surrounding catchment; these include the River Evenlode and its tributaries.

1.2.3 The River Glyme is situated to the northeast of the site and flows in a southerly direction, converging with the River Evenlode 280m to the north of the upstream boundary. The upstream model extent is taken as the confluence of the River Evenlode and the River Glyme. Within the southwestern and southern parts of the site, there are several ordinary watercourses, e.g., City Farm Reach and Goose Farm Reach, that converge with the main channel, the River Evenlode. The River Evenlode flows southward, passing through A4095, which includes three branch channels of the river. Additionally, two diversion channels flow from the eastern part of Eynsham Mill. These channels are regulated by sluice gates and eventually converge with a tributary emanating from Goose Farm. The main channel flows past Cassington Road further downstream and merges with other tributaries towards the southern region of A40.

1.2.4 Key features of the catchment are shown in **Figure 1.1.**

1.2.5 The Environment Agency's (EA) online Flood Map for Planning shows Flood Zones 2 and 3 associated with the watercourses in the vicinity of the site. A band of Flood Zone 2 and 3 has been approached from the upstream boundary of the site and extends across the southern boundary, associated flooding from the River Evenlode.

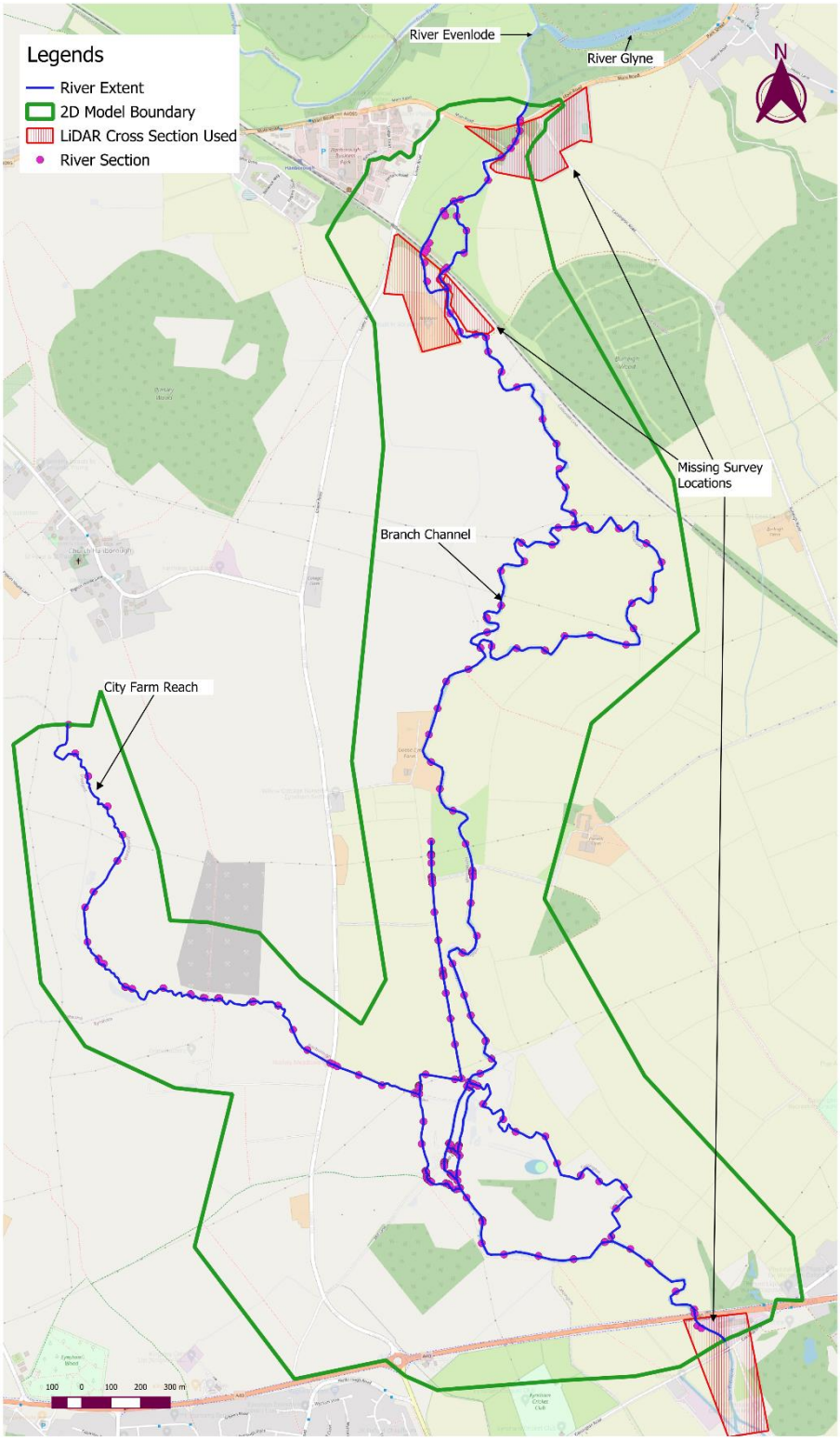


Figure 1.1: Site Location with Main Channel and its Tributaries

1.3 Overview

1.3.1 In order to undertake the hydraulic modelling, an integrated 1-dimensional (1D) - 2-dimensional (2D) Flood Modeller Pro (FMP) -TUFLOW model was utilized to simulate flood risk from the River Evenlode and its tributaries. Implementing

these techniques ensure that complex flow regimes and the inter-connectivity of the open channel and wider floodplain are considered in the model.

1.3.2 The 1D-2D hydrodynamic model comprises a 1D (FMP Version: 5.0.0.7752) open channel network model (based on surveyed channel cross-sections) dynamically linked to a 2D (TUFLOW version: 2020-10-AA-iSP-w64) model of the potential floodplain (created from a LiDAR-derived DTM). Details of the individual model elements are presented in the following sections.

1.4 Model extents and boundaries

1.4.1 An approximate 13.4 km length of River Evenlode and its tributaries have been represented within the model and can be seen in **Figure 1.2**. The upstream extent is located approximately 76m upstream of the A4095 (main road) and 280m southwards from the confluence of the River Glyne and River Evenlode. The upstream boundary was selected in such a way that the hydraulic influence of the upstream boundary does not impact the site.

1.4.2 The downstream extent is located approximately 134m downstream of the A40. The downstream boundary of the 1D element of the model is a normal depth unit (using the bed slope of the river sections). An overview of the watercourses considered for the modelling has been provided in **Table 1.1**

Table 1.1: An overview of the 1D Channels and Tributaries in the model

Reach		Approximate Length (m)	Easting/Northing (starting point)	Easting/Northing (ending point)
Start	End			
EVEM_06959	EVEM_00009L	6950	444080.5, 214337.2	444694.6, 210243.3
CFB_02245	CFB_00000	2245	442549.1, 212287.8	443729.5, 211038.7
GFR_01458	GFR_00000	1458	443778.4, 211892.0	443873.1, 210717.1
EVEB1_00361	EVEB1_00099L	262	443820.2, 214027.5	443764.6, 213789.3
EVEB200903d	EVEB2_00067	836	444238.1, 212954.3	443968.2, 212601.0
EVEB3_01131	EVEB3_00029	1102	443915.7, 211072.4	444389.1, 210554.0
EMDIV2_00124	EMDIV2_00026	98	443844.8, 210849.4	443868.0, 210769.3
EMPOND_00250	EMPOND_00018	232	443908.1, 211059.7	443870.9, 210855.4

1.4.3 A separate hydrology report (Volume 3 Appendix 10.3 Hydrology Report of the ES; details the methodology adopted in deriving the inflow hydrographs for the hydraulic model. The model hydrology is based on the latest Environment agency (EA) Flood Estimation Guidelines from July 2022.

1.4.4 Inflows are applied to the model as point inflows (at the most upstream modelled extents of the watercourse) and as lateral (distributed) inflows to represent flows entering the watercourse from the sub-catchments along its course. The two top inflows for the River Evenlode and River Glyne have been applied as upstream boundary conditions. Two further lateral inflows have been applied further downstream as proportional flows. In addition, the inflow

of a small tributary towards the southern downstream extent has also been applied as tributary flow in the model.

1.4.5 The locations at which the point and lateral (distributed) inflows are applied are shown on **Figure 1.2.**

1.4.6 The downstream boundaries of the 2D domain are stage-flow (HQ) free-flow boundaries which allows floodplain flows to exit the model domain to prevent the water logging along the downstream boundary. The general floodplain gradient values across the HQ boundaries have been applied to the ‘b’ values in the 2d_bc_ HQ type TUFLOW boundary layer.

1.4.7 Initial model runs indicate that the water logging happened along the A4095, Burleigh wood, Mill lane and A40. Further investigation of the Google map and the master map data indicates that there are two flood relief culverts present under the A40. Two culverts have been added in the 2D domain using 1D_Estry network elements. The dimension of these two culverts have been assumed from Google Streetview map. To further investigate the water logging scenarios along the above-mentioned areas, a site visit has been conducted. A detail of the site walkover has been added in the following section.

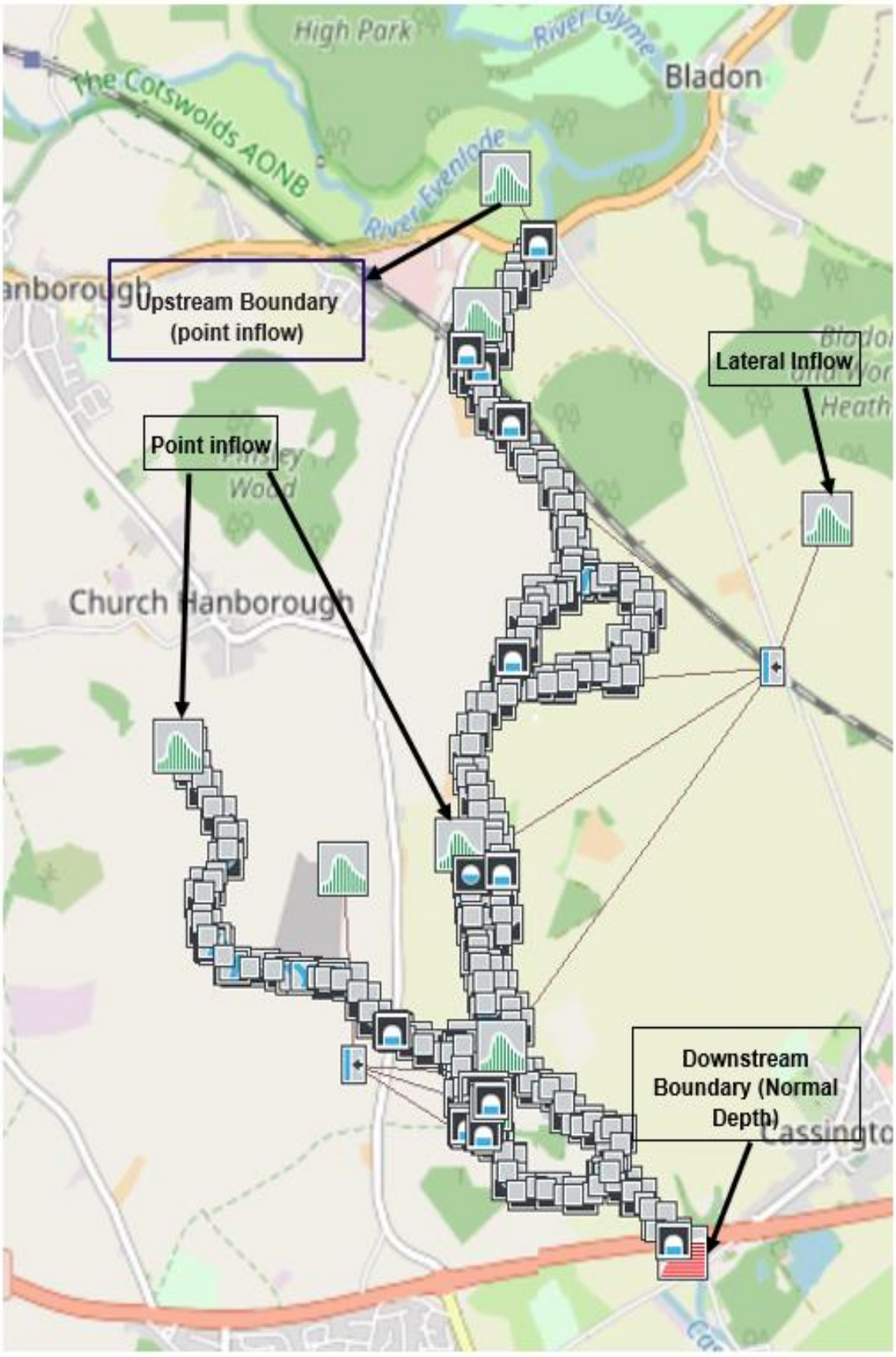


Figure 1.2: Location of 1D model nodes and boundaries

1.5 Site Walkover

1.5.1 A site visit was conducted on 26 June 2023 on 12:30 pm along the A4095 upstream model extent and Burleigh wood. It was a bright sunny day without any rainfall.

1.5.2 A road bridge was identified during the site visit along A4095, and a small tributary was passing by underneath the bridge as shown in Figure 1.3. A dry ditch running along the side of the A4095 appears to collate water from field drain runoff and discharge water into the tributary. The road bridge has been added in the 2D domain using 1D_Estry network elements where the approximated dimensions of the structure were included based on the engineering judgement.

Figure 1.3: Road bridge along the A4095

1.5.3 Along Burleigh wood a railway bridge was identified. This appears to be present within the LiDAR as there is a ‘cut’ in the elevation data. As such no further alteration to the model was applied.

1.5.4 Due to access restriction, the site visit was not carried out along the mill lane and further southern side of Burleigh wood.

1.6 Watercourse

1.6.1 The in-bank 1D element of the model is based on a topographic channel cross section survey undertaken in December 2022 to April 2023 by RPS Group Plc (included as Annex A).

1.6.2 Some structures and cross sections information couldn’t be collected during the survey due to restricted access, as shown in Figure 1. In this case, the relevant cross sections data were taken from the LiDAR DTM for the following cross sections: EVEM_07024L, EVEM_06919L, EVEM_06885L, EVEM_06859L, EVEM_06213L, EVEM_06158L, EVEM_06099L,

EVEM_06017L, EVEM_00028L, EVEM_00009L, EVEM_00000L, EVEB1_00145L and EVEB1_00099L.

1.7 Structures

1.7.1 The structure dimensions were measured from CAD drawings provided by the surveyors. Surveyors indicated that they were unable to take measurements of some downstream cross sections of the structures due to the high-water level and restricted access. In these instances, the upstream cross section has been used at the downstream of the structure.

1.7.2 To improve stability, some culverts have been modelled as orifice using FMP orifice unit. The opening area has been measured from the surveyed CAD drawings. Where the opening areas of upstream and downstream face of the structures have been varied, the smaller opening area have been applied as a conservative approach.

1.7.3 Flow over the structures is being modelled in 1D using FMP spill units and levels were extracted from the survey CAD drawings. However, orifice flow transition options have been enabled for all the surcharged bridges except the bridge at A4095 (node EVEM_06946Ub) as it resulted in instability during initial model runs.

1.7.4 A detailed list of the structures which have been surveyed over the main channel and other tributary channels with the explanation of how the structure been modelled or why the structure been omitted from the model, have been provided below in **Table 1.2**. Annex B shows the relevant images of the structures.

1.7.5 **Figure 1.4** represents the long section plot of the cross sections in the model.

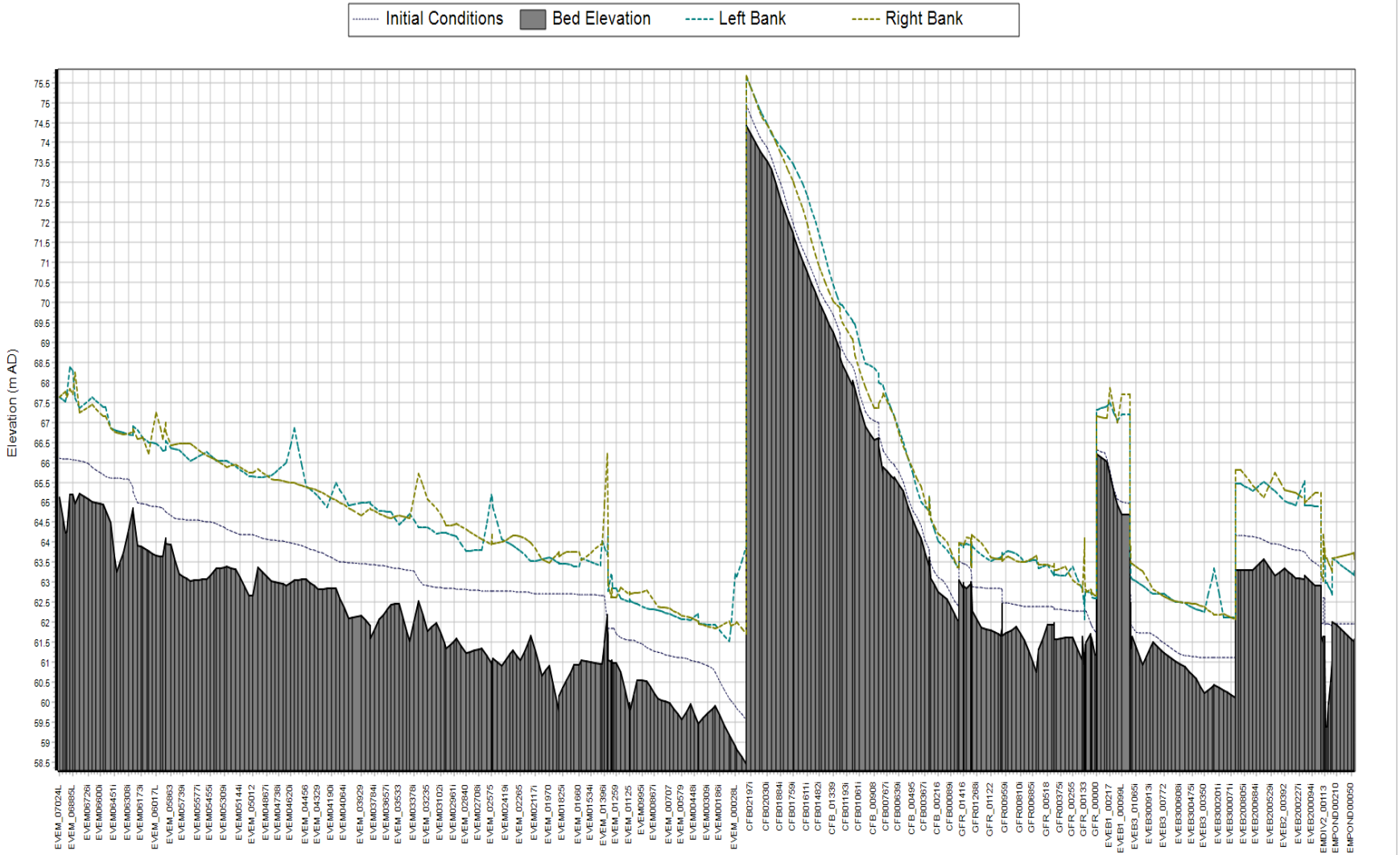


Figure 1.4: Long section plot of the FMP model

Table 1.2: List of structures included in the model

ID	Structure	How the structure been modelled
Survey Id – EVEM_06946 Model Id - EVEM_06946Ub	Bridges at A4095 (Main Road)	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - EVEM_06432 Model Id – n/a	Pipe over River Evenlode	This structure is not modelled as it is situated above water level, and water will divert around edge, unlikely to cause significant impact.
Survey Id - EVEM_06256 Model Id - EVEM_06256Ub	Rail Bridge over River Evenlode	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - EVEM_05917 Model Id - EVEM_05917Ub	Access bridge over River Evenlode	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - EVEM_03834 Model Id – n/a	Footbridge	This timber decking footbridge is not modelled due to its size and nature, and it will have limited impact on flows.
Survey Id - EVEM_02567 Model Id - EVEM_02567Ub	Road bridge over River Evenlode	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - EVEM_01867 Model Id – n/a	Footbridge over River Evenlode	This timber decking footbridge is not modelled due to its size and nature.
Survey Id – EVEM_01394 Model Id – n/a	Footbridge over River Evenlode	This timber decking footbridge is not modelled due to inadequate survey data. The surveyors couldn't get access at this point to determine the bed level due to high water level and high flow velocity.
Survey Id - EVEM_01364 Model Id - EVEM01364Us	Weir Crest nearby Mill Lane	This structure is modelled using a Spill unit in Flood Modeller, due to its varying geometry.
Survey Id – EVEM_01360 Model Id - EVEM_01360Ub	Access Bridge over Mill Lane	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - EVEM_01313 Model Id - EVEM_01313Ub	Footbridge over River Evenlode	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - EVEM_01122 Model Id – n/a	Footbridge over River Evenlode	This timber decking footbridge is not modelled due to its size and nature and it will have limited impact on flows.

ID	Structure	How the structure been modelled
Survey Id - EVEM_00410 Model Id -n/a	Pipe over River Evenlode	This structure is not modelled as it is situated above water level, and water will divert around edge, unlikely to cause significant impact
Survey Id - EVEM_00071 Model Id - EVEM_00071Ub	Road Bridge over the A40	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id – CFB_01271 Model Id - CFB_01271Uo	Footbridge along City Farm Reach	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - CFB_01134 Model Id - CFB_01134Uo	Footbridge along City Farm Reach	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Throat invert level, soffit level, bore area has been taken in accordance with the downstream face as the downstream conditions govern. Overtopping is represented in the 1D domain.
Survey Id - CFB_00860 Model Id – CFB_00860Uo	Access Bridge along North-East side of City Farm cottages	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - CFB_00810 Model Id - CFB_00810Uo	Access Bridge	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Throat invert level, soffit level, bore area has been taken in accordance with the downstream face as the downstream conditions govern. Overtopping is represented in the 1D domain.
Survey Id - CFB_00691 Model Id- CFB_00691Uo	Access Bridge over City Farm Reach	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - CFB_00318 Model Id- CFB_00318Ub	Stone Wall Road Bridge	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain
Survey Id - GFR_01414 Model Id- n/a	Foot Bridge	This timber decking footbridge is not modelled due to its size and nature and it will have limited impact on flows.
Survey Id - GFR_01336 Model Id- GFR_01336Uc	Culvert along Goose Farm Reach	This structure is modelled using a circular conduit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - GFR_01327 Model Id- GFR_01327Uo	Access bridge	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.

ID	Structure	How the structure been modelled
Survey Id - GFR_01005 Model Id- GFR_01005Uo	Culvert along Goose Farm Reach	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - GFR_00453 Model Id- GFR_00453Uo	Culvert along Goose Farm Reach	This structure is modelled using an Orifice unit (due to stability and asymmetric shape) in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - GFR_00155 Model Id- GFR_00155Ub	Access Bridge	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - GFR_00133 Model Id- GFR_00133Ub	Access Bridge along Mill Lane	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - GFR_00113 Model Id- n/a	Foot Bridge	This steel frame is not modelled as it will have limited impact on flows.
Survey Id - GFR_00052 Model Id- GFR_00052Ub	Foot Bridge	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - EVEB1_00217 Model Id- EVEB100217Ub	Rail Bridge along the eastern side of Lower Road	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id - EVEB2_00178 Model Id- EVEB200178Ub	Access Bridge along the eastern side of College Farm	This structure is modelled using an Arch Bridge unit in Flood Modeller in accordance with the downstream face information as the downstream conditions govern. Overtopping is represented in the 1D domain.
Survey Id - EVEB3_01128 Model Id- EVEB3u	Upstream toe of weir	This structure is modelled using a Spill unit in Flood Modeller, due to its varying geometry. The timber decking footbridge has not been modelled.
Survey Id – EM_DIV1_00033 Model Id- Diver1_slu	Evenlode Diversion structure 1	This structure is modelled as a vertical sluice unit by implying logical control, followed by two circular conduits in Flood Modeller. The culvert exit has been modelled as a spill unit due to head difference. Further details of this modelling type are available on the Flood Modeller Knowledge Base (2023).
Survey Id – EM_DIV2_00113 Model Id- EMDIV2_Sl_Lu EMDIV2_Sl_Ru	Evenlode Diversion structure 2	This structure is modelled as a vertical sluice unit by implying logical control in Flood Modeller. Further details of this modelling type are available on the Flood Modeller Knowledge Base (2023).

ID	Structure	How the structure been modelled
Survey Id – EM_DIV2_00111 Model Id- EMDIV200111b	Road Bridge along Mill Lane and Eynsham mill	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.
Survey Id – EM_POND_00250 Model Id- EVEM_01634Us	Sluice gate, Inlet structure to the Eynsham pond	This structure is modelled as a vertical sluice unit by implying logical control in Flood Modeller. This gate has been considered as closed throughout the model simulation. Further details of this modelling type are available on the Flood Modeller Knowledge Base (2023).
Survey Id – EM_POND_00025 Model Id- EMPON00025Ub	Road bridge along the Eynsham pond	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.

1.8 Sluice Operation Rule

1.8.1 As per the survey data, there are several vertical sluices near the Eynsham Mill at three different locations. One at Diversion Channel 1, two at Diversion Channel 2 and one at Eynsham Pond. The operation rules of these sluices have been defined following discussion with Daniel Maddocks who is the operator of these sluices. We have been informed by Daniel that these sluices are operated manually for the purpose of the flood relief. Generally, the River Evenlode water level is maintained approximately at the levels observed during the channel/sluice survey. The gate heights of the sluices are taken from the stage during the survey.

1.8.2 Diversion Channel 1 Sluice- operating rules are defined to open during the higher flow only, otherwise they remain closed. It has been considered in the model that the sluice gate will be opened when the river water level will be higher than 63.75m AOD.

1.8.3 Diversion Channel 2 sluices- there are two sluices present of left and right channel. During the survey it was observed that only right slice is in operation and the left sluice is completely closed. The right sluice has been kept entirely opened when the water level is higher than 63.95m AOD, whereas the height of gate has been maintained at 0.6m when the water level is at or below 63.00m AOD. Left sluice has been kept completely opened at water level higher than 63.95m AOD and entirely closed at or below 63.00 m AOD in the model.

1.8.4 Eynsham Pond sluice: This sluice generally remains closed and occasionally is opened to divert flow to the pond area. This sluice has been kept entirely closed throughout the model simulation. This provides a conservative approach to the model data.

1.9 Floodplain

1.9.1 The wider catchment (potential floodplain) is represented in 2D TUFLOW. A DTM representing ground levels has been derived from EA 1m LiDAR DTM data flown in 2022. A 4m cell size is used for the 2D model domain to capture

the potentially complex floodplain flows in sufficient detail. This resolution provides good floodplain definition whilst maintaining efficient run times.

1.9.2 The 1D and 2D elements of the model are linked using 'Internal' model boundaries which allow the transfer of water between 1D and 2D domains (e.g. allow water to spill from in-channel watercourse onto the adjacent floodplain and vice-versa). Appropriate internal boundary elements have been used (i.e. TUFLOW HX lines and CN connectors link) to connect 1D FMP nodes to the 2D cells along the banks.

1.9.3 To define bank elevation a 2d_zsh layer have been used. The bank top levels of surveyed sections have been extracted from the survey data and the other points along the banks have been extracted from the from LiDAR DTM.

1.10 Roughness

1.10.1 Manning's 'n' value coefficients have been used to represent the roughness of the open channel and floodplain. Established reference works (Chow, 1959) and experienced hydraulic modeller judgement has been used to select appropriate values. Estimates of the channel roughness coefficients were made using information from photographs from the channel survey undertaken for the commission. For the 1D FMP watercourse and structures values vary from 0.04 to 0.06 reflecting the range of bed and bank conditions along the modelled reach. The values of Manning's n selected for the in-channel (1D FMP model) is displayed in **Table 1.3**.

Table 1.3: Manning's n roughness values for 1D domain

Model Domain	Description	Manning's 'n'
1D	Main Channel (Weed, Stones and Lower Stages)	0.040
1D	Light to Medium Vegetation	0.060

1.10.2 The definition of roughness in the 2D domain is based on land use information Master Map data for the site. The mapping defines different areas based on the ground surface characteristics, each of which has been given an appropriate Manning's n coefficient. The values of Manning's n selected for 2D domains is displayed in **Table 1.4** below. However, upon further investigation of previous model runs, a high roughness value (patch stability) has been adopted for the upstream cross sections, starting from EVEM_07024L upto EVEM_06946 to encounter instability issues.

1.10.3 However, sensitivity tests have been undertaken (Mannings 'n' values +/-20% for both 1D and 2D domains) to assess the sensitivity of the model to roughness parameters. A detailed description of sensitivity test results has been provided in section **3.2.1.**

Table 1.4: Manning's n roughness values for 2D domain

Feature Code	Description Group	Manning's 'n'
10021	Building	0.500

Feature Code	Description Group	Manning's 'n'
10053	General Surface (residential yards)	0.040
10054	General Surface	0.025
10056	General Surface (grass, parkland)	0.030
10062	Building	0.500
10076	Land; Heritage And Antiquities	0.500
10089	Water	0.035
10111	Natural Environment (Coniferous/Non-coniferous Trees)	0.100
10119	Roads Tracks And Paths manmade	0.020
10123	Roads Tracks And Paths (roadside pavement)	0.025
10167	Rail	0.050
10172	Roads Tracks And Paths tarmac	0.020
10183	Roads Tracks And Paths (Roadside)	0.020
10185	Structure roadside structure	0.030
10187	Structure generally on top of buildings	0.500
10203	Water foreshore	0.040
10210	Water tidal water	0.035
10217	Land (unclassified)	0.035
1000	Strong instabilities (Patch Stability)	0.3

2 Model runs and performance

2.1 Model Runs

2.1.1 The model has been run for the following events:

- 1 in 20 year
- 1 in 30 year
- 1 in 100 year
- 1 in 100 year +21% Climate Change (CC) Allowance
- 1 in 100 year +43% Climate Change (CC) Allowance

2.1.2 In May 2022 the EA released revised climate change allowances, which updates the 2020 and 2021 version of 'Adapting to Climate Change: Advice to Flood & Coastal Risk Management'. The EA has used the UKCP19 projections to update the peak river flow allowances and have based them on management catchments instead of river basin districts. They have also changed the guidance on how to apply peak river flow allowances. Now the 'higher central' allowance has to be used for all essential infrastructure.

2.1.3 The Project is classified as 'Essential Infrastructure' within Planning and Practice Guidance (PPG). The development is located within the 'Cotswolds' management catchment of 'Thames' River Basin District. Therefore, for the Project, 21% and 43% climate change allowances (peak river flow) have been used which reflects the 2050s and 2080s higher central scenario respectively for essential infrastructure.

2.1.4 In addition to the design runs above, sensitivity testing has been undertaken to assess the model response by varying the following model parameters, for the 1 in 100-year event as shown in the following runs:

- SEN01: 20% decrease in Manning's n roughness values in the 1D and 2D model domains
- SEN02: 20% increase in Manning's n roughness values in the 1D and 2D model domains
- SEN03: 20% increase of flow
- SEN04: 20% decrease of flow
- SEN05: 20% increase of downstream water depth
- SEN06: 20% decrease of downstream water depth

Model run file naming convention

2.1.5 The TUFLOW model run file was named as: Blenheim_~e1~_~s1~_006.tcf

Where:

Blenheim: is the Model Name

~e1~: Flood Event (e.g., 100yr– 100 year flood event)

~s1~: Scenario (e.g., BS- Baseline)

006: (Model Version Number)

Model run parameters

2.1.6 All models run parameters for both FMP and TUFLOW have been set to defaults other than preissmann's slot which has been activated in FMP.

2.1.7 The model has been simulated for a 60hrs duration with a 1 second time step in 1D and 2.0 second time step for 2D domain (half of the 2D grid cell size).

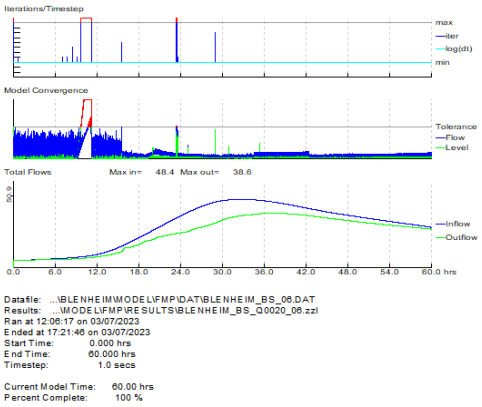
Calibration and validation

2.1.8 A gauging station is situated on the downstream extent of the model (39034; Evenlode at Cassington Mill). The flows provided in the hydrology report have used the QMED of this gauged catchment to compare. We have also looked at the historical flows for the 2007 and 2020 flood events in the determination of the inflows. See the hydrology report for further details.

2.1.9 We have no details on flood extents for historical flooding. Therefore, we have not been able to validate the results of the hydraulic modelling against any recorded flood events.

2.2 Model performance

2.2.1 **Figure 2.1** illustrates the convergence plot for the for the baseline model simulation of all flood events. The convergence plot indicates that there remain some very minor sections of poor convergence. However, the model performance between the peaks of the inflow and outflow hydrographs is within the tolerance limits, meaning that the difference between flow and stage between two consecutive iterations at the given node does not exceed the modelled specified parameters (qtol and htol).



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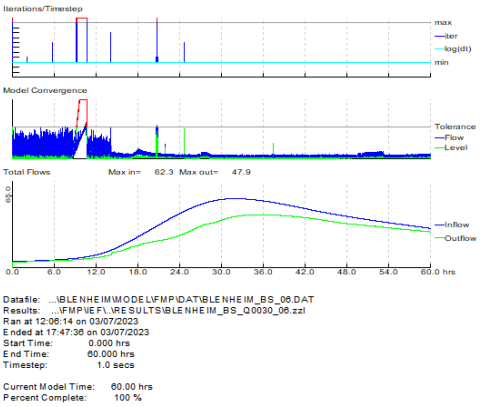

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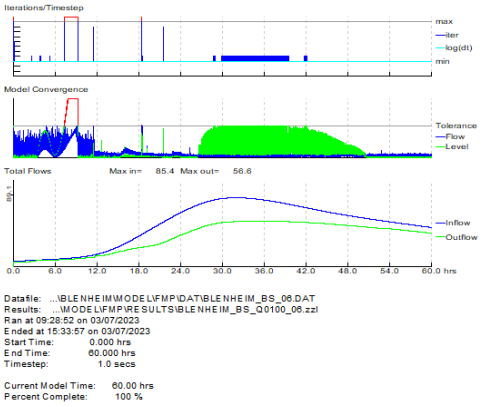
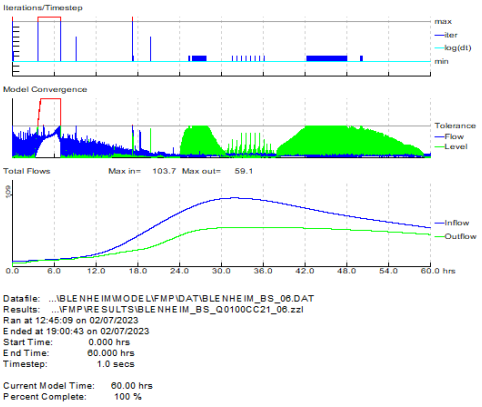
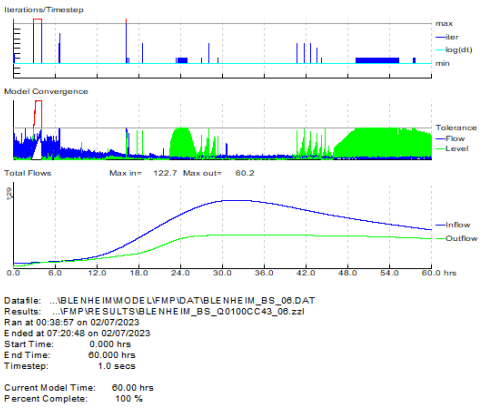


100 year



100 year +21%CC



100 year +43%CC

Figure 2.1: FMP model diagnostics plots for baseline runs

2.2.2 The FMP diagnostics file indicates that the poor convergence occurs at three model nodes GFR_01001Ds (spill over Goose farm reach culvert at node GFR_01005), GFR_01000i and GFR_01005Uo. But the time range differs in different flood events. For example, the poor model convergence occurs at GFR_01001Ds from 2.89h to 4.04h and at GFR_01005Uo from 16.17h to 16.19h for 1 in 100yr+43%CC flood event. This has been investigated and appears to have no significant upstream or downstream propagation. Therefore, the model is appropriate.

2.2.3 The 2D cumulative mass error is outputted during the model simulation for the different flood events (see **Figure 2.2**). This value provides an understanding of the stability of the model as well as the robustness of the model and its ability to stimulate a flood event accurately. A model is considered healthy if it falls between the recommended range of +/- 1% throughout the simulation. **Figure 2.2** shows that the model falls well below to this range for all flood events (within the range of -0.5%~0.2%) except only two data points during 20- and 30-year flood events. The Cumulative ME (%) is around 1.7% at 8.58h and 2.2% at 6.3h during 20- and 30-year flood events respectively. The probable reason for the high cumulative ME (%) is the initiation of flooding in the 2D domain of the model. As such this is not deemed to be of significant concern to the model's overall performance.

2.2.4 Other parameters such as warnings outputted during the simulation, provide details of the 'healthiness' of the model. TUFLOW model log indicates that there are only twelve warnings (WARNING 2118 - Lowered SX ZC Zpt) prior to the simulation. This relates to the lowered 2D ZC Zpt to 1D node bed level where SX has connections to 2D where Z flag has been used.

2.2.5 This is considered acceptable as ZC level adjusted where the culverts added in the 2D domain beneath the A40 and A4095.

2.2.6 Therefore, the baseline model is appropriately stable.

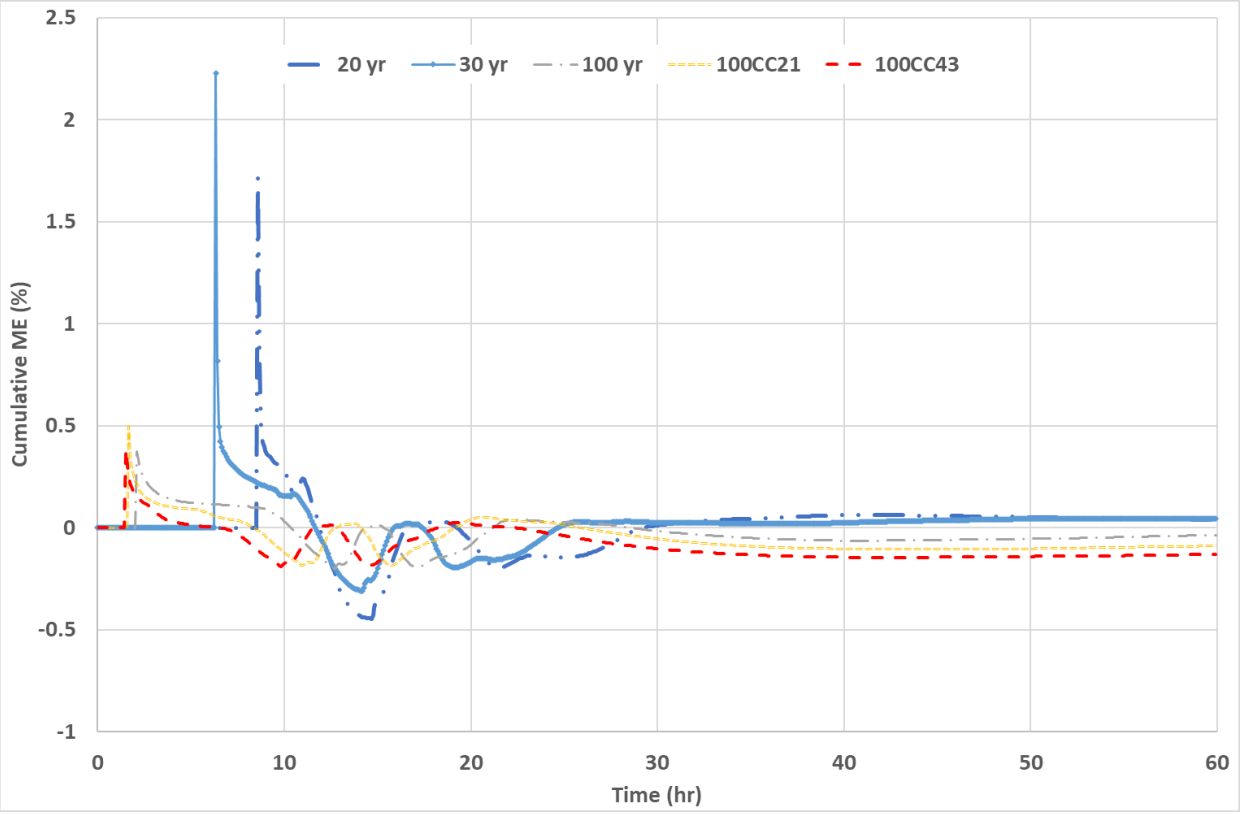


Figure 2.2: Cumulative Mass Error within 2D TUFLOW model

2.3 Assumptions and Limitations

2.3.1 All modelling exercises are simplifications of real-world processes, and hence, by their very nature, a number of assumptions are implicit inherent within the

modelling approach. Several assumptions have been made whilst producing this hydraulic model. The following assumptions have been made within the model.

2.3.2 Roughness values assigned to the channel and floodplain are assumed to be constant whereas in reality, there will be some seasonal variation owing to the growth and die-back of vegetation. It is assumed that the MasterMap, on which the model roughness values have been based, is up-to-date and correct. Therefore, sensitivity analysis on different parameters roughness, flow level and stage of water will be undertaken during detailed design stage.

2.3.3 The cross sections accurately represent the shape and variation of the river.

2.3.4 Model parameters have been determined appropriately.

2.3.5 Design flows are an accurate representation of flows of a given AEP.

2.3.6 The surveyed cross-sections of hydraulic structures and the units used to represent them in the model are appropriate and adequate.

2.3.7 LiDAR accurately reflects bank heights. In this study, it is assumed that a 4m square grid is a fine enough grid resolution with which to undertake flood risk mapping, whilst coarse enough to allow reasonable model run times.

2.3.8 The flow-time inflow boundary to the hydraulic model is assumed to be representative of the design events.

2.3.9 Although adoption of best practice industry standard measures has been used to derive flow, there are inherent uncertainties associated with the hydrological modelling methodology that remain.

2.3.10 The main limitation of the modelling study is the lack historic flood extents with which to calibrate or validate the model.

2.3.11 Since there are no data available to calibrate the model, there is some uncertainty surrounding the accuracy of the modelling results. The sensitivity analyses undertaken have indicated, however, that the model is not overly sensitive to parameters used in modelling. It is therefore unlikely that over- or under- estimation of these parameters would result in any significant changes to modelled flood levels.

3 Model results: Baseline Scenario

3.1 Baseline (existing) scenario flood risk

3.1.1 The results of the model at and around the model boundary are presented in Annex C including depth, velocity, and hazard maps. All the raw model maximum results grids are provided electronically alongside this report to allow independent review. The model results are discussed in the following section. The results of the modelling have been utilized in the flood risk assessment to provide an interpretation of the model results in the context of the nature of the proposed development on the site. They are also considered alongside the requirement to consider and mitigate fluvial flood risk within national and local planning policy and guidance.

3.1.2 The updated modelled flood extents near the site for the baseline scenario are presented in **Figure 3.1**. The baseline model results indicate the following: During the 1 in 20 year flood event, limited 'out of bank' flow occurs at left banks along the western boundary City Farm reach. Whereas floodplain encroachment in several areas along the River Evenlode and it's tributaries within the site have been observed.

3.1.3 The 30-year, 100-year, 100-years+ 21% CC, and 100-years+43% CC produce successively increasing flood extents from the overtopping over the banks of the River Evenlode along with its tributaries. Flood water also enters the site via overtopping the A40 along of the downstream of the site, especially during the 100-years+ 21% CC, and 100-years+43% CC flood events. A figure of the 30-year and 100-year flood extent along with the environment agency's Flood zone 2 and Flood Zone 3 map has been provided in **Figure 3.2.**

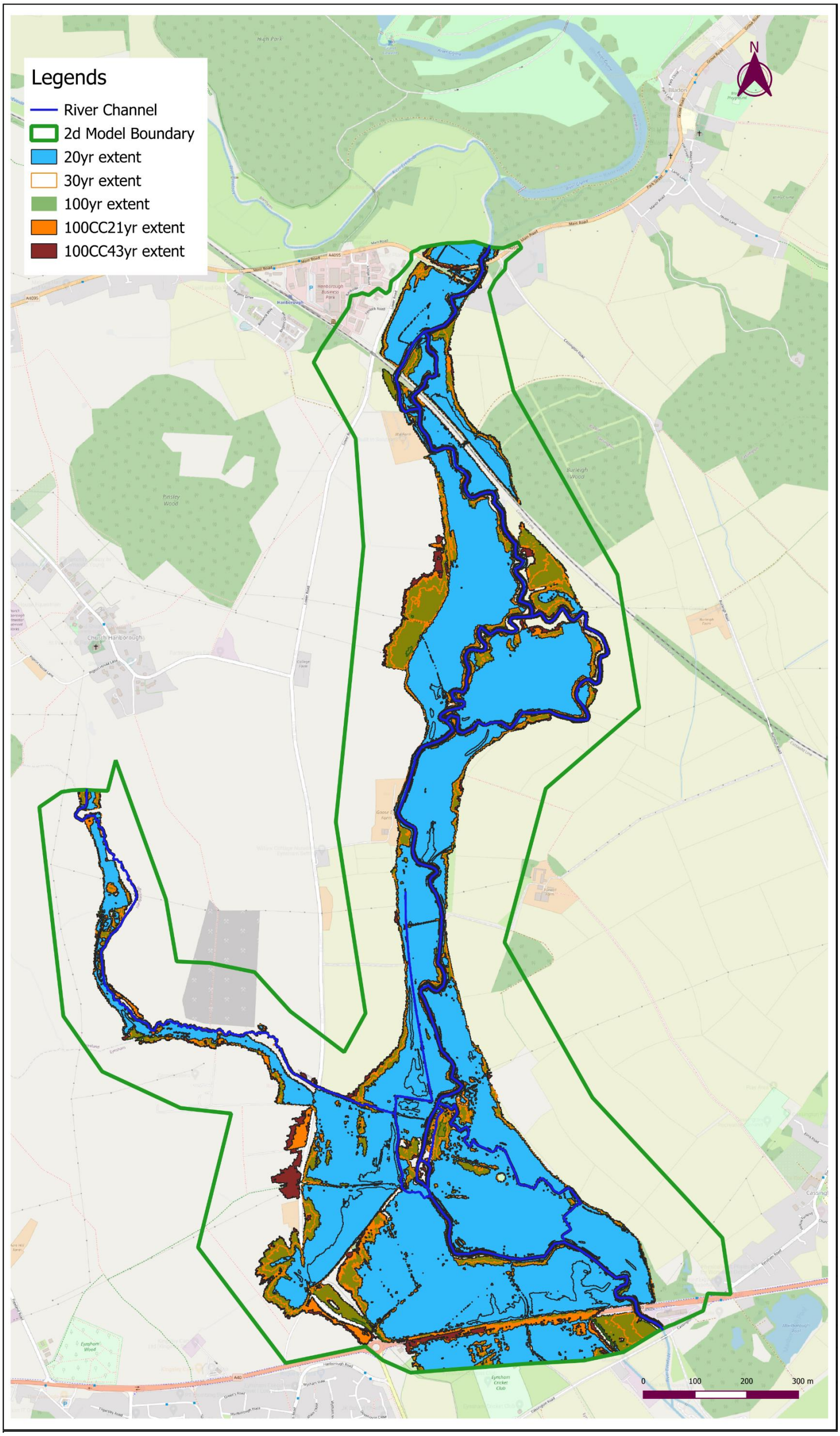


Figure 3.1: Baseline maximum flood extents for all modelled return periods adjacent to development site

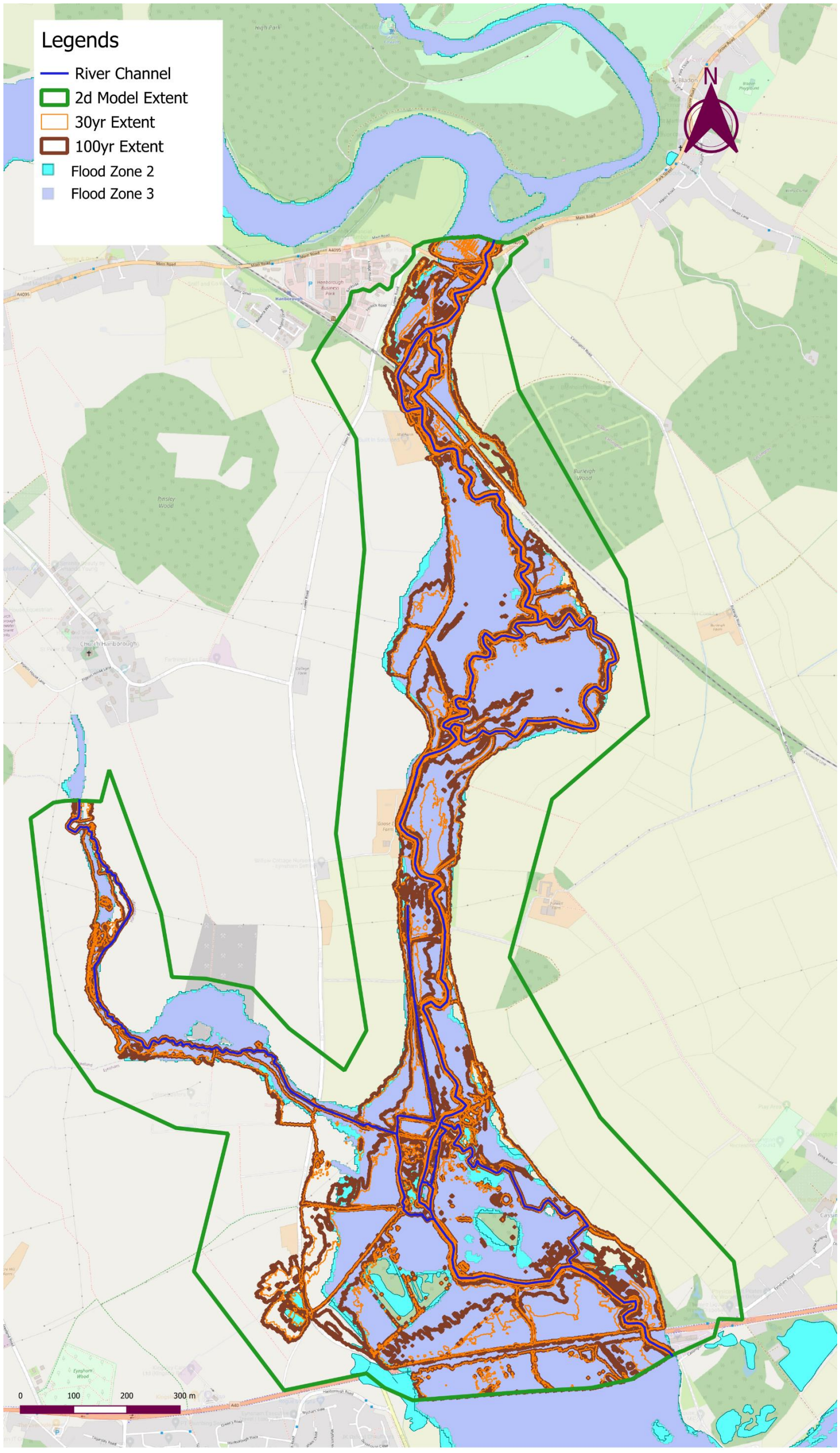


Figure 3.2: Comparison of 30-year and 100-year Flood Extent along with EA Flood Zone 2 and Flood Zone 3 map

3.2 Sensitivity Testing

3.2.1 To ensure that the baseline model results are robust, it is industry standard procedure to carry out a 'sensitivity analyses' to ensure that model parameters are not overly sensitive to minor adjustments to their values. The following model parameters have been proposed for sensitivity analysis:

- SEN01: 20% decrease in Manning's n roughness values in the 1D and 2D model domains
- SEN02: 20% increase in Manning's n roughness values in the 1D and 2D model domains
- SEN03: 20% increase of flow
- SEN04: 20% decrease of flow
- SEN05: 20% increase of downstream water depth
- SEN06: 20% decrease of downstream water depth

3.2.2 Model runs have been carried out on the above parameters for the 1 in 100-year scenario. The results are detailed in the section below.

Roughness Scenarios

3.2.3 Annex D shows the results of the sensitivity testing on roughness values, and the flood extents can be found in Annex C. Roughness values were adjusted throughout both the 1D and 2D domains of the model for all parameters, i.e., channel, floodplain, materials layer (buildings, roads etc).

3.2.4 As expected, decreasing the roughness (SEN01) leads to a decrease in water levels with a noticeable minimal change of flood extent adjacent to the site. For sensitivity 01 test, maximum stage (0.15 m) occurs at the section EVEM_00000L when roughness value is decreased by 20%. This location is downstream remote point of the model where a bridge is located 159m upstream of this section. The probable reason for the high-water level is due to the water logging along downstream due to the lack of additional flow paths to convey the excess water further downstream. Apart from this, high water level (0.12m~0.15m) has been found at some other cross sections, e.g., EVEM_07024L, EVEM06984Li, and EVEM_06256D. This high-water level could be the impact of backwater effect of structures located downstream of these cross sections. As a result, the backwater impact propagates along the upstream of the model boundary. For sensitivity 02, the maximum water level occurs (0.13 m) at EVEM_07024L, EVEM06984Li, EVEM_06256D, and EVEB1_00217. The probable reason for this high-water level could be the similar as the former one due to backwater impact from the structures at EVEM_06946Ub, EVEM_06256Ub and EVEB100217Ub. The adjusted bed level from LiDAR data could play a role in the backwater propagation along the upstream of the model.

Inflow Hydrographs

3.2.5 Hydrographs at each of the model inflows were increased and decreased by 20% relative to the 1 in 100 year design event to assess the sensitivity of model outputs to uncertainties in flow estimates. This had the anticipated effect of increasing and decreasing modelled water levels following increases and decreases in flow, respectively. Annex E displays the results of the sensitivity testing on inflow hydrographs, and the flood extents can be found in Annex C.

3.2.6 As expected, increasing the inflows hydrograph (SEN03) leads to an increase in water levels with a noticeable flood extent and decreasing the inflows hydrograph (SEN04) leads to a decrease in water levels. Throughout the model extent, the water level rises around 0.22m in maximum at EVEM_07024L, EVEM06984Li, and EVEM_06946 for sensitivity 03. Model sensitivity to flow variation was most pronounced at structures where the increase in flow resulted in overtopping of bridges and, therefore, increased water levels along upstream. For sensitivity 04, the water level drops around 0.22m in maximum at EVEM00138i, and EVEM_00086 which also indicates the presence of downstream structure at EVEM_00071.

Downstream Stage of Water

3.2.7 To assess the influence of the downstream boundary condition (depth of water) on modelled water levels, it was varied by ±20%. Annex F shows the results of the sensitivity testing on downstream level of water, and the flood extents can be found in Annex C.

3.2.8 At the most downstream cross section (EVEM_00000L), maximum water levels varied by up to +0.55m and -0.59m from the baseline for sensitivity 05 and 06 respectively. The variation of water level propagates further upstream of EVEM00186i which is located 274m upstream of EVEM_00000L. At EVEM00186i, the water levels dropped to +0.01m and -0.01m from the baseline for sensitivity 05 and 06 respectively. This cross-section is towards the downstream extent of the site boundary. The sensitivity results indicate that the model results are not overly sensitive with the variation of downstream water level.

4 Conclusion

4.1.1 The purpose of this report is to assess the baseline flood conditions for a proposed development of Botley West Solar Farm located within the administrative areas of Cherwell, West Oxfordshire and The Vale of White Horse Districts.

4.1.2 A dynamically linked 1D-2D hydraulic model using industry standard Flood Modeller Pro-Tuflow software has been used to simulate flood risk along an approximate 13.4 km length of the River Evenlode including its tributaries.

4.1.3 Design peak flow estimates have been derived for the 1 in 20 year, 1 in 30 year, 1 in 100 year, 1 in 100 year +21% climate change allowance , and 1 in 100 year +43% climate change allowance flood events. The model hydrology is based on the latest Environment agency (EA) Flood Estimation Guidelines from July 2022.

4.1.4 The 1D element of the hydraulic model has been based upon 209 surveyed cross sections of River Evenlode and its tributaries and 40 surveyed hydraulic structures. The 2D element of the model has been based upon 1m resolution LiDAR data.

4.1.5 The baseline model results have indicated that during the 1 in 20 year flood event, out of bank flow occurs in a few region of the site whereas significant sections of the site are flooded in the 100 year +21% CC and 100 year +43% CC events. Flood depth remains in between 0.6-1.2m at most of the regions.

4.1.6 The roughness coefficients are deemed appropriate and are based on the typical values recommended for hydraulic modelling studies and site observation from the photographs taken during survey. The choice of Manning's coefficients is discussed further in Section 1.2.28.

4.1.7 Sensitivity analysis on the 1 in 100-year flood event has been performed on roughness parameters. The sensitivity analysis results of Manning's n roughness have shown that the hydraulic model is not overly sensitive to changes in these parameters.

4.1.8 The sensitivity to inflow hydrographs underlines the importance of robust hydrological modelling since under or overestimates can influence both the 1D water levels and 2D flood extents.

4.1.9 The sensitivity testing outlined above indicate that the model is relatively insensitive to changes in the downstream boundary condition, apart from the downstream model extent, although the variations in water levels were limited and did not propagate up to the site boundary.

5 References

Chow, V.T. (1959) Open Channel Hydraulics. McGraw-Hill, New York

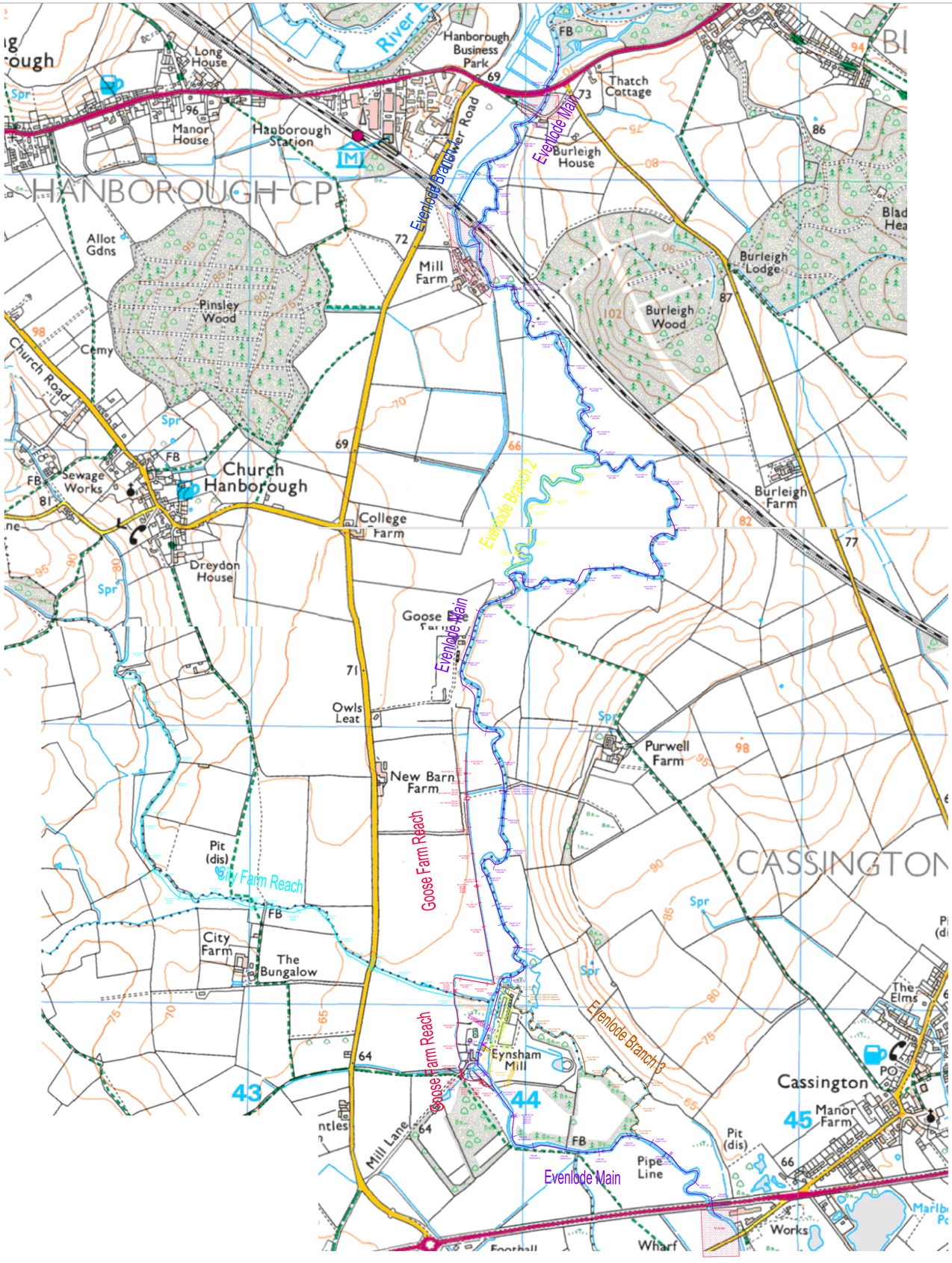
Flood Modeller Knowledge Base (2023) How to apply logical rules to a sluice or gated weir [redacted]

TUFLOW Classic/HPC User Manual. (2018, 03). TUFLOW 1D/2D Fixed Grid Hydraulic Modelling. Retrieved from [redacted]

[redacted]

Annex A

Watercourse Survey



Standard Abbreviations

ACO	ACCESS CHANNEL	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BH	BOREHOLE	G	GULLY	RWP	RAINWATER PIPE
BM	BENCHMARK	GAS	GAS VALVE	SAT	SATELLITE DISH
BO	BOLLARD	GP	GROUND PIPE	SB	SAND BOX
BP	BOUNDARY POST	GPR	GROUND PROBING RADAR	SW	SHED TOP
BT	BUTTON PUNCH	GV	GAS VENT	SL	SLOPE LEVEL
BUS	BUS STOP	GVC	GAS VALVE COVER	SL	SUPPLY LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
CBC	CONCRETE BOLLARD COVER	IL	INVERT LEVEL	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spr/Hedge	SPRUCE HEDGE
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SR	SAMPLING POINT
CAB	CABLE TELEVISION BOX	LG	LOCKABLE GATE	SS	STAINLESS STEEL
CP	CATTENARY POLE	LW	LOOSE GATE	ST	STUMP
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pav	STONE PAVING SLABS
CF	CHAIN LINK FENCE	LP	LAMP POST (with)	SV	STOP VALVE
CO	CHAMBER (BT)	LP	LAMP POST	SPO	STAY POST
CL	CABLE	MH	MANHOLE	ST	STONE
CP	CAST IRON	MANHOLE		STM	STATMAT
CL	CENTRE LINE POINT	MBP	MARKER POST	SW	STOP VALVE
CL	COVER LEVEL	MARKER POST		SW	STONE WALL
CL	CHAIN LINK FENCE	MR	MILE POST	TM	TACTILE PAVING
CM	CONCRETE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	EXISTING MOTOR		TRM	RECLAIMED TARMACK
CP	CONCRETE POST (with)	NAME PLATE		TC	TELEPHONE CALL BOX
CP	CATCHPIT	NAME PLATE		TCP	TELEPHONE CALL POST
CP	CATHODIC PROTECTION EQUIPMENT	NATURAL GAS SECURITY AREA		TP	TELEGRAPH POLE
CW	BUILDING CANOPY	OS BENCH MARK		TL	THRESHOLD LEVEL
CANTON	CANTON	OHDC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CH	CAST HOOD	OHL	OVERHEAD LINE	TL	TOP OF LEVEL
CH	CAR STRAY / PICKUP	OHL	OVERHEAD ELECTRIC	TLP	TELEGRAPH POLE
CW	CONCRETE WALL	OHWall	OVERHEAD STRUCTURE	TW	TRIAL PIT
DC	DATA	OHW	OVERHEAD WIRES	TW	TIMBER
DC	DAVIT CLEVIS	OHW	OVERHEAD MARKERS	UTA	UNABLE TO ACCESS
DP	DRAINAGE POINT	PB	POST BOX	UTL	UNABLE TO LOCATE
DRAIN	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DP	DRAIN POINT	PC	PHOTOGRAPHIC CAMERA	UTS	UNABLE TO SURVEY
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	UV	VITRIFIED CLAY
DW	DRY WELL	PO	PETROL OUTLET	VP	VENTILATION PIPE
EL	EAVES LEVEL	PR	PETROL POMP	VP	VENT PIPE
ELEC	ELECTRICITY COVER	PS	PETROL STORAGE	WB	WATER BOARD
ELEC	ENG'M TRACE (utility)	Pole	PENSTOCK	WB	WASH BRIDGE
EP	ELECTRIC POLE	PP	PHOTO POINT (PP)	WC	WATER COURSE
ER	EARTH ROD	PYLON		WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	RG	RODDING EYE	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	RM	RESERVOIR	WMW	WATER MONITORING
FC	FLOOD CONTROLLED CHAMBER	RL	RAIN LEVEL	WP	WATER PIPE FENCE
FL	FLOOR (LEVEL)	RL	RISING LEVEL	WS	WINDSOCK POLE
FL	FINISHED FLOOR LEVEL	RM	RESERVOIR MONITORING Pnt	WSR	WATER LEVEL SENSOR
FLight	FLOOR LIGHT	RP	REFLECTOR POST		

N

Grid: National Grid by GPS Observations to the OS Active Network (OSTN15)

Datum: Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

MAKING COMPLEX EASY
THE SURVEY ASSOCIATION
A TETRA TECH COMPANY
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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:
RPS Consulting
UK & Ireland

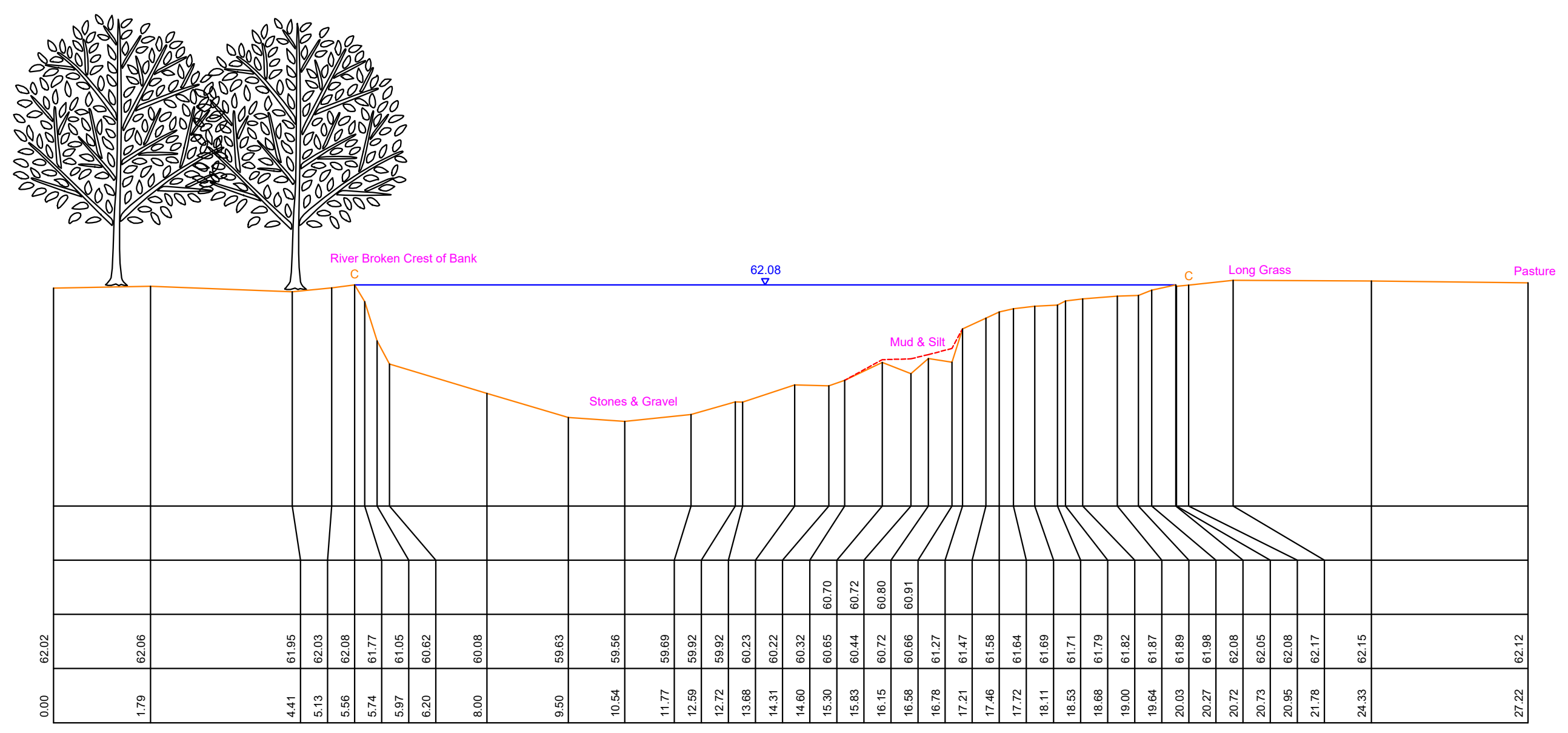
PROJECT:
West Botley

TITLE:
Key Plan

Drawn: JP/CR/MV/SB/RR/CPH/JE/LB	Checked: CA
Date: May 2023	Scale: N.T.S @ A0
Org No.: UAR002_B	Sheet: 1 of 25

MAKING COMPLEX EASY

Evenlode Main



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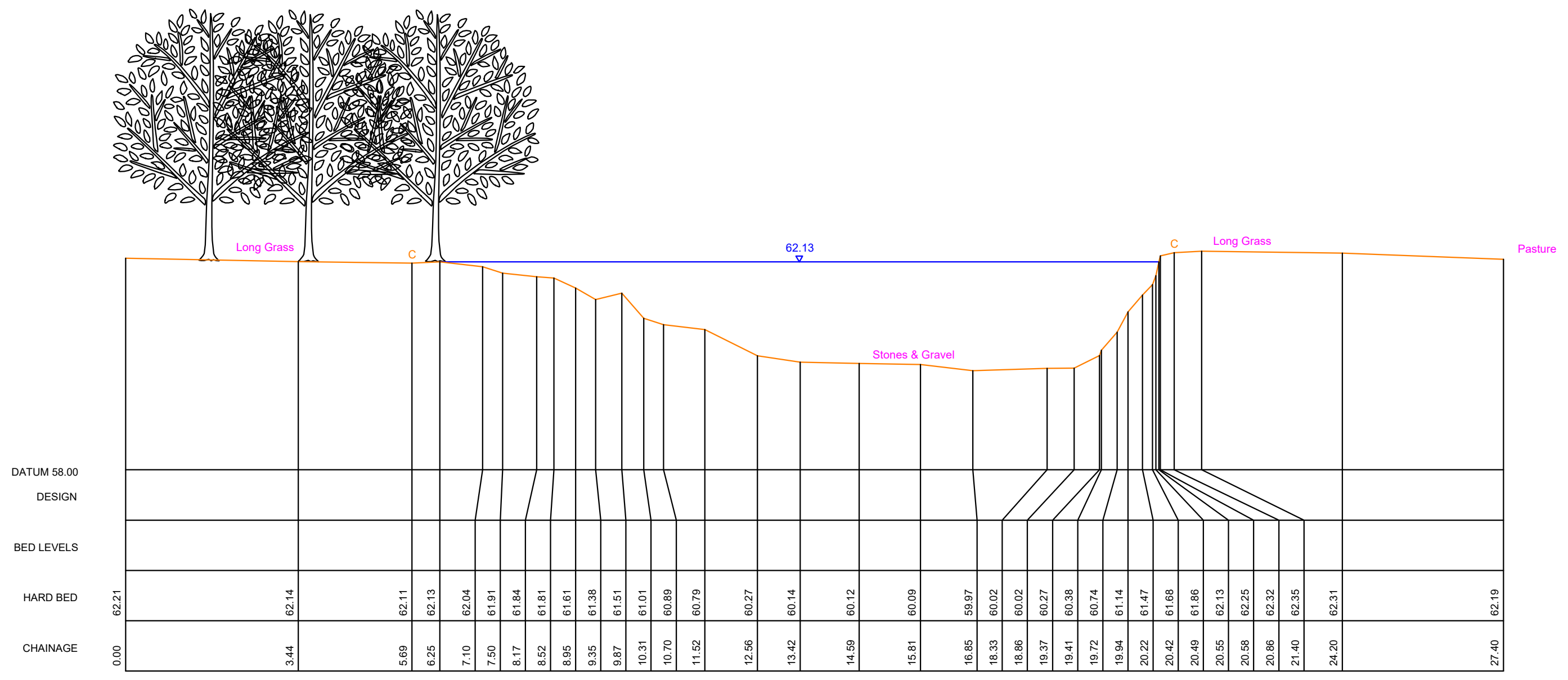

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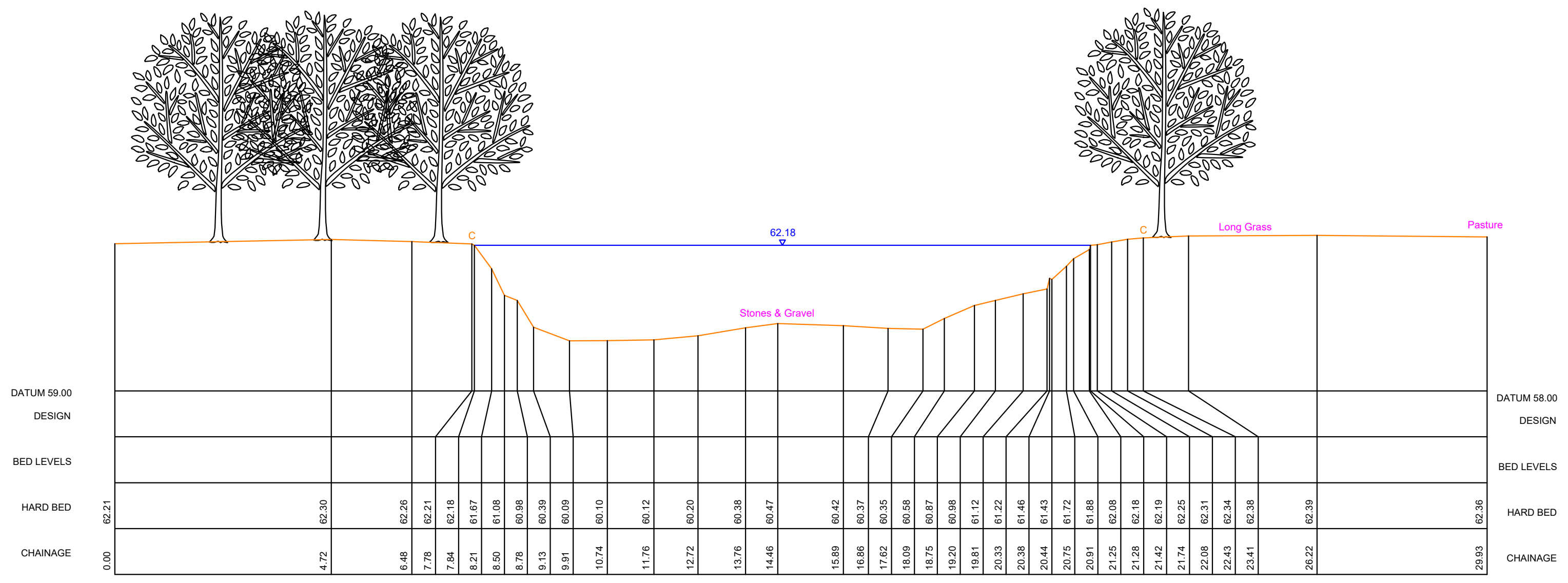

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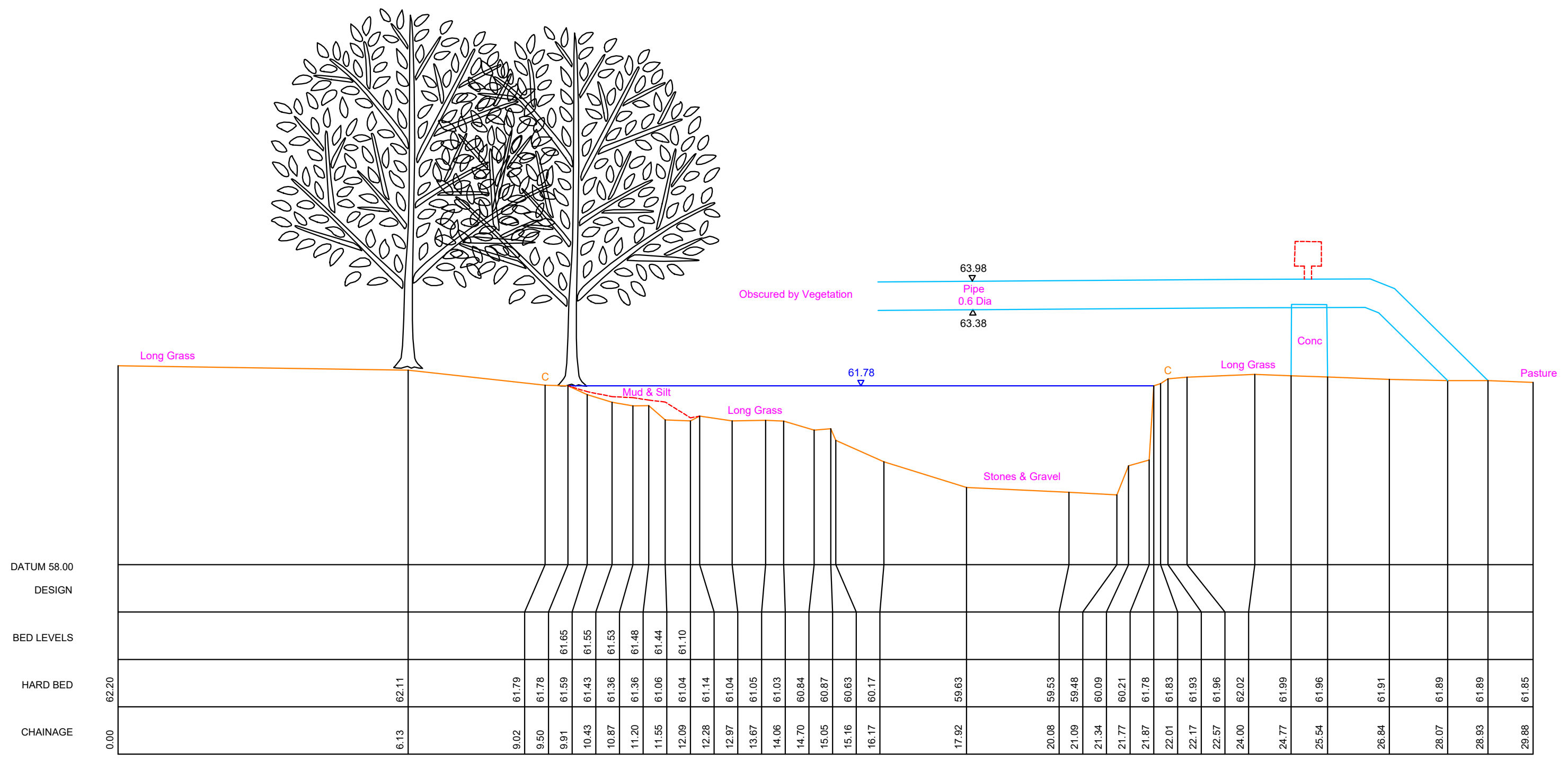

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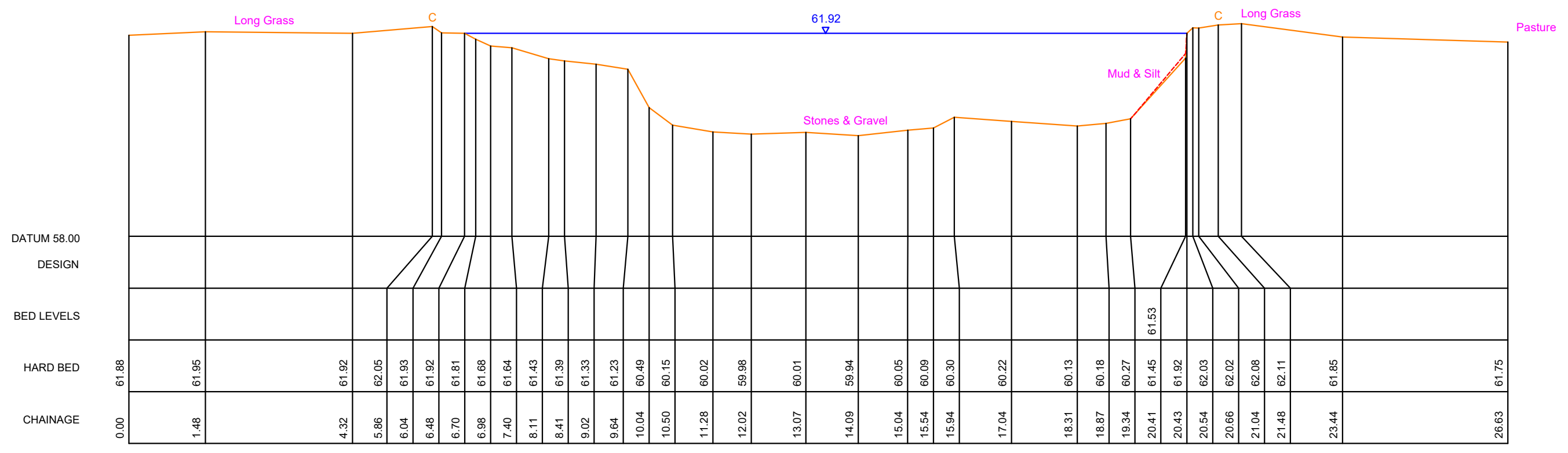

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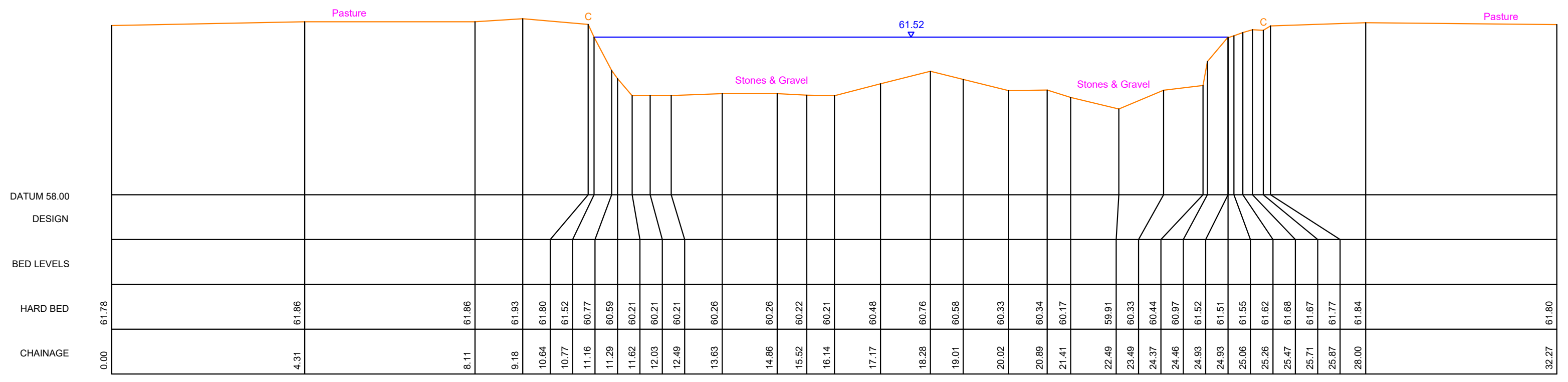
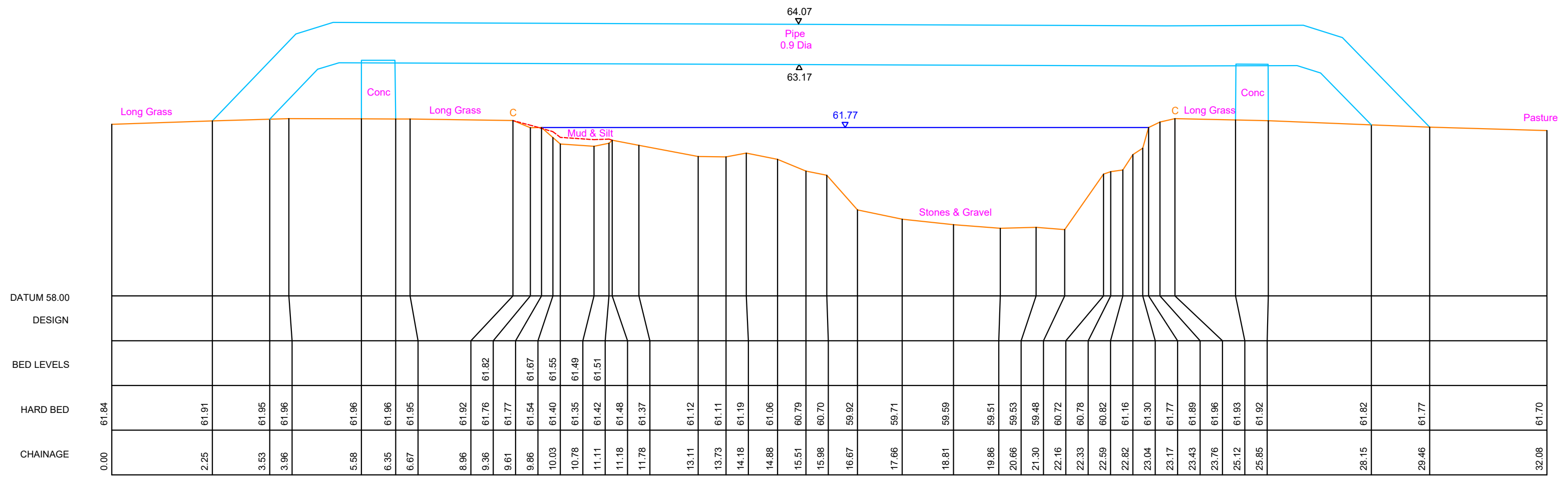
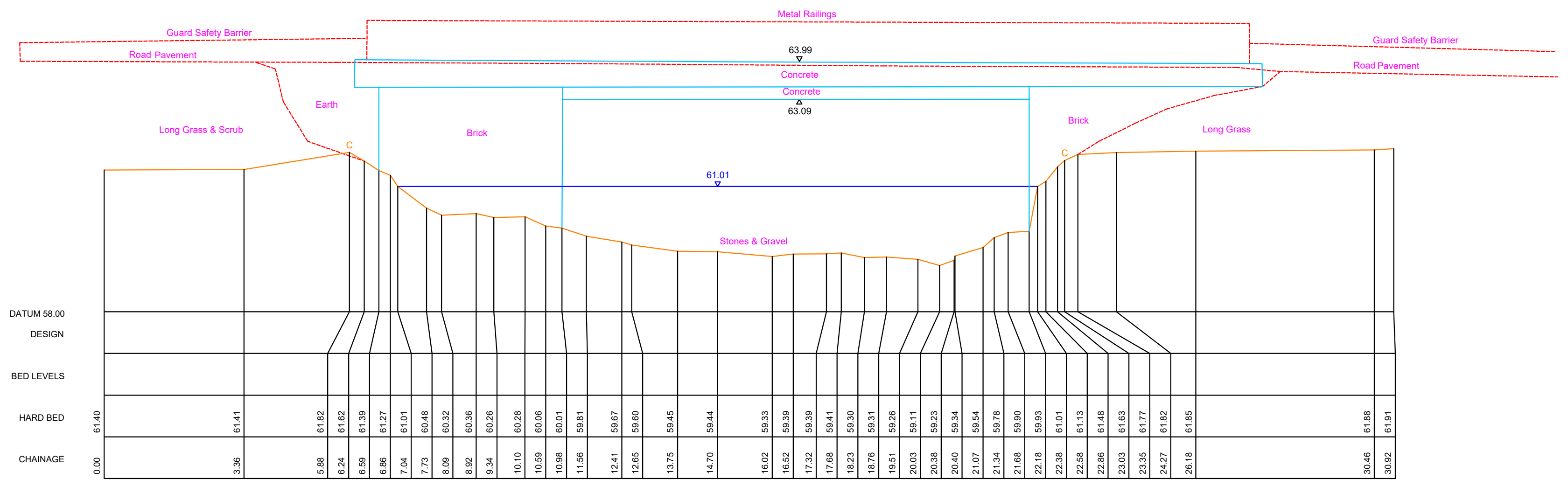


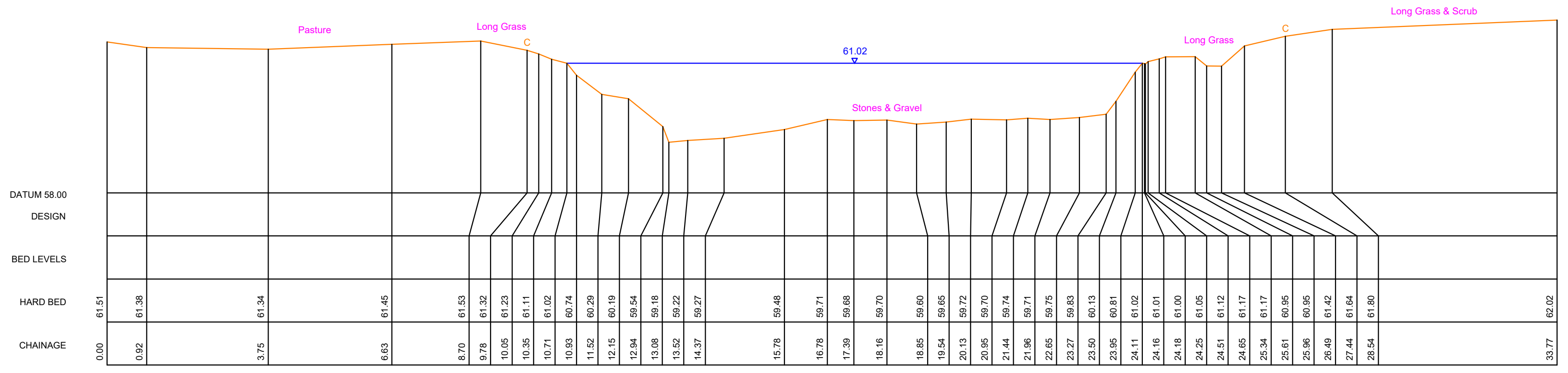
Section Name: EVEM_00234
Open Channel
Date of Survey: 13/04/2023
CH: 234.393
E: 444624.71E
N: 210353.83N
BEARING 310



Section Name: EVEM_00405
Other Structure - Pipe
Date of Survey: 13/04/2023
CH: 405.358
E: 444528.17E
N: 210475.13N
BEARING 216



Section Name: EVEM_00071
Road Bridge
Date of Survey: 19/04/2023
CH: 70.533
E: 444687.04E
N: 210294.40N
BEARING 264



Section Name: EVEM_00086
Open Channel
Date of Survey: 19/04/2023
CH: 85.549
E: 444683.74E
N: 210316.54N
BEARING 238

Notes:

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The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or fluid ground, contaminates on or within the ground, should be further investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 3 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

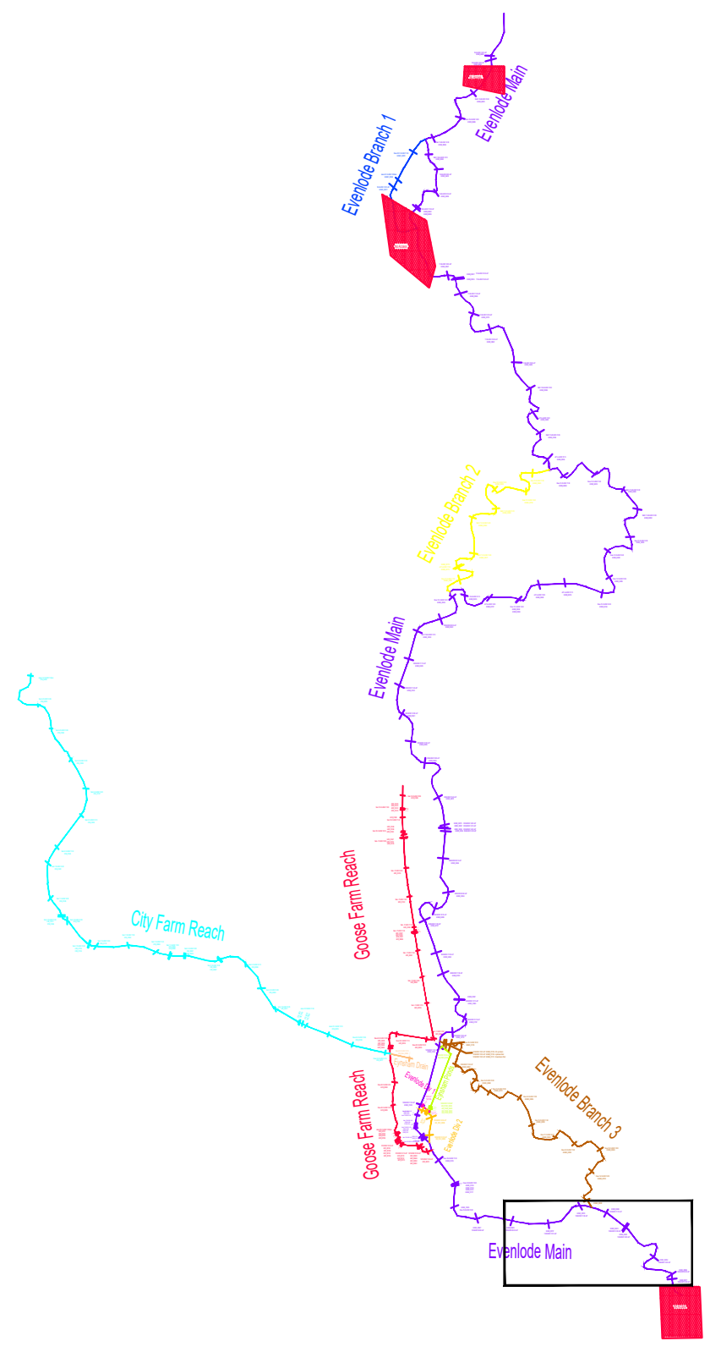
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation including ground conditions/contaminants, drainage, design & planning/density negotiations. Sketch proposals may be based upon enlargements of OS sheets & visual estimations of existing site features, accuracy will therefore need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	LINEAR DRAINAGE CHANNEL	FLR	FLAT ROOF LEVEL	RS	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
A/R	ASSUMED ROUTE	FS	FLAG STAFF	RW	RETAINING WALL
BB	BELISH BEACON	G	GULLY	RWP	RAN WATER PIPE
BdL	BED LEVEL	GIS	GAS INLET POINT	Sap	SAPLING
BH	BOREHOLE	GP	GUIDE POST	SB	SIGN BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	Shlt	SHELTER
BP	BOUNDARY POST	Grl	GRILLE COVER	Si	SPUN IRON
B Pvg	BLOCK PAVING	GV	GAS VALVE COVER	SL	SOFFIT LEVEL
BRck	BICYCLE RACK	Hrl	HAND RAIL	Slt	SILT LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BT	BRITISH TELECOM COVER	IL	INVERT LEVEL	SP	SIGN POST
BW	BRICK WALL	I/R	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPt	SAMPLING POINT
CAP	CABLE WINDING MACHINE	Lby	LIFEBUOY	SS	STRUCTURE POINT
Cat	CATENARY LEVEL	Lck	LOCK GATE	ST	STAND PIPE / SUPPLY TAP
CATV	CABLE TV COVER	Ldr	LADDER	Sti	STILE
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pvg	STONE PAVING SLABS
C/B	CLOSE BOARDED FENCE	LOS	LOSS OF SIGNAL (eml)	STP	STAND PIPE
CD	CHAMBER DEPTH	LP	LAMP POST	StPO	STAY POST
Cgd	CATTLE GRID	Mcy	MACHINERY	Stu	STUMP
Ci	CAST IRON	MH	MANHOLE	StW	STAYWIRE
CIP	CABLE INLET POINT	MgP	MOORING POST	SV	STOP VALVE
CL	COVER LEVEL	Mkr	MARKER POST	SW	STONE WALL
C/L	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Col	COLUMN	MS	MILESTONE	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	ELECTRIC MOTOR	TBol	BOLLARD (Dept' Transport)
Conc Pvg	CONCRETE PAVING	NVP	NO VISIBLE PIPE	TCB	TELEPHONE CALL BOX
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
Cpe	CHILDRENS PLAY EQUIPMENT	OSA	OUTSIDE SURVEY AREA	TEL	TELECOM COVER
Cpy	BUILDING CANOPY	OSBM	OS BENCH MARK	ThL	THRESHOLD LEVEL
Cpsn	CAPSTAN	OGC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CR	CRANE / HOIST	OHC	OVERHEAD CONDUIT	TM	TICKET MACHINE
Cul	CULVERT	OHE	OVERHEAD ELECTRIC	ToV	TOP OF VALVE LEVEL
Ct	CABLE TRAY/ TROUGH	OHG	OVERHEAD GANTRY	TP	TELEGRAPH POLE
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
Dav	Davit	OHT	OVERHEAD TELECOMS	Tr	TROUGH
DC	DUCT COVER	OHU	OVERHEAD UNKNOWN	UTA	UNABLE TO ACCESS
Di	DUCTILE IRON	P	POST	UTL	UNABLE TO LOCATE
(dilap)	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
(dis)	DISUSED	PC	SECURITY CAMERA	UTS	UNABLE TO SURVEY
DPC	DAMP PROOF COURSE	Pcg	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PD	PIT DEPTH	VC	VITRIFIED CLAY
DSW	DRYSTONE WALL	P/F	PANEL FENCE	VDP	VEHICLE DETECTION PAD
Eav	EAVES LEVEL	PP	PETROL PUMP	VP	VENT PIPE
EIC	ELECTRICITY COVER	P/R	POST & RAIL FENCE	VW	VALVE WHEEL
EOT	END OF TRACE (utility)	Psk	PENSTOCK	WB	WEIGH BRIDGE
EP	ELECTRICITY POLE	PV	VERTICAL PIPE	WG	WATER GAUGE
ER	EARTH ROD	Pyl	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POINT	PZ	PIEZOMETER	WM	WATER METER
ESW	ELECTRICITY SWITCH BOX	Rdg	RIDGE LEVEL	W/M	WIRE MESH FENCE
EVC	ELECTRIC VEHICLE CHARGING	RE	RODDING EYE	WO	WASHOUT COVER
FB	FOOTBRIDGE	RG	RAIN GAUGE	WS	WIND SOCK POLE
FL	FLOOR LEVEL	RL	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FFL	FINISHED FLOOR LEVEL	RMP	RESRVOIR MONITORING Pnt		
Flgt	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:
National Grid
by GPS Observations
to the OS Active
Network (OSTN15)

Datum:
Ordnance Datum
by GPS Observations
to the OS Active
Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

rps
MAKING COMPLEX EASY
THE SURVEY ASSOCIATION
AFFILIATE MEMBER

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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:
RPS Consulting
UK & Ireland

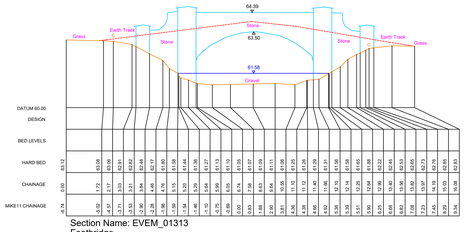
PROJECT:
West Botley

TITLE:
River Cross Sections

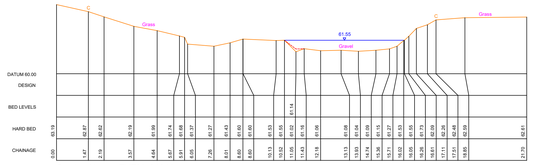
Drawn:	JP/DR/MV/SB/RR/CPH/JE/LB	Checked:	CA
Date:	May 2023	Scale:	1:100 @ A0
Drg No:	UAR3692_B	Sheet:	2 of 23

MAKING
COMPLEX
EASY

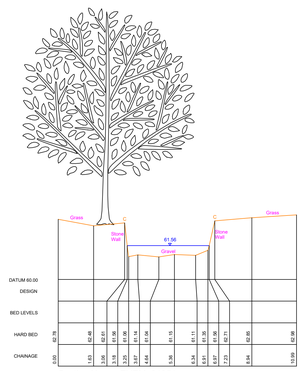
Evenlode Main



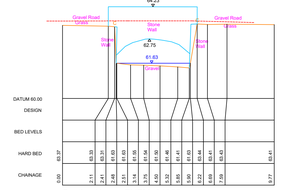
Section Name: EVEM_01313
Footbridge
Date of Survey: 17/02/2023
CH: 1313.463
E: 443853.11E
N: 210769.37N
BEARING 226



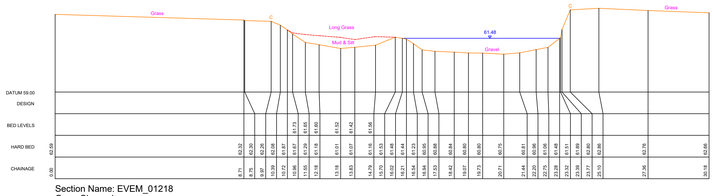
Section Name: EVEM_01319
Open Channel
Date of Survey: 17/02/2023
CH: 1319.427
E: 443849.76E
N: 210773.90N
BEARING 229



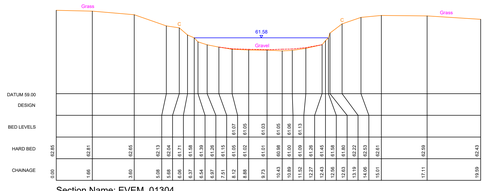
Section Name: EVEM_01351
Open Channel
Date of Survey: 17/02/2023
CH: 1351.250
E: 443829.03E
N: 210792.69N
BEARING 262



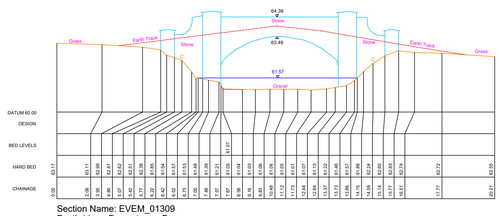
Section Name: EVEM_01355
Road Bridge - Downstream View
Date of Survey: 17/02/2023
CH: 1355.091
E: 443827.28E
N: 210797.12N
BEARING 253



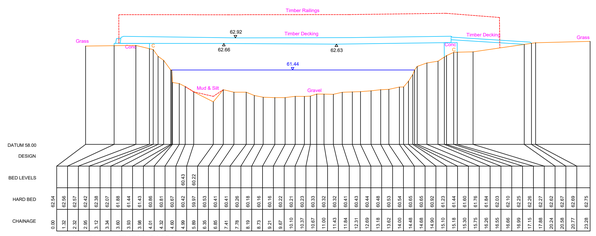
Section Name: EVEM_01218
Open Channel
Date of Survey: 16/02/2023
CH: 1218.431
E: 443912.18E
N: 210696.92N
BEARING 231



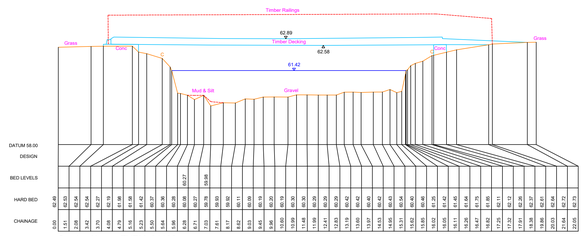
Section Name: EVEM_01304
Open Channel
Date of Survey: 16/02/2023
CH: 1304.120
E: 443860.66E
N: 210761.54N
BEARING 237



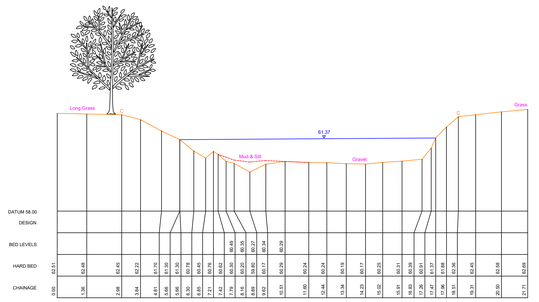
Section Name: EVEM_01309
Footbridge - Downstream Face
Date of Survey: 16/02/2023
CH: 1309.074
E: 443857.42E
N: 210766.96N
BEARING 228



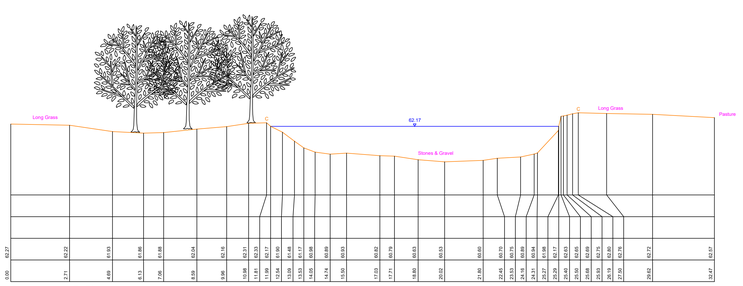
Section Name: EVEM_01121
Footbridge - Downstream Face
Date of Survey: 20/02/2023
CH: 1120.991
E: 443963.49E
N: 210607.75N
BEARING 261



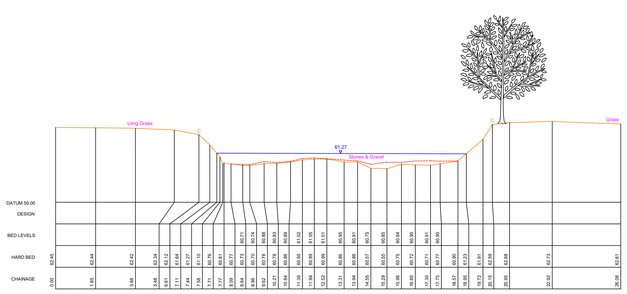
Section Name: EVEM_01122
Footbridge
Date of Survey: 20/02/2023
CH: 1121.988
E: 443964.16E
N: 210608.75N
BEARING 261



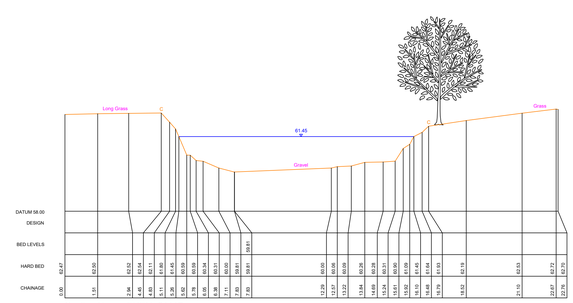
Section Name: EVEM_01125
Open Channel
Date of Survey: 20/02/2023
CH: 1125.118
E: 443963.66E
N: 210614.28N
BEARING 250



Section Name: EVEM_00947
Open Channel
Date of Survey: 13/04/2023
CH: 947.336
E: 444020.36E
N: 210509.91N
BEARING 163



Section Name: EVEM_01045
Open Channel
Date of Survey: 15/02/2023
CH: 1045.487
E: 443964.28E
N: 210603.84N
BEARING 249



Section Name: EVEM_01117
Open Channel
Date of Survey: 20/02/2023
CH: 1116.886
E: 443964.76E
N: 210603.82N
BEARING 260

Notes:

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This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Where trees are to be retained, the exact location of all underground services and foundations must be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing and proposed trees, to prevent damage to the roots. Ground conditions should be investigated and foundations designed by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees to be felled should be carefully removed, including stumps and roots, in such a manner as to prevent harm from damage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

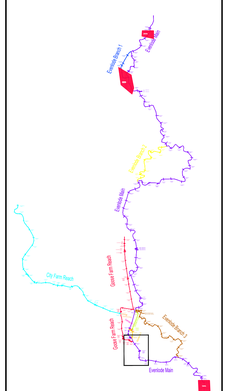
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and design. Information contained within this drawing is for Planning purposes only and detailed design of proposals may be based upon arrangements of Cdt. Grade & visual estimations of existing site conditions. Existing features need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

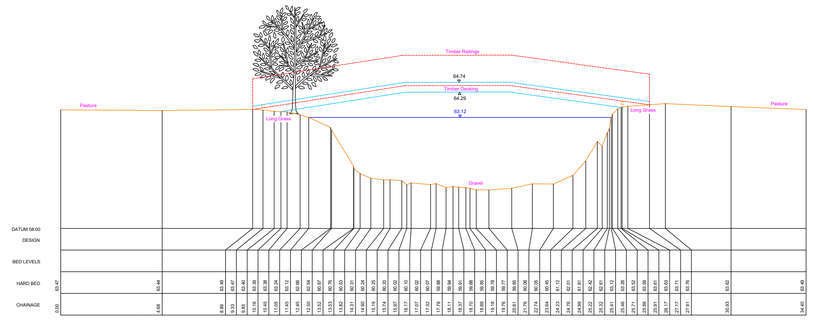
Standard Abbreviations

ACD	ACCESS CHANNEL DRAIN	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
AB	ASSUMED BOOTS	FL	FLAG POLE	RWP	RAIN WATER PIPE
BB	BOLLARD	T	FLAT TOP	RWG	RECTANGULAR MANHOLE
BH	BOREHOLE	GP	GAS GOVERNOR POST	RM	RISER
Bol	BOLLARD	GF	GUIDE POST	SB	SIGN BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SW	SHED TOP
B Plug	BOLLARD REMOVABLE	GV	GAS VALVE	SL	SLOPE
B Plug	BUTON PLUGG	GV	GAS VALVE COVER	SL	SUPPLY LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SM	SIGNAL MAST
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BCP	BUTTON CHAMBER COVER	IP	IRON PIPE	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMPLING POINT
CAB	CABLE TELEVISION BOX	LB	LAMP BRACKET	SS	SOIL VENT PIPE
CAV	CATHWAY LEVEL	LG	LOCK GATE	ST	STAIRS
CB	CATCH PIT CHAMBER	LP	LAMP POST	STP	STOPPING PIPE - SUPPLY TAP
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pvg	STONE PAVING SLABS
CF	CHAIN LINK FENCE	LS	LOW SUPPLY (MP)	SW	STOP VALVE
CO	CHAMBER DEPTH	LP	LAMP POST	SWD	STAY POST
CP	CAR PARK	MH	MANHOLE	SWP	STAY WIRE
CP	CAST IRON	MH	MANHOLE	SW	STEPWIRE
CP	CATCH PIT POINT	MP	MARKER POST	TB	TELEGRAPH BOX
CL	COVER LEVEL	MP	MARKER POST	TW	STONE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Conc	CONCRETE	MP	MONITORING POINT	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MV	ELECTRIC MOTOR	TRM	BOLLARD (Road Transport)
CP	CONCRETE PAVING	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CE	CONSTRUCTION PLANT EQUIPMENT	OBW	OBSERVATION BOREHOLE WELL HEAD	TL	THRESHOLD LEVEL
Cov	BUILDING CANOPY	OSBM	OS BENCH MARK	TL	THRESHOLD LEVEL
Cpost	CAPSTAN	OHC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CAR PARK	OHL	OVERHEAD CABLES	TP	TELEGRAPH POLE
CP	CAR PARK	OHL	OVERHEAD ELECTRIC	TP	TELEPHONE PILLAR
CP	CAR PARK / PICKUP	OHL	OVERHEAD LINES	TP	TRIAL PIT
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DUCT	OHW	OVERHEAD WIRES	TS	TRAFFIC SIGNAL
D	DUCT CLOSE	OHW	OVERHEAD WIRING	UTA	UNABLE TO ACCESS
DRN	DRAINAGE	P	PIPE	UTC	UNABLE TO CLOSE
DRN2	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DP	DRAIN POINT	PC	PEDESTRIAN CAMERA	UTL	UNABLE TO LOCATE
DPC	DAMP PROOF COURSE	PC	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DS	DIRECTION SIGN	PIT	PIT DEPTH	VP	VENT PIPE OR SECTION PAD
Dr	DAVID LEVEL	PL	PETROL PUMP	VP	VENT PIPE
EOT	END OF TRACE (gpr)	PH	PHONE BOX	WB	WATER BOARD
EOT	END OF TRACE (MP)	Pnt	PENSTOCK	WB	WATER BRIDGE
EP	EARTH POST	PV	PETROL VENT PIPE	WC	WATER COURSE
ER	EARTH ROD	PU	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pkg	PEDESTRIAN GATE	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Pkg	PEDESTRIAN GATE	WMF	WATER MAIN FENCE
EC	ELECTRICITY SERVICE CHAMBER	RL	RAIN LEVEL	WP	WOOD POST
Fb	FOOTBRIDGE	RG	RAIN GAUGE	WS	WING SIDE PIECE
FL	FLOOR LEVEL	Rs	RISER LEVEL	WSR	WATER LEVEL SENSOR
FL	FINISHED FLOOR LEVEL	RMP	RAIN MONITORING Pnt		
FL	FLOOR LIGHT	RP	REFLECTOR POST		

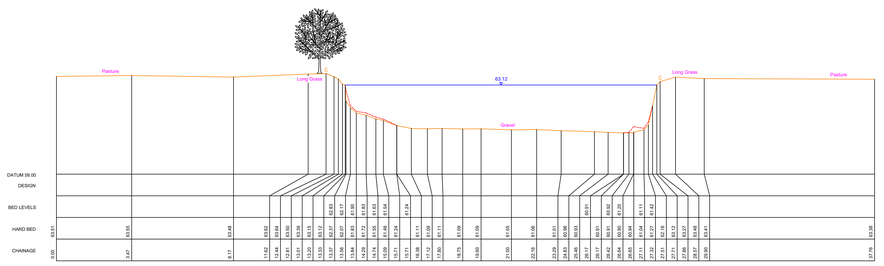
Key Plan



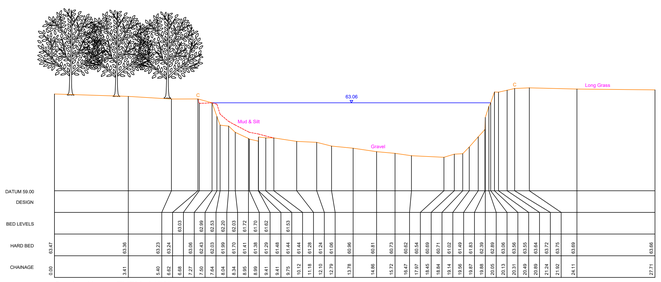
Evenlode Main



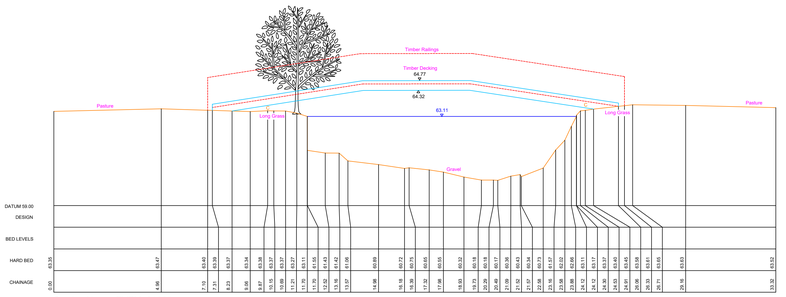
Section Name: EVEM_01867
Footbridge
Date of Survey: 06/04/2023
CH: 1867.181
E: 443985.25E
N: 211216.32N
BEARING 274



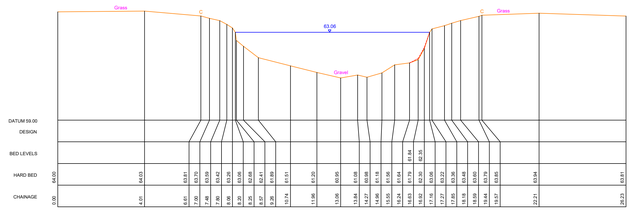
Section Name: EVEM_01970
Open Channel
Date of Survey: 06/04/2023
CH: 1970.137
E: 443930.78E
N: 211311.19N
BEARING 246



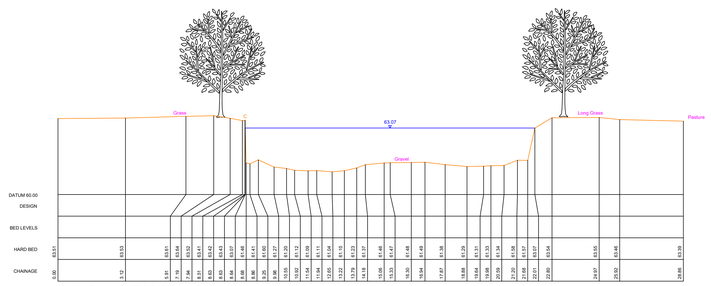
Section Name: EVEM_01787
Open Channel
Date of Survey: 06/04/2023
CH: 1786.839
E: 443988.86E
N: 211169.36N
BEARING 202



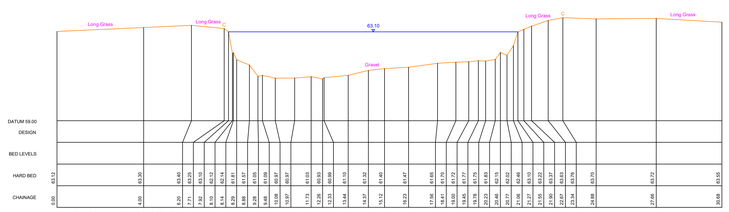
Section Name: EVEM_01865
Footbridge - Downstream Face
Date of Survey: 06/04/2023
CH: 1865.269
E: 443983.72E
N: 211215.17N
BEARING 272



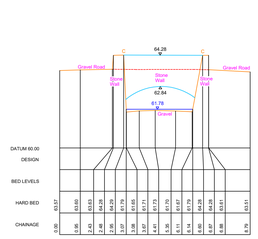
Section Name: EVEM_01432
Open Channel
Date of Survey: 12/04/2023
CH: 1431.565
E: 443851.62E
N: 210866.08N
BEARING 286



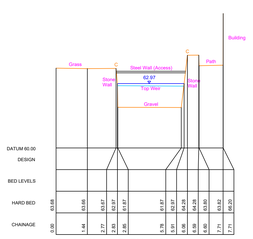
Section Name: EVEM_01634
Open Channel
Date of Survey: 12/04/2023
CH: 1634.309
E: 443912.67E
N: 211052.55N
BEARING 308



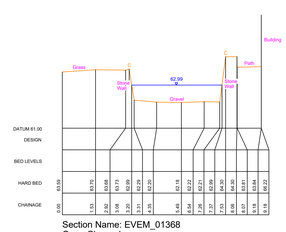
Section Name: EVEM_01710
Open Channel
Date of Survey: 06/04/2023
CH: 1709.797
E: 443945.54E
N: 211092.48N
BEARING 356



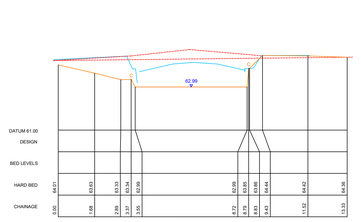
Section Name: EVEM_01360
Access Bridge - Upstream View
Date of Survey: 17/02/2023
CH: 1359.801
E: 443827.45E
N: 210802.04N
BEARING 252



Section Name: EVEM_01364
Weir Crest
Date of Survey: 17/02/2023
CH: 1363.863
E: 443827.36E
N: 210804.54N
BEARING 269

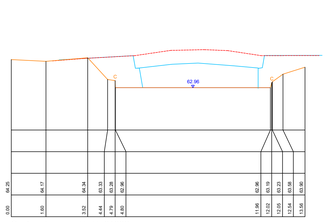


Section Name: EVEM_01368
Open Channel
Date of Survey: 17/02/2023
CH: 1367.523
E: 443828.71E
N: 210808.19N
BEARING 269



Section Name: EVEM_01394
Footbridge - Upstream Face
Date of Survey: 17/02/2023
CH: 1394.275
E: 443833.16E
N: 210832.29N
BEARING 289

No Bed Levels - Unable to Access



Section Name: EVEM_01396
Rail Bridge - Downstream Face
Date of Survey: 17/02/2023
CH: 1396.389
E: 443836.09E
N: 210833.98N
BEARING 286

No Bed Levels - Unable to Access

Notes:

The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before commencing any work or shop drawings. All work is to be carried out in accordance with Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical, or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Where trees are to be retained, the location, species and condition of trees and hedgerows should be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing trees and hedgerows. Ground conditions and contaminants should be investigated by a suitably qualified geotechnical investigator by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction by the erection of barriers around the root protection area from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

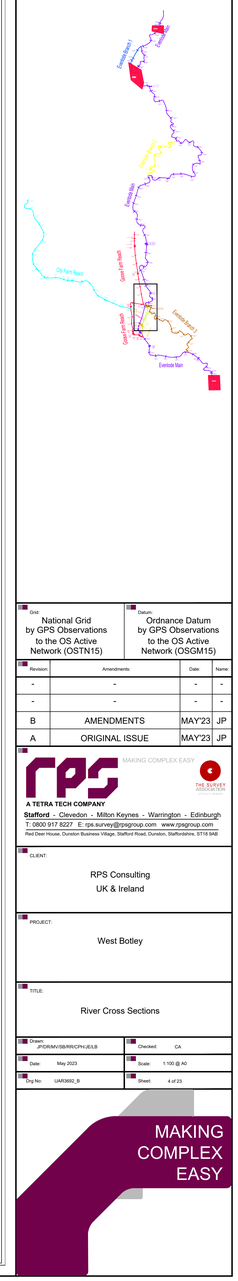
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and design. Information contained within sketch proposals may be based upon OS plans & visual observations. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. Dimensions will need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

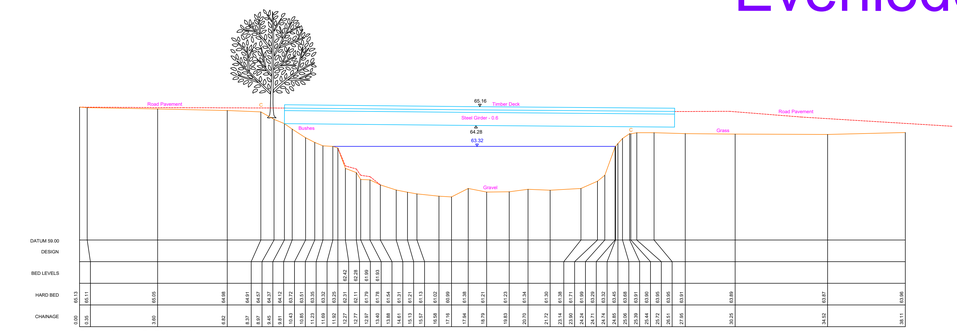
Standard Abbreviations

ACO	ACCESS CHANNEL	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BH	ASSUMED INVERT	FL	FLAG POST	RWP	RAIN WATER PIPE
BB	BOREHOLE	G	GULLY	RWG	RECTANGULAR RING
BH	BOREHOLES	GP	GUIDE POST	SB	SAND BOX
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SB	SAND BOX
BP	BOLLARD POST	GV	GAS VALVE	SE	SOIL PIPE
B Pag	BUSH PLANG	GV	GAS VALVE COVER	SL	SUPPLY LEVEL
BS	BUS STOP	H	HEDGE	SM	SETTLEMENT MARK
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BT	BRITISH TELECOM COVER	IL	INVERT LEVEL	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spt Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SR	SHARPS ROOT
CA	CARRIAGEWAY CENTRE	LG	LOCAL GATE	ST	STUMP (TREE)
CAT	CATENARY LEVEL	LG	LOCK GATE	SV	STOP VALVE
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (grt)	Stone Pvg	STONE PAVING SLABS
CF	CHAINLINK FENCE	LP	LAMP POST (with)	SW	SOIL WASTE
CO	CHAMBER DEPTH	LP	LAMP POST	SWD	STAY POST
CP	CONCRETE POST	MH	MANHOLE	SWP	STOP VALVE
CP	CAST IRON	MH	MANHOLE	SW	STATHAM
CP	CONCRETE POST	MP	MARKER POST	TH	TRIAL HOLE
CL	COVER LEVEL	MP	MARKER POST	TM	STAKE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Conc	CONCRETE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MP	EXISTING MAYOR	TBS	BOLLARD (Rail Transport)
CP	CONCRETE POST	NP	NOTICE BOARD POST	TC	TELEPHONE CALL BOX
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
Cpe	CHILDREN'S PLAY EQUIPMENT	OHW	OVERHEAD TRACTORY WIRES	TL	TRAFFIC LIGHTS
Cpe	CARPARK	OSM	OS BENCH MARK	TL	TIMBERWALLS LEVEL
Cpe	CARPARK	OSC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CAR PARK	OSL	OVERHEAD LINES	TP	TELEGRAPH POLE
CP	CAR PARK	OSL	OVERHEAD ELECTRIC	TP	TELEPHONE PLATE
CR	CONCRETE RAILS / PICKUSH	OSP	OVERHEAD POWER	TP	TELEPHONE POLE
CW	CONCRETE WALL	OSStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
CY	CATS EYE	OT	OVERHEAD TELEPHONE	TR	TRENCH
CY	CATS EYE(S)	OWH	OVERHEAD WARNING	UTA	UNABLE TO ACCESS
D	DRAINAGE RUN	P	POST	UTA	UNABLE TO ACCESS
DRN2	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DP	DRAIN POINT	PB	PUSH BUTTON CAMERA	UTR	UNABLE TO RAISE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO FENCE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DW	DRY WELL	PM	PARKING METER	VP	VENT PIPE
Ent	EAVES LEVEL	PR	PETROL POMP	VP	VENT PIPE
EOT	END OF TRACK (left)	PR	PETROL POMP	WB	WATER BOARD
EOT	END OF TRACK (right)	Pwr	PENSTOCK	WB	WATER BRIDGE
EP	ELECTRIC POST	PV	PRIVATE VALVE	WC	WATER COURSE
ER	EARTH ROD	PV	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pwy	PEDESTRIAN	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	RB	RODDING EYE	WMP	WATER MAIN PIPE
FC	FLOOD CHANNEL CHAMBERS	RL	RAIN GAUGE	WP	WATER POST
FL	FLOOR LEVEL	Rs	RIDGE LEVEL	WS	WATER LEVEL SENSOR
FLR	FINISHED FLOOR LEVEL	RM	RISING MAIN/MONITORING Pnt	WSR	WATER LEVEL SENSOR
Flg	FLOOR LIGHT	RP	REFLECTOR POST		

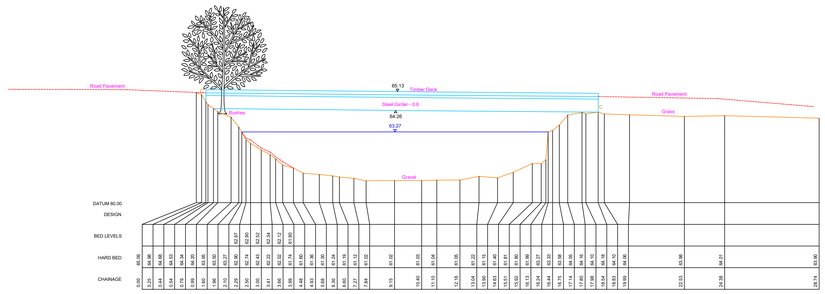
Key Plan



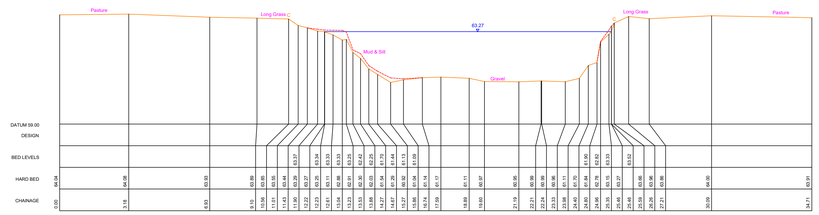
Evenlode Main



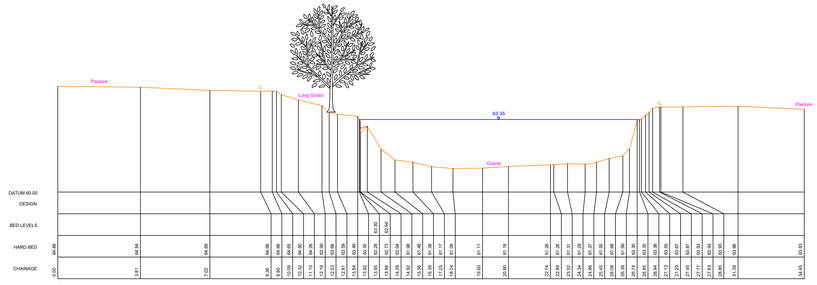
Section Name: EVEM_02563
Road Bridge - Downstream Face
Date of Survey: 05/04/2023
CH: 2563.419
E: 443937.79E
N: 211782.22N
BEARING 272



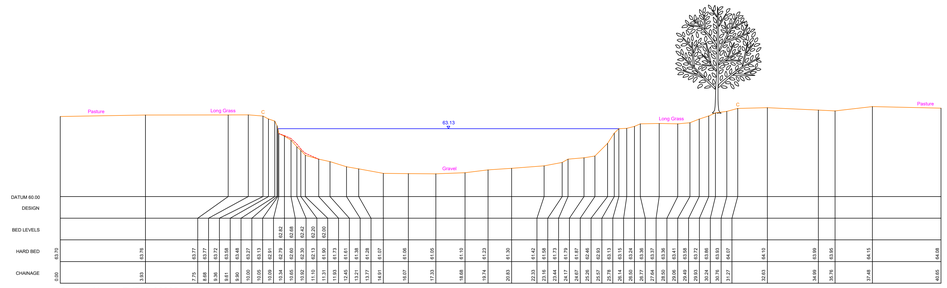
Section Name: EVEM_02567
Road Bridge
Date of Survey: 05/04/2023
CH: 2566.522
E: 443929.00E
N: 211785.72N
BEARING 272



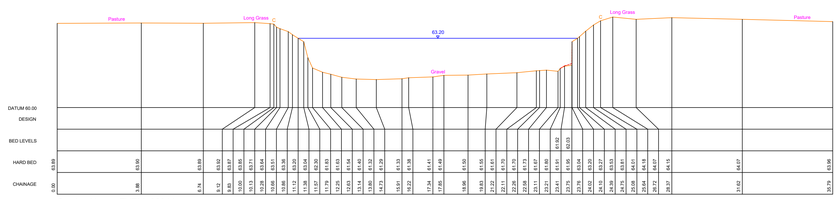
Section Name: EVEM_02464
Open Channel
Date of Survey: 06/04/2023
CH: 2464.144
E: 443930.63E
N: 211682.59N
BEARING 274



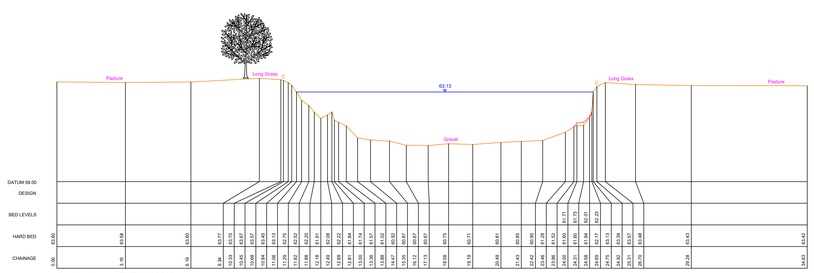
Section Name: EVEM_02554
Open Channel
Date of Survey: 05/04/2023
CH: 2553.691
E: 443939.86E
N: 211772.13N
BEARING 273



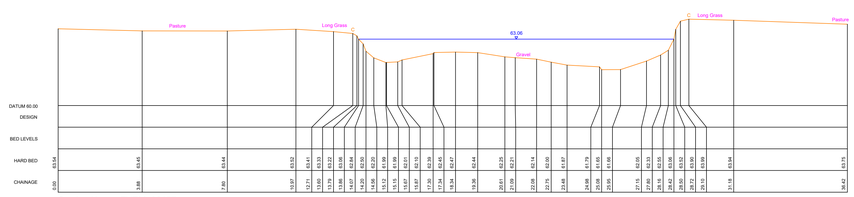
Section Name: EVEM_02265
Open Channel
Date of Survey: 06/04/2023
CH: 2264.880
E: 443879.06E
N: 211498.42N
BEARING 020



Section Name: EVEM_02344
Open Channel
Date of Survey: 06/04/2023
CH: 2344.486
E: 443948.62E
N: 211575.83N
BEARING 259



Section Name: EVEM_02042
Open Channel
Date of Survey: 06/04/2023
CH: 2042.470
E: 443907.74E
N: 211377.30N
BEARING 253

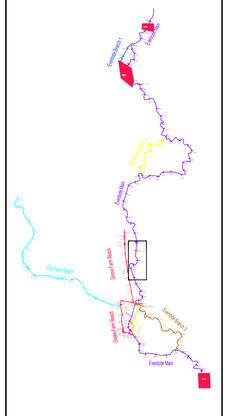


Section Name: EVEM_02157
Open Channel
Date of Survey: 06/04/2023
CH: 2156.795
E: 443869.17E
N: 211487.42N
BEARING 245

Standard Abbreviations

ACO	ACCESS CHANNEL	FLR	FLAT ROOF LEVEL	RG	RODD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BH	BOREHOLE	G	GULLY	RWP	RAIN WATER PIPE
BB	BUS STOP	GAS	GAS VALVE / FOOT	SAT	SATELLITE DISH
BH	BOREHOLE	GP	GUIDE POST	SB	SIGN BOARD
BP	BOLLARD	GPR	GROUND PROBING RADAR	SW	SHED TRP
BT	BRITISH TELECOM	GV	GAS VALVE	SL	SLOPE LEVEL
BVP	BUTON PUSHING	GV	GAS VALVE COVER	SL	SLOPE LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BS	BUS STOP	IC	INSPECTION COVER	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spt Hump	SPEED HUMP
BWP	BARRED WIRE FENCE	KO	KERB OUTLET	SPR	SAMPLING POINT
CAB	CABLE TELEVISION BOX	LC	LEVEL CASTE	SS	SOIL SAMPLE
CAT	CATHWAY LEVEL	LG	LOCK GATE	ST	STAY WIRE
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pvg	STONE PAVING SLABS
CB	CONTROL BOX	LP	LAMP POST / MAST	SW	SOIL WASTE
CC	CHAMBER (DEPTH)	LP	LAMP POST	SWS	STAY POST
CF	CAST IRON	MH	MANHOLE	SY	STAYWIRE
CF	CAST IRON	MH	MANHOLE	SW	STAYWIRE
CL	COVER LEVEL	MP	MARKER POST	TB	TRAFFIC BOX
CL	COVER LEVEL	MP	MARKER POST	TM	STONE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
CL	CABLE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MV	EXISTING MOTOR	TBM	INSTALLATION (Telecom)
CP	CONCRETE PAVING	NP	NAME PLATE	TBM	INSTALLATION (Telecom)
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDRENS PLAY EQUIPMENT	OBH	OVERHEAD BOOM ARCH	TL	THRESHOLD LEVEL
CS	BUILDING CANOPY	OBM	OS BENCH MARK	TL	THRESHOLD LEVEL
Cable	CANOPY	OHC	OVERHEAD CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CAST PIPE	OHC	OVERHEAD CABLE	TP	TEST PIT
CP	CAR PARKING	OHL	OVERHEAD ELECTRIC	TP	TELEPHONE KIOSK
CP	CONCRETE / PICADH	OHL	OVERHEAD LINE	TP	TRIAL PIT
CW	CONCRETE WALL	OHStruc	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DOOR	OL	OVERHEAD LINE	TR	TREE
DC	DUCT COVER	OHV	OVERHEAD MARKERS	UTR	UNABLE TO ACCESS
DRN	DRAINAGE	P	PIPE	UTR	UNABLE TO ACCESS
DRNG	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DT	DUCT	PC	PEDESTRIAN CAMERA	UTR	UNABLE TO RAISE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DW	DRY WELL	PM	PARKING METER	VP	VENT PIPE / DETECTION PAD
Ent	EARTH LEVEL	PP	PETROL PUMP	W	VENT PIPE
EOT	END OF TRACE (gpr)	PP	PETROL PUMP	WB	WATER BOARD
EOT	END OF TRACE (gpr)	Pwr	POWER POINT	WB	WATER BOARD
ET	EARTH POST	PU	PYLON	WL	WATER LEVEL
EP	ELECTRICITY SUPPLY POST	PW	PEDESTRIAN WAY	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Rly	RAILWAY LINE	WM	WATER METER CHAMBER
EW	ELECTRICITY CHAMBERS	RL	RAIN GAUGE	WS	WATER SAMPLING POINT
FL	FLOOR LEVEL	Rly	RIDGE LEVEL	WV	WATER VALVE
FL	FINISHED FLOOR LEVEL	RM	RADIO MONITORING Pnt	WSR	WATER LEVEL SENSOR
FL	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:
National Grid by GPS Observations to the OS Active Network (OSTN15)

Datum:
Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision	Amendments	Date	Name
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

MAKING COMPLEX EASY
A TETRA TECH COMPANY
Stafford - Clevedon - Milton Keynes - Warrington - Edinburgh
T: 0800 917 8227 E: rps.survey@rpsgroup.com www.rpsgroup.com
Red Deer House, Dundee Business Village, Stafford Road, Dundee, Staffordshire, ST18 9AB

CLIENT:
RPS Consulting
UK & Ireland

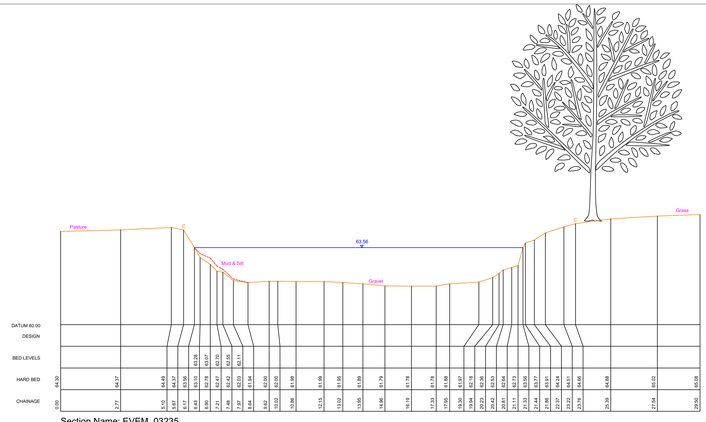
PROJECT:
West Botley

TITLE:
River Cross Sections

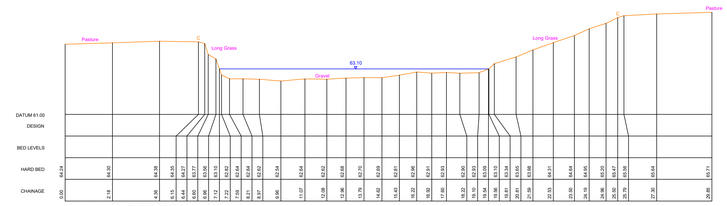
Drawn: JP/DR/MV/SB/RB/CP/HJE/LB	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Org No: UAR3692_B	Sheet: 5 of 23

MAKING COMPLEX EASY

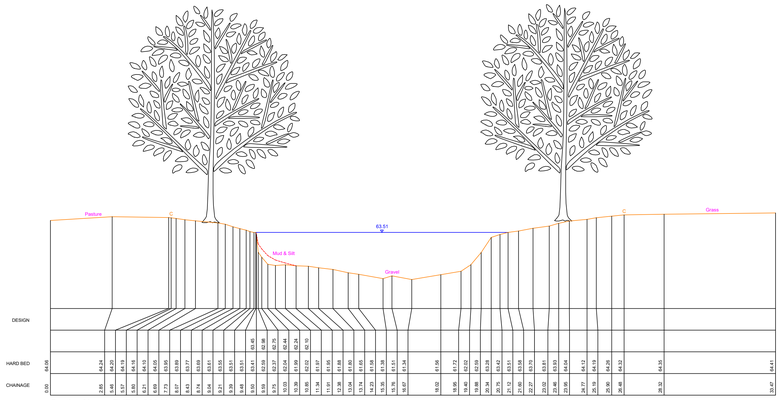
Evenlode Main



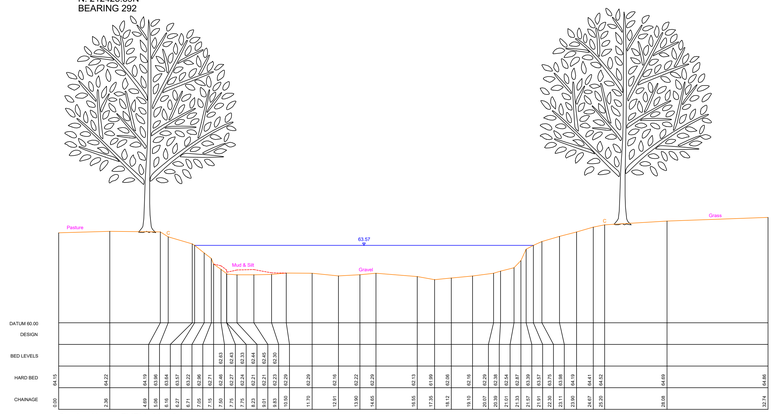
Section Name: EVEM_03235
Open Channel
Date of Survey: 05/04/2023
CH: 3235.497
E: 443814.27E
N: 212338.90N
BEARING 286



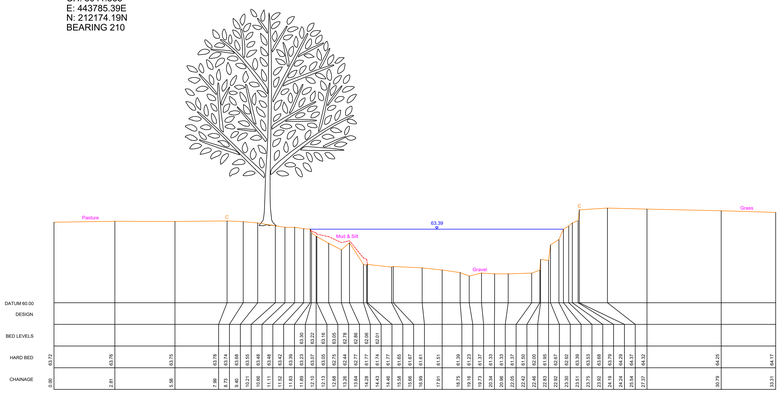
Section Name: EVEM_03332
Open Channel
Date of Survey: 16/02/2023
CH: 3331.639
E: 443843.37E
N: 212428.89N
BEARING 292



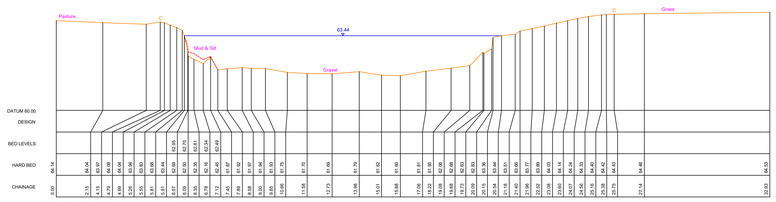
Section Name: EVEM_03041
Open Channel
Date of Survey: 05/04/2023
CH: 3041.363
E: 443785.39E
N: 212174.19N
BEARING 210



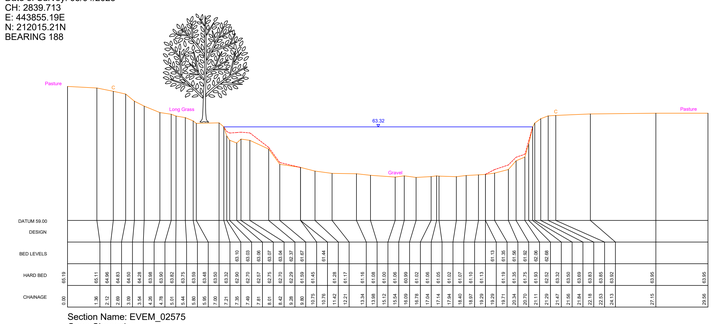
Section Name: EVEM_03142
Open Channel
Date of Survey: 05/04/2023
CH: 3142.141
E: 443783.36E
N: 212247.74N
BEARING 297



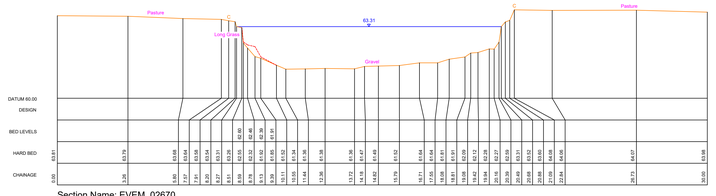
Section Name: EVEM_02840
Open Channel
Date of Survey: 05/04/2023
CH: 2839.713
E: 443855.19E
N: 212015.21N
BEARING 188



Section Name: EVEM_02935
Open Channel
Date of Survey: 05/04/2023
CH: 2934.819
E: 443822.08E
N: 212068.14N
BEARING 279



Section Name: EVEM_02575
Open Channel
Date of Survey: 05/04/2023
CH: 2574.550
E: 443933.03E
N: 211797.18N
BEARING 258

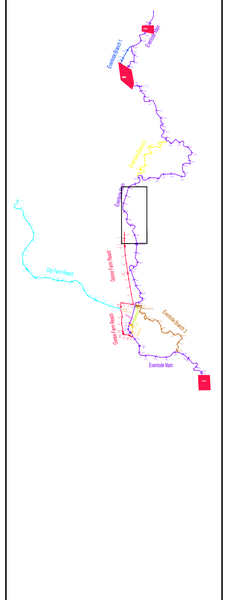


Section Name: EVEM_02670
Open Channel
Date of Survey: 05/04/2023
CH: 2669.986
E: 443909.43E
N: 211893.16N
BEARING 240

Standard Abbreviations

ACO	ACO CHANNEL/DRAINAGE CHANNEL	FLR	FLAT RIDGE LEVEL	RG	RODD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BH	ASSUMED INVERT	G	GULLY	RWP	RAIN WATER PIPE
BB	BOREHOLE	T	TRIAL PIT	RWG	RAIN WATER GRID
BH	BOREHOLE	GP	GUIDE POST	SB	SAND BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SW	SHED TRY
BP	BOUNDARY POST	GV	GAS VALVE	SL	SLOPE LEVEL
B Pap	BUSH PLANG	GV	GATE VALVE COVER	SL	SLOPE LEVEL
BS	BUS STOP	HP	HANDRAIL POST	SP	SOIL PIPE
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BC	BUTTERFLY VALVE CHAMBER COVER	IL	INVERT LEVEL	SP	SOIL PIPE
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMELING POINT
CAB	CABLE TELEVISION COVER	LG	LOCK GATE	ST	STAY WIRE
CP	CATENARY POST	LG	LOCK GATE	ST	STAND PIPE / SUPPLY TAP
CB	CONTROL BOX	LP	LAMP POST	SW	STONE WALL
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pav	STONE PAVING SLABS
CF	CHAIN LINK FENCE	LTS	LIGHTING TRAFFIC SIGN	SV	STOP VALVE
CC	CHAMBER (CBTV)	LP	LAMP POST	SPO	STAY POST
CC	CHAMBER (CBTV)	MH	MANHOLE	SW	STONE WALL
CP	CAST IRON	MH	MANHOLE	SW	STATWIRE
CP	CAST IRON POINT	MP	MARKER POST	SW	STATWIRE
CL	COVER LEVEL	MP	MARKER POST	SW	STONE WALL
CL	CHAIN LINK FENCE	MF	MILE POST	Tac	TACTILE PAVING
CL	COVER LEVEL	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MP	ELECTRIC MOTOR	TBM	BOLLARD (Rail Transport)
CP	CONCRETE POST	NP	NOTICE BOARD POST	TBM	TEMPORARY BENCH MARK
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CE	CONSTRUCTION PLANT EQUIPMENT	OHW	OVERHEAD WIRE/UTILITY WIRES	TL	THRESHOLD LEVEL
CL	BUILDING CLADDING	OSBM	OS BENCH MARK	TL	THRESHOLD LEVEL
Cable	CAPSTAN	OSC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CONCRETE POST	OSC	OVERGROUND CONDUIT	TP	TELEPHONE POST
CP	CAR PARK	OHL	OVERHEAD ELECTRIC	TP	TELEPHONE PLATE
CP	CABLE TRACT / PICKUP	OHL	OVERHEAD ELECTRIC	TP	TELEPHONE POST
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	TP	TRIAL PIT
CI	CATCH	OP	OVERHEAD POWER	TP	TRIAL PIT
CI	CATCH COVER	OHV	OVERHEAD VANTOPIN	UTA	UNABLE TO ACCESS
CI	CATCH COVER	PC	POST CAP	UTA	UNABLE TO ACCESS
DRM	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DP	DRAIN POINT	PC	PEDESTRIAN CAMERA	UTR	UNABLE TO RAISE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	UT	UTILITIES DUCT
DS	DIRECTION SIGN	PP	PHOTO POINT	VC	VEHICLE DETECTION PAD
Dm	DAVES LEVEL	PP	PETROL PUMP	VP	VENT PIPE
ELEC	ELECTRICITY COVER	PB	PUSH BUTTON	WP	WATER POINT
ELEC	END OF TRACE (utility)	Pnt	PENSTOCK	WB	WEIGH BRIDGE
EP	ELECTRIC POST	PL	PIPE LEVEL (gpr)	WL	WATER LEVEL
EM	EARTH POST	PU	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	PS	PEDESTRIAN	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Rly	RAILWAY LINE	WM	WATER METER FENCE
EC	ELECTRICITY VEHICLE CHARGING	RL	RAIL LEVEL	WG	WIRE GUARD FENCE
FL	FLOOD/DRAIN	RG	RAIN GAUGE	WG	WIRE GUARD FENCE
FL	FLOOR LEVEL	RL	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FL	FLOOR LEVEL/FINISHED LEVEL	RSMP	RAILWAY MONITORING Pnt		
FL	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:	Datum:
National Grid by GPS Observations to the OS Active Network (OSTN15)	Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

RPS MAKING COMPLEX EASY
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CLIENT:

RPS Consulting
UK & Ireland

PROJECT:

West Botley

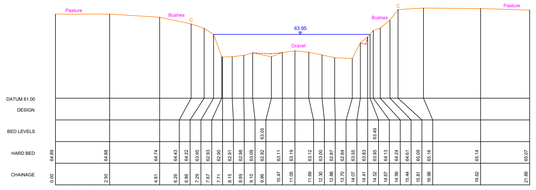
TITLE:

River Cross Sections

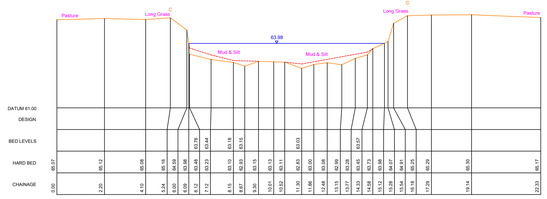
Drawn: JP/DRM/VSB/RR/CPH/JE/LB	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Org No.: UAR0602_B	Sheet: 6 of 23

MAKING COMPLEX EASY

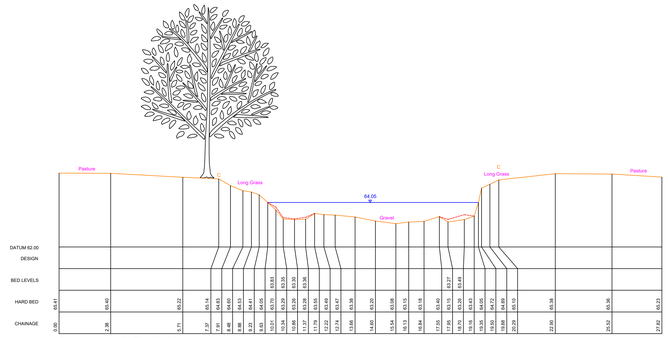
Evenlode Main



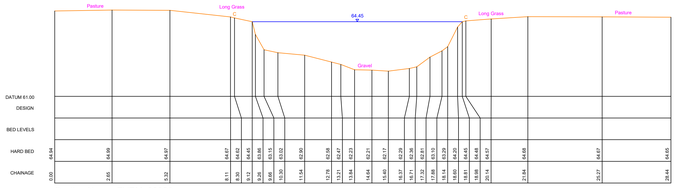
Section Name: EVEM_04236
Open Channel
Date of Survey: 15/12/2022
CH: 4235.741
E: 444472.56E
N: 212619.28N
BEARING 238



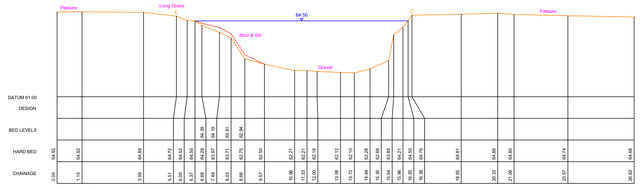
Section Name: EVEM_04329
Open Channel
Date of Survey: 15/12/2022
CH: 4329.150
E: 444486.58E
N: 212694.28N
BEARING 307



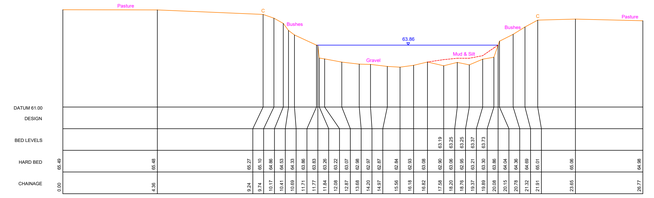
Section Name: EVEM_04456
Open Channel
Date of Survey: 15/12/2022
CH: 4455.628
E: 444545.76E
N: 212746.67N
BEARING 269



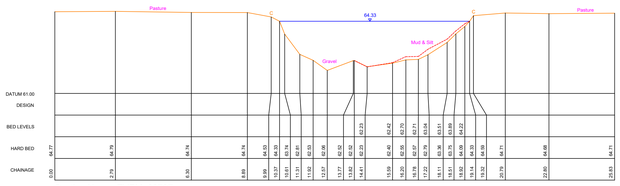
Section Name: EVEM_03929
Open Channel
Date of Survey: 04/04/2023
CH: 3929.338
E: 444234.81E
N: 212574.98N
BEARING 344



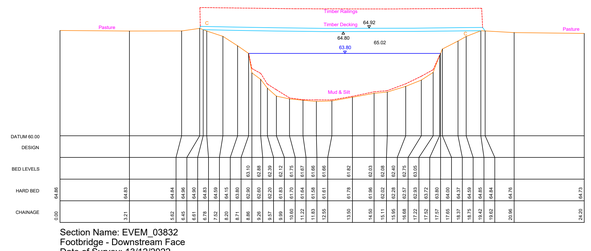
Section Name: EVEM_04016
Open Channel
Date of Survey: 04/04/2023
CH: 4015.607
E: 444318.44E
N: 212581.85N
BEARING 351



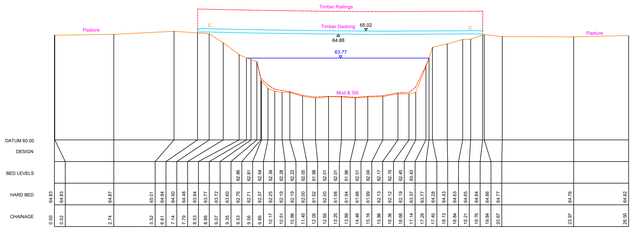
Section Name: EVEM_04144
Open Channel
Date of Survey: 15/12/2022
CH: 4143.683
E: 444436.48E
N: 212545.60N
BEARING 012



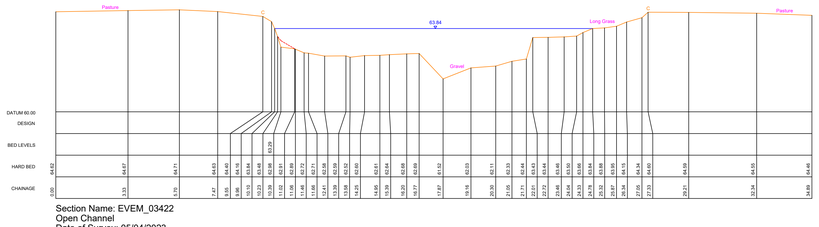
Section Name: EVEM_03737
Open Channel
Date of Survey: 04/04/2023
CH: 3737.040
E: 444058.77E
N: 212535.65N
BEARING 042



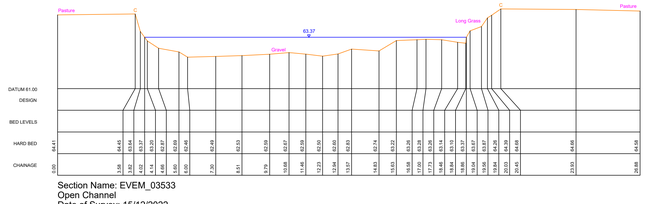
Section Name: EVEM_03832
Footbridge - Downstream Face
Date of Survey: 13/12/2022
CH: 3832.250
E: 444154.26E
N: 212530.74N
BEARING 044



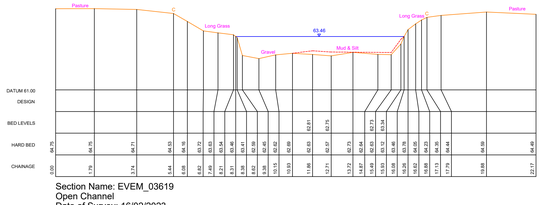
Section Name: EVEM_03834
Footbridge
Date of Survey: 13/12/2022
CH: 3834.232
E: 444155.69E
N: 212529.22N
BEARING 043



Section Name: EVEM_03422
Open Channel
Date of Survey: 05/04/2023
CH: 3421.502
E: 443910.42E
N: 212458.33N
BEARING 340



Section Name: EVEM_03533
Open Channel
Date of Survey: 15/12/2022
CH: 3532.646
E: 443954.27E
N: 212556.13N
BEARING 229



Section Name: EVEM_03619
Open Channel
Date of Survey: 16/02/2023
CH: 3619.409
E: 443973.21E
N: 212556.51N
BEARING 104

Notes:

This drawing and the building works depicted are the copyright of RPS and may not be reproduced or transmitted, except by written permission. No liability will be accepted for amendments made by other persons.

The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. This drawing is to be read in conjunction with all relevant Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Any excavation works adjacent to existing trees must be undertaken carefully and roots must be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing trees and proposed trees. Foundations should be designed by a suitably qualified engineer and should be investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction works and adequate space should be provided for trees to grow from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

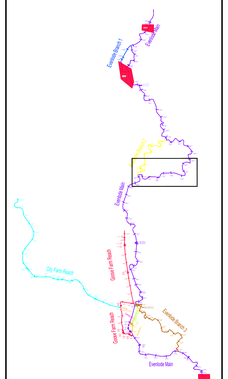
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and design. Any information contained within this drawing is to be considered indicative only. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. Any information required to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

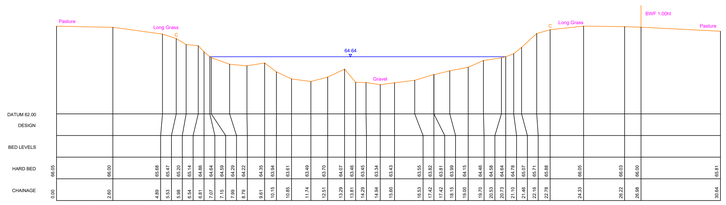
Standard Abbreviations

ACO	ACCESS CHANNEL	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BH	BOREHOLE	FC	FLOOR CHANNEL	RWP	RAIN WATER PIPE
BB	BUILDING	G	GULLY	RWG	RECTANGULAR RING
BH	BOREHOLE	GF	GAS GUARD POST	SP	SIGN POST
BH	BOREHOLES	GP	GUIDE POST	SB	SIGN BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SW	SHED TOP
BP	BOUNDARY POST	GV	GAS VALVE	SL	SLOPE LEVEL
B Pap	BUSH PAPAS	GC	GAS VALVE COVER	SL	SUPPLY LEVEL
BS	BUS SHELTER	H	HEDGE	SM	SETTLEMENT MARK
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BC	BUTTERFLY CHAMBER COVER	IP	IRON PEG	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMELING POINT
CA	CARRIAGEWAY CENTRE	LA	LOCAL AUTHORITY	SS	SOIL SAMPLE
CA	CATHWAY LEVEL	LG	LOCK GATE	ST	STAND PIPE / SUPPLY TAP
CB	CONTROL BOX	LP	LAMP POST	ST	STUMP
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pav	STONE PAVING SLABS
CF	CHAIN LINK FENCE	LS	LOW SPEED LIMIT SIGN	SV	STOP VALVE
CO	CHAMBER EXPTD	LP	LAMP POST	SPO	STAY POST
CP	CAST IRON	MH	MANHOLE	STR	STRUCTURE
CP	CAST IRON	MP	MARKER POST	STW	STYCHWIC
CL	CENTRE LINE	MM	MARKER POST	SW	SURFACE WELL
CL	CHAIN LINK FENCE	MP	MILE POST	SW	SURFACE WELL
Cmp	COMPOST	MP	MILE POST	Tac	TACTILE PAVING
Conc	CONCRETE	MV	EXISTING MOTOR	TBM	TEMPORARY BENCH MARK
CP	CONCRETE POSTING	NP	NOTICE POST	TBM	BOLLARD (Dept Transport)
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
Cpt	CHILDRENS PLAY EQUIPMENT	NRV	NON RETURN VALVE / WEIR	TL	TRAFFIC LIGHTS
Cst	BUILDING CANOPY	OSBM	OS BENCH MARK	TN	THRESHOLD LEVEL
Cable	CARRYON	OHC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CAST IRON POST	OHL	OVERHEAD LINE	TP	TELEGRAPH POLE
CP	CAR PARKY	OHL	OVERHEAD ELECTRIC	TP	TELEPHONE PILLAR
CP	CAR PARKY / PICASH	OHL	OVERHEAD LINE	TP	TELEPHONE POLE
CW	CONCRETE WALL	OHStruc	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DRAIN	OP	OVERHEAD POWER	TR	TREE
DC	DATT COVER	Ohn	OVERHEAD MARKERN	UTA	UNABLE TO ACCESS
DP	DRAINAGE POINT	P	POST	UTB	UNABLE TO BURIED
DRN2	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DP	DRAIN POINT	PC	PEDESTRIAN CAMERA	UTS	UNABLE TO SURVEY
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DW	DRY WELL	PO	PARKING METER	VP	VENT PIPE / SECTION PAD
Dw	DAVES LEVEL	PR	PETROL PUMP	VP	VENT PIPE
EOT	END OF TRACK (gpr)	PS	PUMPING STATION	WB	WATER BOARD
EOT	END OF TRACK (MPK)	Pnt	PENSTOCK	WB	WEIR BRIDGE
EP	ELECTRIC POST	PV	PETROL VENT PIPE	WL	WATER LEVEL
ER	EARTH ROD	PU	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pg	PEDESTRIAN GATE	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Pg	PEDESTRIAN GATE	WM	WATER MAIN / FENCE
FC	FLOOR CHANNEL / SERVICE CHAMBER	RL	RAIN GAUGE	WS	WATER SUPPLY
FL	FLOOR LEVEL	RL	RAISE LEVEL	WS	WIND SOCK POLE
FL	FINISHED FLOOR LEVEL	RMP	RAISED MARKER POINT	WSR	WATER LEVEL SENSOR
FLP	FLOOR LIGHT	RP	REFLECTOR POST		

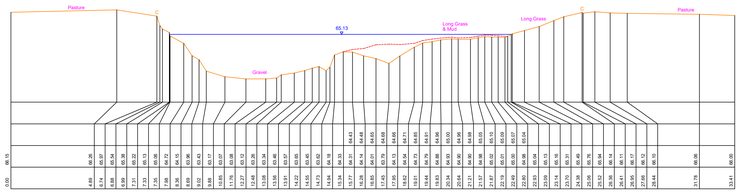
Key Plan



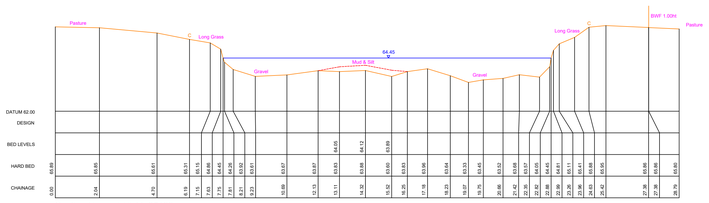
Evenlode Main



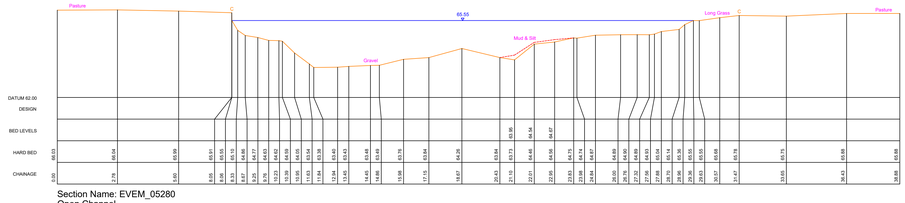
Section Name: EVEM_05389
Open Channel
Date of Survey: 16/12/2022
CH: 5389.022
E: 444216.89E
N: 213246.15N
BEARING 242



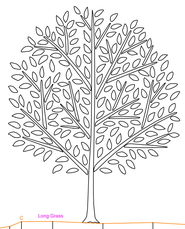
Section Name: EVEM_05495
Open Channel
Date of Survey: 17/04/2023
5494.701
444173.77E
213322.72N
BEARING 272

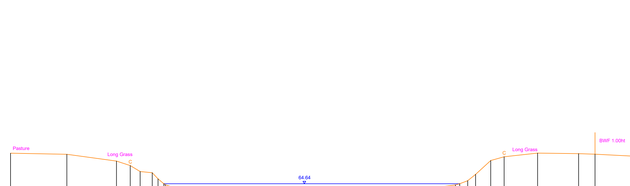


Section Name: EVEM_05189
Open Channel
Date of Survey: 16/12/2022
CH: 5188.603
E: 444247.59E
N: 213100.14N
BEARING 239



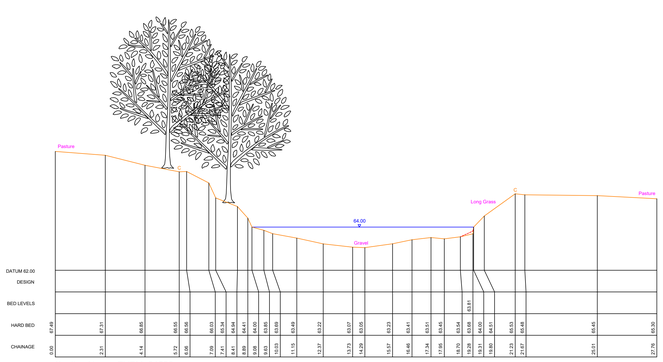
Section Name: EVEM_05280
Open Channel
Date of Survey: 04/04/2023
CH: 5280.138
E: 444225.92E
N: 213136.50N
BEARING 325



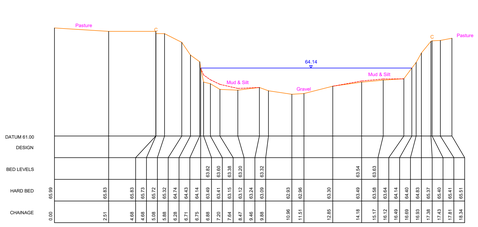


Section Name: EVEM_04959
Open Channel
Date of Survey: 15/12/2022
CH: 4959.452
E: 444326.07E
N: 212957.53N
BEARING 236

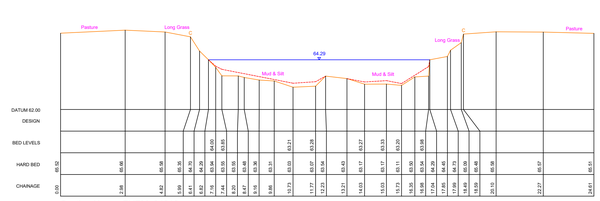
Section Name: EVEM_05054
Open Channel
Date of Survey: 04/04/2023
CH: 5054.115
E: 444274.93E
N: 213020.18N
BEARING 222



Section Name: EVEM_04580
Open Channel
Date of Survey: 15/12/2022
CH: 4580.027
E: 444570.47E
N: 212836.35N
BEARING 281



Section Name: EVEM_04662
Open Channel
Date of Survey: 15/12/2022
CH: 4662.125
E: 444513.40E
N: 212911.51N
BEARING 210



Section Name: EVEM_04818
Open Channel
Date of Survey: 15/12/2022
CH: 4818.177
E: 444423.92E
N: 212961.55N
BEARING 228

Notes:

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The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. This drawing is to be read in conjunction with all relevant Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Any indication of foundations shown on this drawing is approximate only and should be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing foundations, ground conditions and ground contaminants. Ground conditions should be investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction operations and adequate space should be provided to allow for trees from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

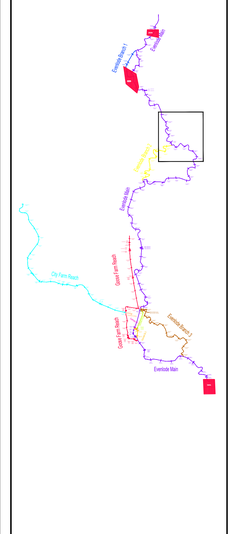
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and design. Information regarding existing services is from a variety of sources and as such sketch proposals may be based upon arrangements of GIS sheets & visual estimations of existing site features. Information will need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	ACO CHANNEL/ DRAINAGE CHANNEL	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BB	ASSUMED NODE	G	GULLY	RWP	RAIN WATER PIPE
BH	BOREHOLE	T	GULLY WITH TRAP	RWT	RAIN WATER TANK
BK	BOREHOLE	GP	GUIDE POST	SB	SAND BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SW	SHED TOP
BP	BOUNDARY POST	GV	GAS VALVE	SL	SLOPE LEVEL
B Pap	BUSH PAVING	GV	GAS VALVE COVER	SL	SLOPE LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BS	BUS STOP	IC	INSPECTION COVER	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spt Hydr	SPEED HUMP
BWP	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMPLING POINT
CA	CARRIAGEWAY CENTRE	LA	LOCAL AUTHORITY	SS	SOIL SAMPLE
CA	CATHWAY LEVEL	LG	LOCK GATE	ST	STAIRS
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (grt)	Stone Pav	STONE PAVING SLABS
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (refl)	STP	STOP POST
CD	CHAMBER DEPTH	LP	LAMP POST	SWD	STAY POST
CF	CAST IRON	MH	MANHOLE	SWP	STOP POST
CF	CAST IRON	MH	MANHOLE	SW	STATIONING
CL	CABLE TV POINT	MP	MARKER POST	TB	TRIAL PIT
CL	COVER LEVEL	MP	MARKER POST	TB	STONE WALL
CL	CHAIN LINK FENCE	MS	MILE POST	Tac	TACTILE PAVING
CL	CLOSE	MT	MAST POINT	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	EXISTING MAPTOR	TBM	BOLLARD (Rail Transport)
CP	CONCRETE PAVING	NB	NAME PLATE	TBM	TEMPORARY BENCH MARK
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDREN'S PLAY EQUIPMENT	OBW	OVERHEAD BATTERY WIRES	TL	TRAFFIC LIGHTS
Cpt	BUILDING CANOPY	OBW	OB BRANCH MARK	TL	THRESHOLD LEVEL
Cpte	CARPORT	OHC	OVERHEAD CONDUIT	TL	TRAFFIC SIGNAL POST
CS	CAST STONE	OHL	OVERHEAD LINES	TP	TRIAL PIT
CV	CAR PARK	OHL	OVERHEAD ELECTRIC	TP	TELEPHONE POLE
CW	CONCRETE WALL	OHP	OVERHEAD PIPELINE	TP	TELEPHONE POLE
CW	CONCRETE WALL	OHStruc	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DATUM	OL	OVERHEAD LINES	TR	TRENCH
DT	DUCT COVER	OHV	OVERHEAD MARKERS	UTR	UNABLE TO ACCESS
DT	DUCT COVER	P	POST	UTR	UNABLE TO ACCESS
DRM2	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DRM	DRAIN	PC	PEDESTRIAN CAMERA	UTR	UNABLE TO RAISE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DW	DRY WELL	PM	PARKING METER	VC	VEHICLE DETECTION PAD
Eav	EAVES LEVEL	PP	PETROL PUMP	VP	VENT PIPE
EHP	ELECTRICITY HEAD POST	PS	PUMPING STATION	WB	WATER BOARD
EOT	END OF TRACE (utility)	Pwr	PENSTOCK	WB	MAGIK BRIDGE
ES	ELECTRIC SUB STATION	PY	PAY & DISPLAY PIPE	WC	WATER COURSE
Ew	EARTH BUND	PZ	PYLON	WL	WATER LEVEL
EWP	ELECTRICITY SUPPLY POST	R	RESERVOIR	WM	WATER METER
FBP	FLOOD BARRIER POINT	Rdg	RIDGE LEVEL	WMK	WATER MARKER POST
FC	FLOOD/DRAINAGE CHAMBER	RL	RAIN GAUGE	WP	WATER POLE
FL	FLOOR LEVEL	RL	RIDGE LEVEL	WS	WATER POLE
FLR	FLAT ROOF LEVEL	RMP	RAILWAY MONITORING Pnt	WSR	WATER LEVEL SENSOR
Flt	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:	Datum:
National Grid by GPS Observations to the OS Active Network (OSTN15)	Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:

RPS Consulting
UK & Ireland

PROJECT:

West Botley

TITLE:

River Cross Sections

Drawn: JP/DR/MV/SB/RR/CP/HJE/LB	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Dwg No: UA13692_B	Sheet: 8 of 23

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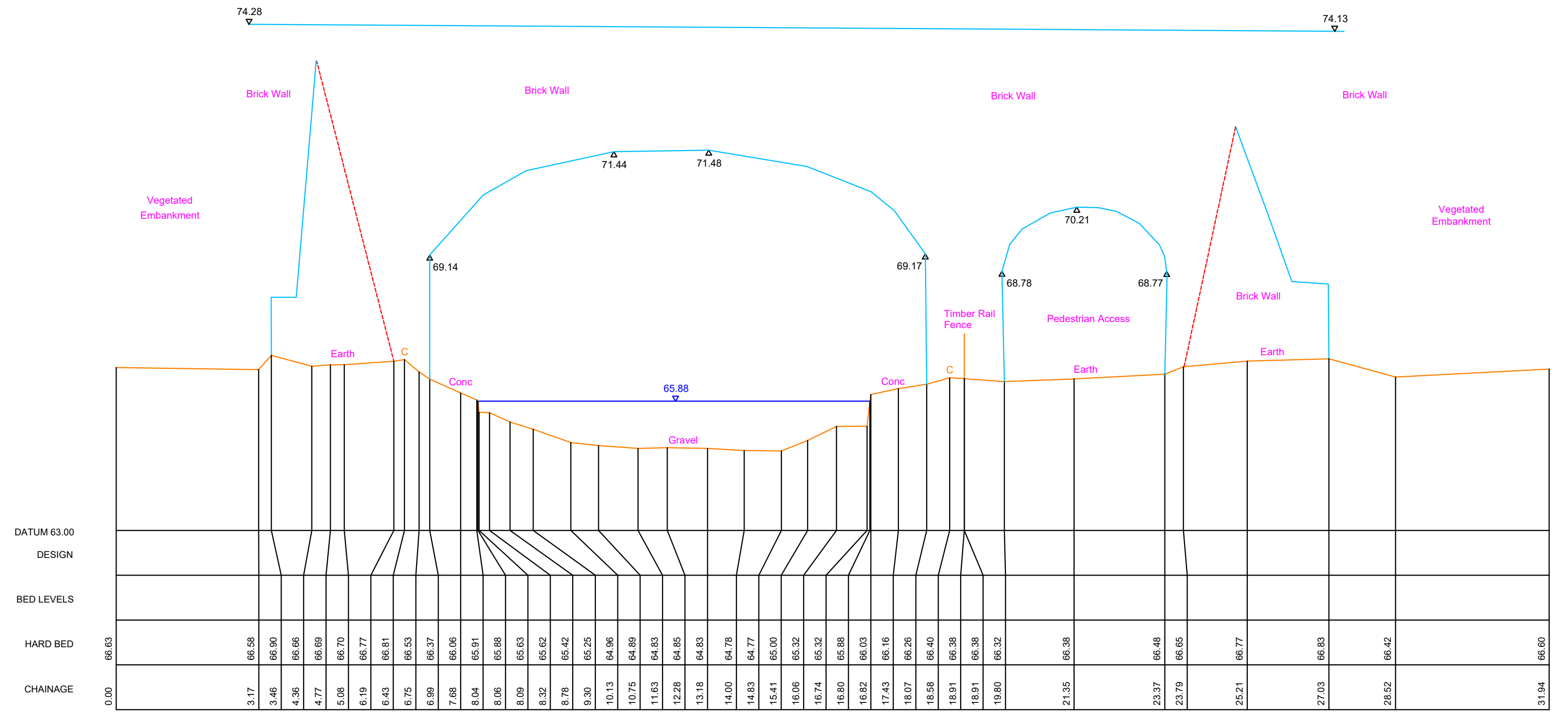
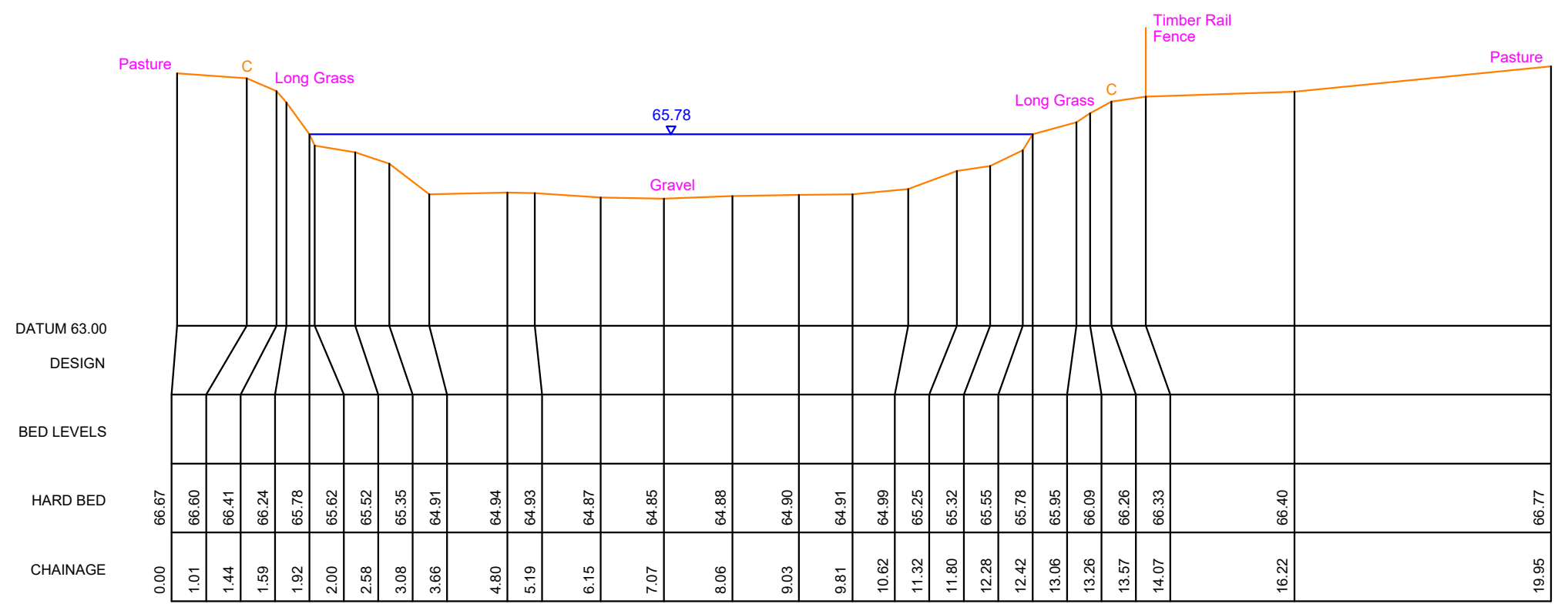
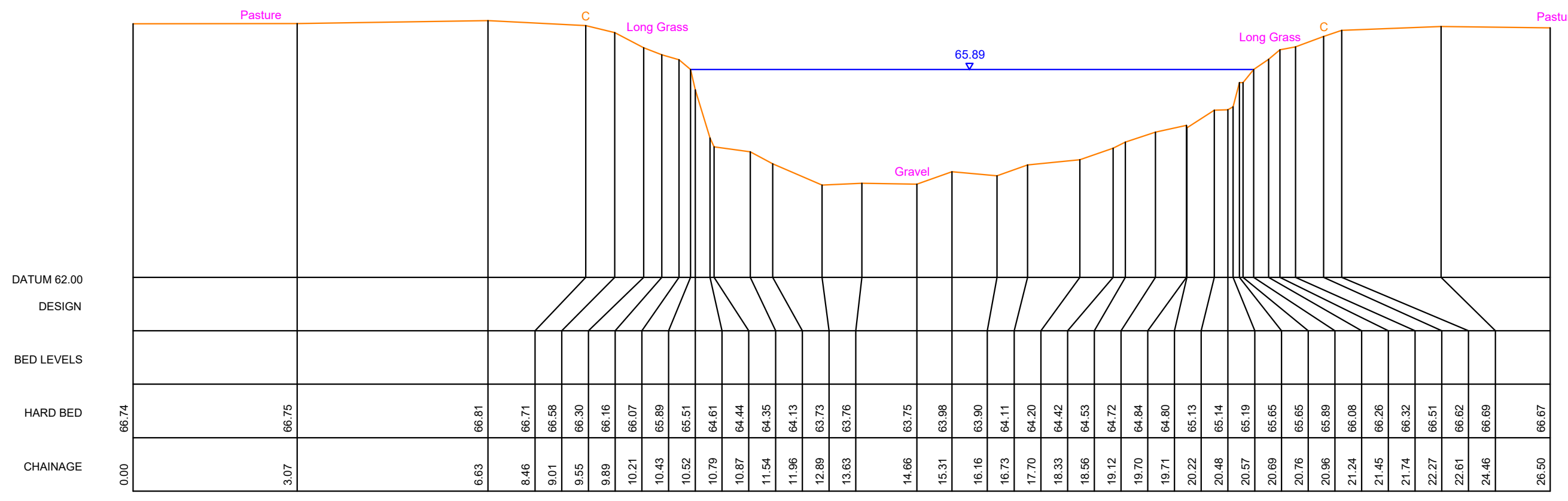


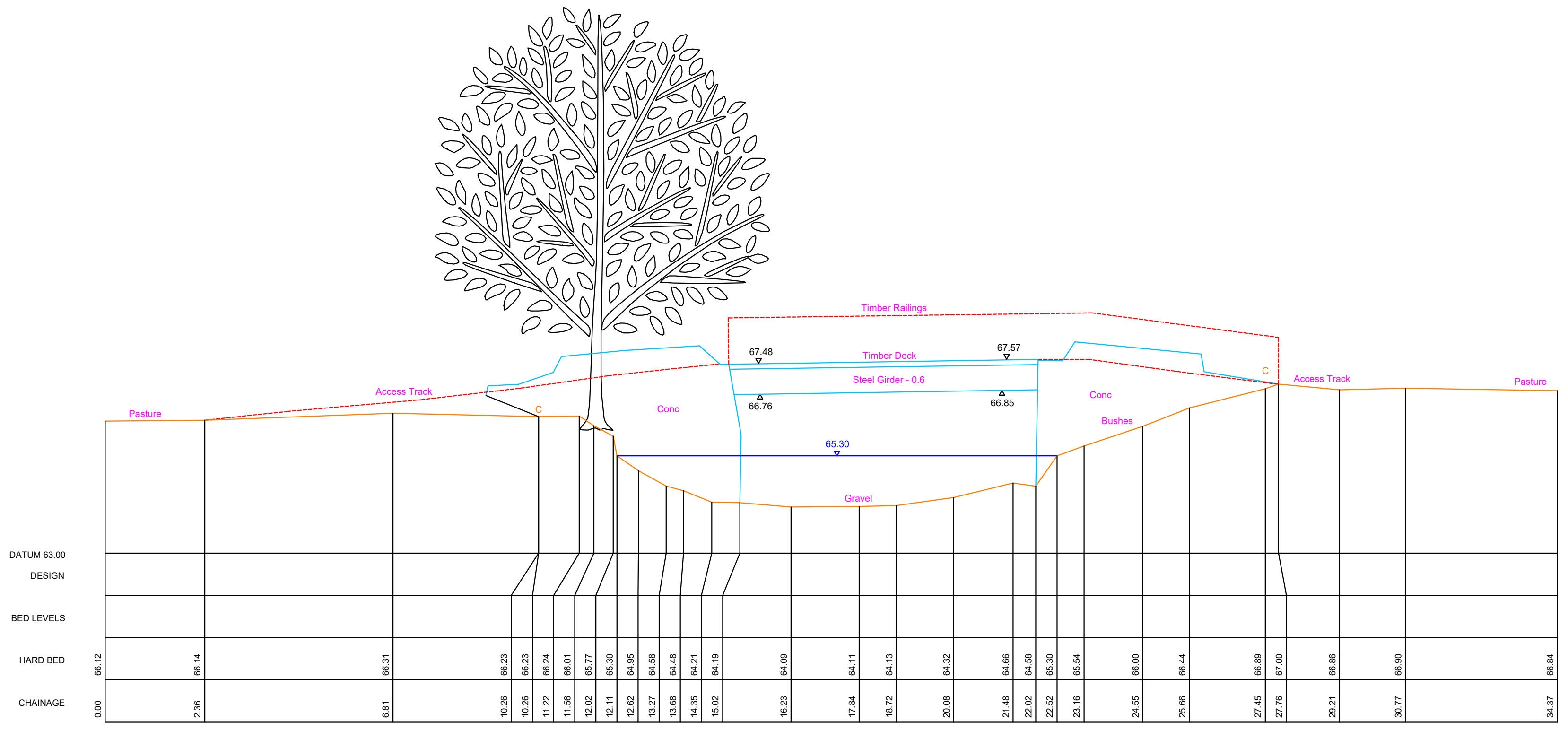
Section Name: EVEM_06256
Rail Bridge
Date of Survey: 18/04/2023
CH: 6255.958
E: 443837.17E
N: 213823.08N
BEARING 313



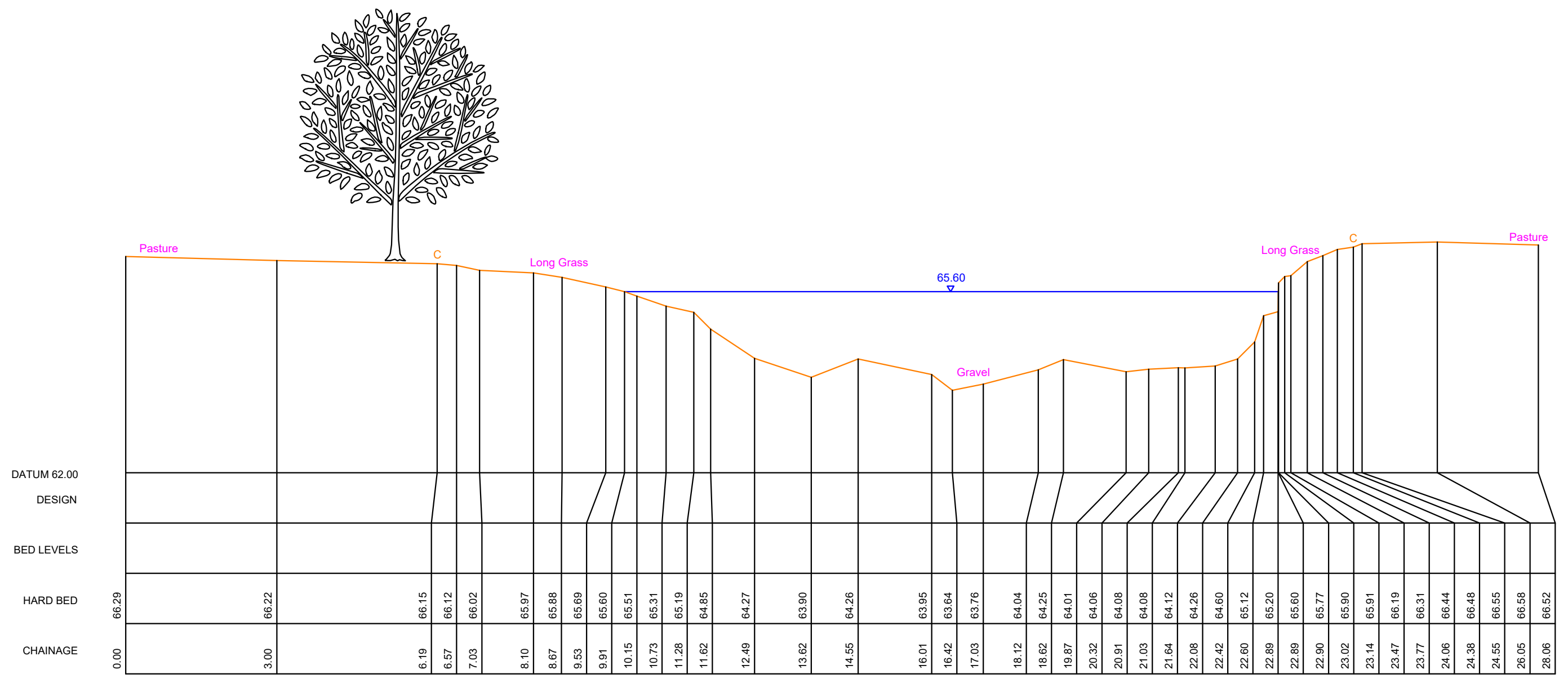
Section Name: EVEM_06262
Open Channel
Date of Survey: 18/04/2023
CH: 6261.677
E: 443837.89E
N: 213831.09N
BEARING 310



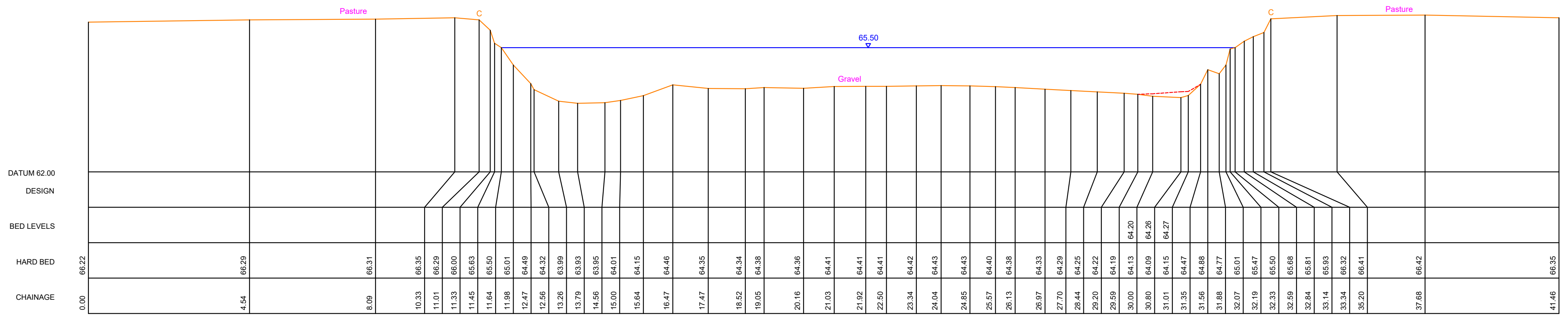
Section Name: EVEM_06356
Open Channel
Date of Survey: 18/04/2023
CH: 6356.441
E: 443897.90E
N: 213873.51N
BEARING 326



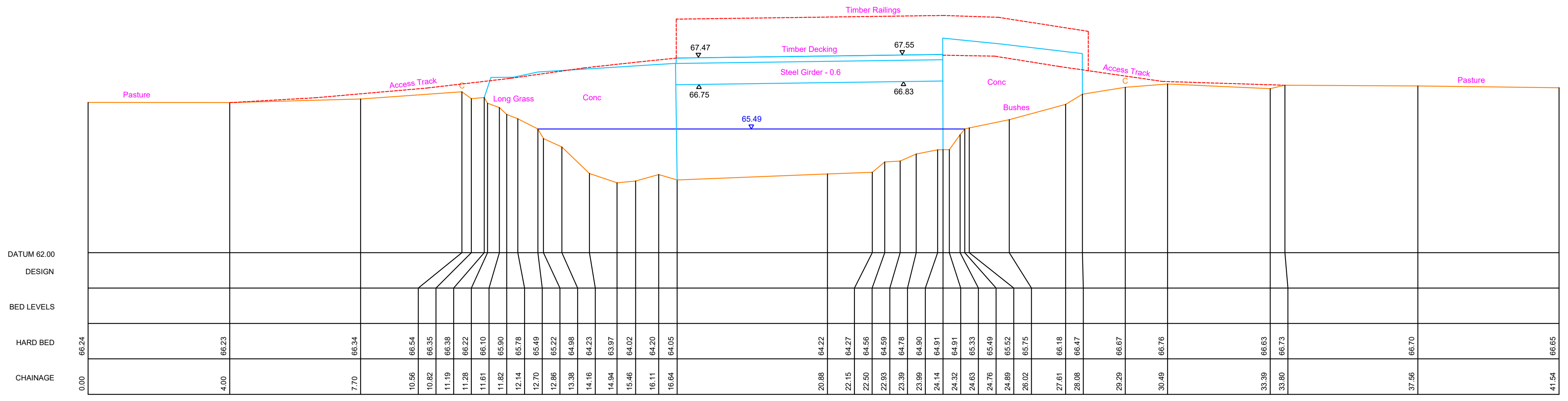
Section Name: EVEM_05917
Access Bridge - Upstream View
Date of Survey: 17/04/2023
CH: 5917.316
E: 443980.33E
N: 213605.69N
BEARING 262



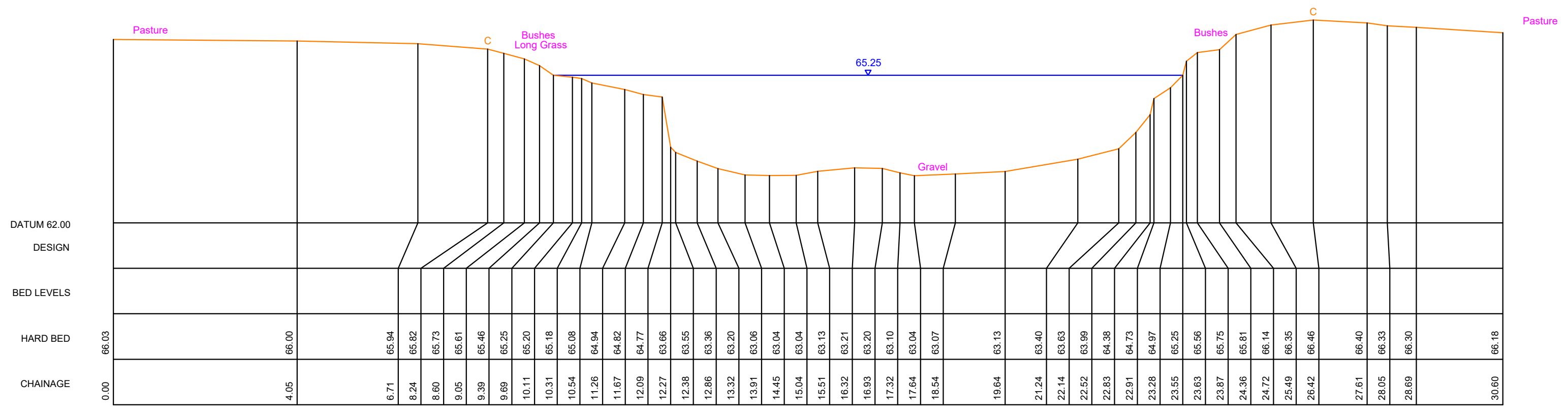
Section Name: EVEM_05947
Open Channel
Date of Survey: 17/04/2023
CH: 5946.995
E: 443925.55E
N: 213624.66N
BEARING 167



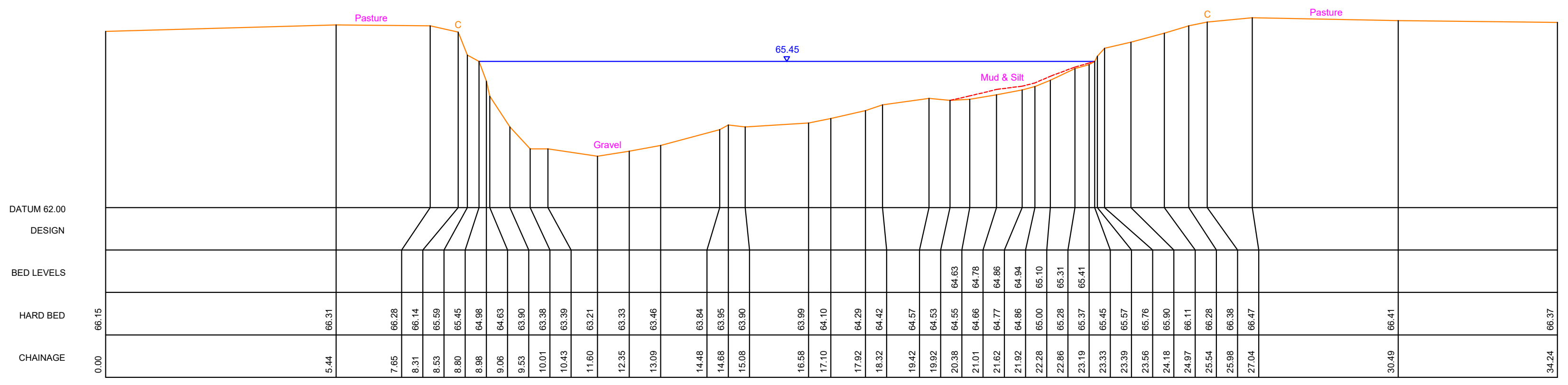
Section Name: EVEM_05863
Open Channel
Date of Survey: 17/04/2023
CH: 5863.215
E: 443992.02E
N: 213557.55N
BEARING 254



Section Name: EVEM_05914
Access Bridge
Date of Survey: 17/04/2023
CH: 5913.830
E: 443983.03E
N: 213601.04N
BEARING 265



Section Name: EVEM_05661
Open Channel
Date of Survey: 17/04/2023
CH: 5661.267
E: 444063.70E
N: 213449.13N
BEARING 162



Section Name: EVEM_05779
Open Channel
Date of Survey: 17/04/2023
CH: 5779.067
E: 444031.84E
N: 213478.88N
BEARING 288

Notes:

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The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or fluid ground, contaminates on or within the ground, should be further investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 3 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

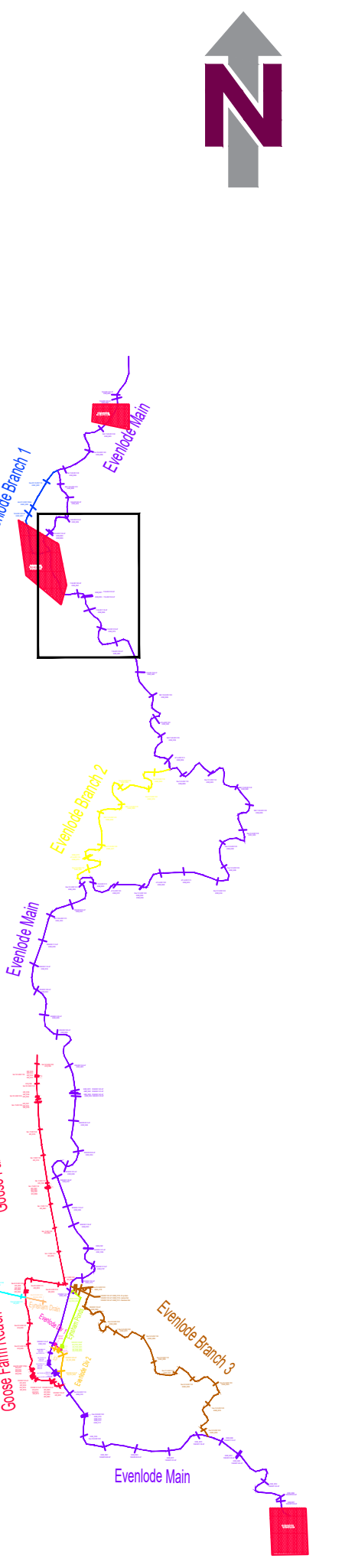
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation including ground conditions/contaminants, drainage, design & planning/density negotiations. Sketch proposals may be based upon enlargements of OS sheets & visual estimations of existing site features, accuracy will therefore need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	LINEAR DRAINAGE CHANNEL	FLR	FLAT ROOF LEVEL	RS	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
A/R	ASSUMED ROUTE	FS	FLAG STAFF	RW	RETAINING WALL
BB	BELISH BEACON	G	GULLY	RWP	RAN WATER PIPE
BdL	BED LEVEL	GIS	GAS INLET POINT	Sap	SAPLING
BH	BOREHOLE	GP	GUIDE POST	SB	SIGN BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	Shlt	SHELTER
BP	BOUNDARY POST	Grl	GRILLE COVER	Si	SPUN IRON
B Pvg	BLOCK PAVING	GV	GAS VALVE COVER	SL	SOFFIT LEVEL
BRck	BICYCLE RACK	Hrl	HAND RAIL	Slt	SILT LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BT	BRITISH TELECOM COVER	IL	INVERT LEVEL	SP	SIGN POST
BW	BRICK WALL	I/R	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPt	SAMPLING POINT
CAP	CABLE WINDING MACHINE	Lby	LIFEBUOY	SS	STRUCTURE POINT
Cat	CATENARY LEVEL	Lck	LOCK GATE	ST	STAND PIPE / SUPPLY TAP
CATV	CABLE TV COVER	Ldr	LADDER	Sti	STILE
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pvg	STONE PAVING SLABS
C/B	CLOSE BOARDED FENCE	LOS	LOSS OF SIGNAL (eml)	STP	STAND PIPE
CD	CHAMBER DEPTH	LP	LAMP POST	StPO	STAY POST
Cgd	CATTLE GRID	Mcy	MACHINERY	Stu	STUMP
Ci	CAST IRON	MH	MANHOLE	StW	STAYWIRE
CIP	CABLE INLET POINT	MgP	MOORING POST	SV	STOP VALVE
CL	COVER LEVEL	Mkr	MARKER POST	SW	STONE WALL
C/L	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Col	COLUMN	MS	MILESTONE	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	ELECTRIC MOTOR	TBol	BOLLARD (Dept' Transport)
Conc Pvg	CONCRETE PAVING	NVP	NO VISIBLE PIPE	TCB	TELEPHONE CALL BOX
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
Cpe	CHILDRENS PLAY EQUIPMENT	OSA	OUTSIDE SURVEY AREA	TEL	TELECOM COVER
Cpy	BUILDING CANOPY	OSBM	OS BENCH MARK	ThL	THRESHOLD LEVEL
Cpsn	CAPSTAN	OGC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CR	CRANE / HOIST	OHC	OVERHEAD CONDUIT	TM	TICKET MACHINE
Cul	CULVERT	OHE	OVERHEAD ELECTRIC	ToV	TOP OF VALVE LEVEL
Ct	CABLE TRAY/ TROUGH	OHG	OVERHEAD GANTRY	TP	TELEGRAPH POLE
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
Dav	Davit	OHT	OVERHEAD TELECOMS	Tr	TROUGH
DC	DUCT COVER	OHU	OVERHEAD UNKNOWN	UTA	UNABLE TO ACCESS
Di	DUCTILE IRON	P	POST	UTL	UNABLE TO LOCATE
(dilap)	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
(dis)	DISUSED	PC	SECURITY CAMERA	UTS	UNABLE TO SURVEY
DPC	DAMP PROOF COURSE	Pcg	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PD	PIT DEPTH	VC	VITRIFIED CLAY
DSW	DRYSTONE WALL	P/F	PANEL FENCE	VDP	VEHICLE DETECTION PAD
Eav	EAVES LEVEL	PP	PETROL PUMP	VP	VENT PIPE
EIC	ELECTRICITY COVER	P/R	POST & RAIL FENCE	VW	VALVE WHEEL
EOT	END OF TRACE (utility)	Psk	PENSTOCK	WB	WEIGH BRIDGE
EP	ELECTRICITY POLE	PV	VERTICAL PIPE	WG	WATER GAUGE
ER	EARTH ROD	Pyl	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POINT	PZ	PIEZOMETER	WM	WATER METER
ESW	ELECTRICITY SWITCH BOX	Rdg	RIDGE LEVEL	W/M	WIRE MESH FENCE
EVC	ELECTRIC VEHICLE CHARGING	RE	RODDING EYE	WO	WASHOUT COVER
FB	FOOTBRIDGE	RG	RAIN GAUGE	WS	WIND SOCK POLE
FL	FLOOR LEVEL	RL	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FFL	FINISHED FLOOR LEVEL	RMP	RESRVOIR MONITORING Pnt		
Flgt	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:	Datum:
National Grid by GPS Observations to the OS Active Network (OSTN15)	Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:
RPS Consulting
UK & Ireland

PROJECT:
West Botley

TITLE:
River Cross Sections

Drawn: JP/DR/MV/SB/RR/CPH/JE/LB	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Drg No: UAR3692_B	Sheet: 9 of 23

MAKING
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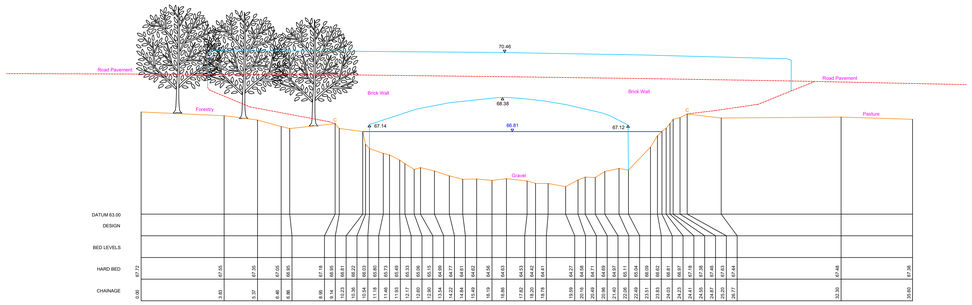
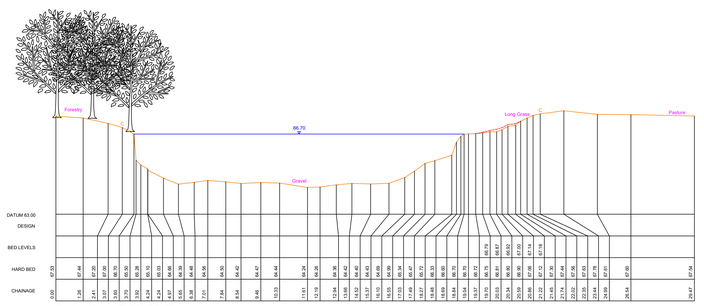
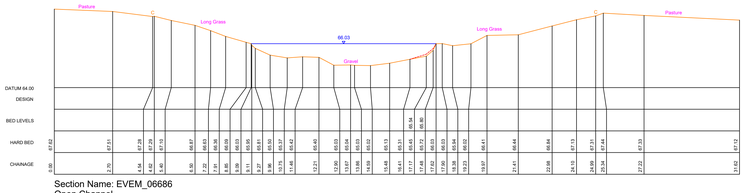
Evenlode Main



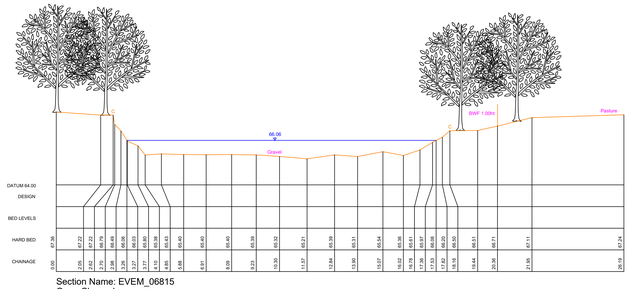
Section Name: EVEM_06946
Road Bridge
Date of Survey: 18/04/2023
CH: 6946.271
E: 444088.13E
N: 214328.81N
BEARING 253



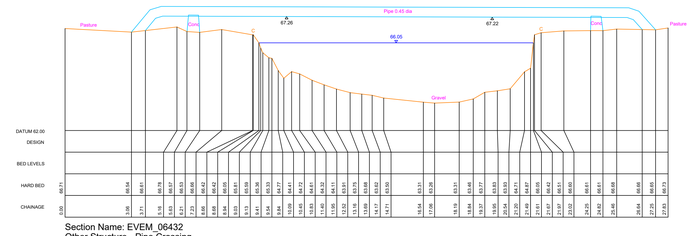
Section Name: EVEM_06959
Open Channel
Date of Survey: 18/04/2023
CH: 6959.442
E: 444081.85E
N: 214337.14N
BEARING 272



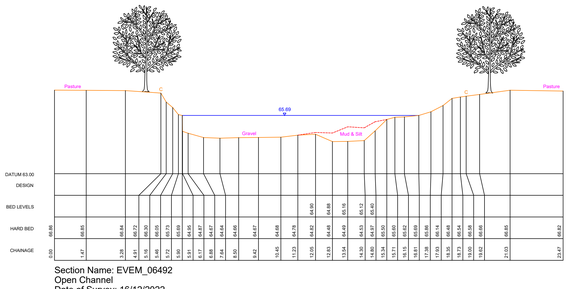
Section Name: EVEM_06686
Open Channel
Date of Survey: 15/12/2022
CH: 6686.129
E: 443985.34E
N: 214128.58N
BEARING 286



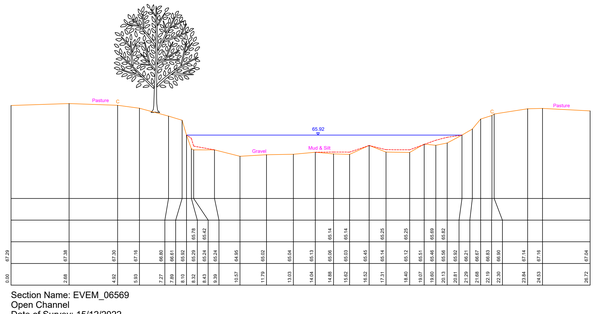
Section Name: EVEM_06815
Open Channel
Date of Survey: 16/12/2022
CH: 6815.228
E: 444021.66E
N: 214203.39N
BEARING 321



Section Name: EVEM_06432
Other Structure - Pipe Crossing
Date of Survey: 18/04/2023
CH: 6432.380
E: 443913.27E
N: 213962.62N
BEARING 266



Section Name: EVEM_06492
Open Channel
Date of Survey: 16/12/2022
CH: 6492.500
E: 443877.99E
N: 214011.54N
BEARING 267



Section Name: EVEM_06569
Open Channel
Date of Survey: 15/12/2022
CH: 6569.481
E: 443886.67E
N: 214052.41N
BEARING 334

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This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Any comments made regarding foundations are indicative only. Foundation requirements must be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing ground conditions, slopes, trees and proximity of drainage and services. Ground conditions should be investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction works and adequate space should be provided for growth from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

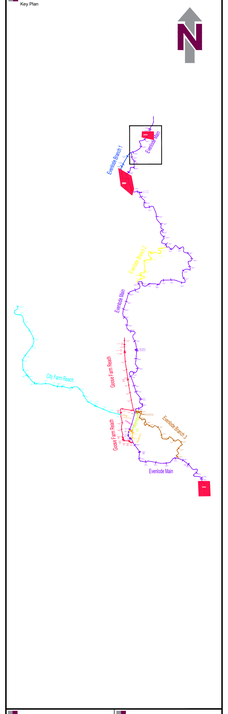
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and survey. Existing information shown is based on OS data & visual estimations of existing site levels. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. All information is indicative and need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACD	ACCESS CHANNEL DRAIN	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BE	ASSUMED INVERT	G	GULLY	RWP	RAIN WATER PIPE
BB	BOREHOLE	T	TOP OF KERB	RWG	RECORDED WELL
BH	BOREHOLE	GP	GUIDE POST	SB	SAND BOX
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SB	SHED SW
BP	BOUNDARY POST	GV	GAS VALVE	SL	SLOPE
B Pav	BLOCK PAVING	GC	GAS VALVE COVER	SL	SUPPLY LEVEL
BS	BUS STOP	HR	HEDGE ROW	SP	SOIL PIPE
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BT	BRITISH TELECOM COVER	K	KERB	SP	SOIL PIPE
BW	BRICK WALL	KR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWP	BARBED WIRE FENCE	KO	KERB OUTLET	SPR	SAMPLING POINT
CA	CONCRETE APRON	LA	LIGHTING COLUMN	SS	STONE SETT
CAN	CATHWAY LEVEL	LG	LOCK GATE	ST	STAND PIPE / SUPPLY TAP
CB	CONCRETE BASE	LP	LAMP POST	ST	STUMP
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (grt)	Stone Pav	STONE PAVING SLABS
CF	CONCRETE BLOCK FENCE	LW	LOSS OF REFLECTION (wht)	SW	STOP VALVE
CH	CHAMBER DEPTH	LP	LAMP POST	SWD	STAY POST
CL	CENTRE LINE	MH	MANHOLE	SWP	SWITCH POST
CP	CAST IRON	MH	MANHOLE	SW	STATHAM
CP	CONCRETE POINT	MP	MARKER POST	TB	TRIAL PIT
CL	COVER LEVEL	MP	MARKER POST	TW	STONE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
CM	CONCRETE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MV	ELECTRIC MOTOR	TBM	BOLLARD (Dual Transport)
CP	CONCRETE PAVING	NP	NOTICE BOARD POST	TBM	BOLLARD (Single Transport)
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDRENS PLAY EQUIPMENT	OA	OVERHEAD ADVERTISEMENT ARCH	TL	THRESHOLD LEVEL
Cpt	BUILDING CANOPY	OBM	OS BENCH MARK	TL	THRESHOLD LEVEL
Cpwr	CARPORT	OHC	OVERHEAD CONDUIT	TL	TRAFFIC SIGNAL POST
CS	CAST STONE	OHL	OVERHEAD LINES	TP	TELEGRAPH POLE
CV	CAR PARK / PICKUP	OHL	OVERHEAD ELECTRIC	TP	TELEPHONE PILLAR
CW	CONCRETE WALL	OHP	OVERHEAD PIPELINE	TP	TELEPHONE POST
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DOOR	P	PARKING METER	TR	TREE
DC	DUCT COVER	PAV	OVERHEAD AWNDOW	UTA	UNABLE TO ACCESS
DRN	DRAINAGE	PB	POST BOX	UTB	UNABLE TO BREACH
DRNG	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DW	DOORWAY	PC	PEDESTRIAN CAMERA	UTS	UNABLE TO SURVEY
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
E	ELECTRIC BOX	PL	PARKING LIGHT	VP	VENT PIPE / DETECTION POD
Eve	EAVES LEVEL	PR	PETROL POMP	WF	VENT PIPE
EC	ELECTRICITY COVER	PS	PARKING SENSOR	WB	WATER BOARD
EOT	END OF TRACE (utility)	Pnk	PINNACLE	WB	WIDOW BRIDGE
ER	ELECTRIC RISER	PV	PRIVATE VALVE	WC	WATER COURSE
ER	EARTH POST	PV	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pg	PEDESTRIAN GATE	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Rly	RAILWAY SIGNAL	WM	WATER MONITORING
FC	FLOOD/RECEIVER CHAMBER	RL	RAIN GAUGE	WP	WATER POST
FL	FLOOR LEVEL	RL	RAIN GAUGE	WS	WIND SOCK POLE
FL	FLOOR LEVEL (GF)	Rs	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FP	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Evenlode Main

Notes:

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Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction works and not damaged by excavations or by changes to soil from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

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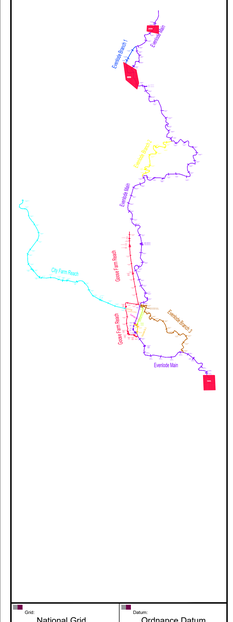
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	ACCESS COVER/ CHANNEL	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
B	ASSUMED NODE	G	GULLY	RWP	RAIN WATER PIPE
BB	BOREHOLE	GT	GULLY WITH GRATE	RWG	RECORDED WING
BH	BOREHOLES	GP	GUIDE POST	S	SOIL PIPE
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SB	SOIL BOARD
BP	BOUNDARY POST	GV	GAS VALVE	SW	SHED TOP
B Pav	BLOCK PAVING	GC	GAS VALVE COVER	SL	SUPPLY LEVEL
BS	BUS SHELTER	H	HEDGE	SP	SOIL VENT PIPE
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BW	BRICK WALL/ BELOW COVER	IP	IRON PIPE	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWP	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMPLING POINT
C	CENTRE LINE OF CARRIAGEWAY	LB	LETTER BOX	ST	STONE PITCHING
CA	CATHWAY LEVEL	LG	LOCK GATE	SV	STOP VALVE / SUPPLY TAP
CB	CONTROL BOX	LP	LAMP POST	T	TREE
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (ppr)	Stone Pav	STONE PAVING SLABS
CF	CHAIN LINK/ METAL FENCE	LW	LOW WALL/ KERB (with)	TB	TELE BOX
CO	CHAMBER (DEPTH)	LP	LAMP POST	UPD	STAY POST
CP	CONCRETE POST	MH	MANHOLE	UP	UTILITY POST
CP	CAST IRON	MH	MANHOLE	SW	STATHPIPE
CP	CONCRETE POINT	MP	MARKER POST	TC	TOP OF CUT
CL	COVER LEVEL	MP	MARKER POST	SW	STONE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	TP	TACTILE PAVING
CL	CLOSE	MP	MILE POST	TM	TEMPORARY BENCH MARK
Conc	CONCRETE	MP	ELECTRIC MAST/OR	TRM	BOLLARD (Post/ Transport)
CP	CONCRETE POST (RING	MP	MARKER POST/ MARKER	TSP	TRAFFIC SIGNAL POST
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDREN'S PLAY EQUIPMENT	OB	OVERHEAD BOUNDARY WIRES	TL	THRESHOLD LEVEL
Cpw	BUILDING CANOPY	OBB	OB BEACH Mark	TL	THRESHOLD LEVEL
Cpw	CANOPY	OC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CAST PILLAR	OC	OVERHEAD CABLES	TP	TELEPHONE POST
CP	CAR PARK PROGR	OHL	OVERHEAD ELECTRIC	TP	TELE/ DIS PLATE
CW	CONCRETE WALL	OHBeac	OVERHEAD BEACON	TP	TELEPHONE POINT
CW	CONCRETE WALL	OHStruc	OVERHEAD STRUCTURE	Tpl	TRIAL PIT
D	DITCH	OP	OVERHEAD POWER	TS	TRAFFIC SIGN
DC	DAFT CLOSE	OW	OVERHEAD WARNING	UTA	UNABLE TO ACCESS
DRN	DRAINAGE	P	POST	UTC	UNABLE TO CLOSE
DRNG	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DT	DITCH	PC	POST CONCRETE	UTL	UNABLE TO LOCATE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLOTH
DW	DRY WELL	PL	PIPE LEVEL	VP	VENT PIPE/ VENTILATION PAD
Ew	EAVES LEVEL	PR	PETROL PUMP	VP	VENT PIPE
EC	ELECTRICITY COVER	PS	PHONE SERVICE	WB	WATER BOARD
EOT	END OF TRACE (utility)	Pole	PENSTOCK	WB	WEIR BRIDGE
EP	ELECTRIC POST	PV	PETROL VENT PIPE	WC	WATER COURSE
ER	EARTH ROD	PV	PYLON	WL	WATER LEVEL
ES	ELECTRICITY SUPPLY POST	RB	RESIDENTIAL BIN	WM	WATER METER
ESP	ELECTRICITY SUPPLY POINT	Ring	RING MAIN	WPB	WATER PROTECTED
ETC	ELECTRICITY/CABLE CHAMBER	RL	RAIL LEVEL	WS	WATER SUPPLY
Fe	FENCE	RM	RAIN GAUGE	WS	WEIR SIDE PIECE
FL	FLOOR LEVEL	RL	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FFL	FINISHED FLOOR LEVEL	RMP	RIGHT OF WAY/ MONITORING Pnt		
Flg	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid: National Grid by GPS Observations to the OS Active Network (OSTN15)

Datum: Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

MAKING COMPLEX EASY

A TETRA TECH COMPANY

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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:

RPS Consulting UK & Ireland

PROJECT:

West Botley

TITLE:

River Cross Sections

Drawn: JP/DR/MV/SB/RR/CPH/JE/LB	Checked: CA
Date: May 2023	Scale: 1:1250 @ A0
Org No: UA53692_B	Sheet: 11 of 23

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Evenlode Main

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Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction works by barriers and ground boards to prevent damage from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

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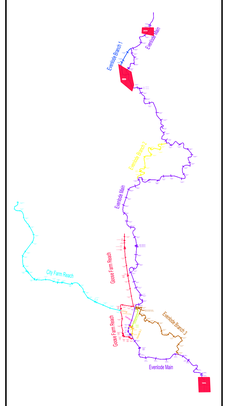
Standard Abbreviations

ACO	ACCESS CHANNEL	FLR	FLAT RIDGE LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BB	ASSUMED INVERT	G	GULLY	RWP	RAIN WATER PIPE
BH	BOREHOLE	GT	GULLY GRATE POINT	RWG	RECTANGULAR WAG
BS	BENCHMARK	GP	GUIDE POST	SB	SIGN BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SW	SHED TEP
BP	BOUNDARY POST	GV	GAS VALVE	SL	SLOPE LEVEL
B Pag	BUTAN PIPING	GV	GAS VALVE COVER	SL	SUPPLY LEVEL
BT	BRITISH TELECOM	HR	HANDRAIL	SM	SERVICE MARKER
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BTC	BRITISH TELECOM COVER	IL	INVERT LEVEL	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMELING POINT
CAT	CATHODIC PROTECTION	LB	LETTER BOX	SS	SOIL VENT PIPE
CP	CATHWAY LEVEL	LG	LOCK GATE	ST	STAND PIPE / SUPPLY TAP
CB	CONTROL BOX	LP	LAMP POST	SV	STOP VALVE
CF	CHAIN LINK FENCE	LOR	LOSS OF REFLECTION (gpr)	Stone Pv	STONE PAVING SLABS
CC	CHAMBER CENTRE	LT	LOSS OF REFLECTION (with	SW	STREAM
CI	CHAMBER INVERT	LP	LAMP POST	SPD	STAY POST
CL	CAST IRON	MH	MANHOLE	STR	STRUCTURE
CP	CAST IRON POINT	MP	MARKER POST	SW	STYLE/PIKE
CL	COVER LEVEL	MP	MARKER POST	SR	STONE WALL
CL	CHAIN LINK FENCE	MF	MILE POST	Tac	TACTILE PAVING
CL	CABLE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MP	ELECTRIC MAST OR	TBM	BOLLARD (Rail Transport)
CW	CONCRETE WALLING	NP	NAME PLATE OR POST	TBM	TEMPORARY BENCH MARK
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDRENS PLAY EQUIPMENT	OHW	OVERHEAD ELECTRICITY WIRES	TL	TOP LEVEL
Cott	BUILDING CANOPY	OWB	OB BRICK Inside	TL	THRESHOLD LEVEL
Open	CANOPY/on	OSC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CAR PARKING	OSC	OVERGROUND CONDUIT	TP	TELEGRAPH POLE
CP	CAR STAND	OHL	OVERHEAD ELECTRIC	TP	TOP OF KERB AT LEVEL
CW	CONCRETE RKCASH	OHL	OVERHEAD ELECTRIC	TP	TOP OF KERB AT LEVEL
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
CC	CAT CCVE	PC	OVERHEAD CABLE	TS	TRAFFIC SIGN
CC	CAT CCVE	(Pm)	OVERHEAD MARKERN	U1A	UNABLE TO ACCESS
(dRM)	DRAINAGE	PB	POST BOX	U1B	UNABLE TO ACCESS
(dRM)	DILAPIDATED	PB	POST BOX	U1N	UNABLE TO RAISE
DC	DRAIN CAP	PC	PEDESTRIAN CAMERA	U1T	UNABLE TO TRACE
DPC	DAMP PROOF COURSE	Pxg	PEDESTRIAN CROSSING	U1T	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	UC	UTHREED CLAY
DS	DIRECTION SIGN	PC	PETROL CAP	UC	UNDER CONSTRUCTION PAD
Ew	EAVES LEVEL	PP	PETROL PUMP	VP	VENT PIPE
EJT	EXPANSION JOINT	PF	PEDESTRIAN REFUGE	WB	WATER BOARD
EJT	END OF TRACE (utility	Pnt	PENSTOCK	WB	MAJOR BRIDGE
EP	ELECTRIC POST	PL	PLANTING AREA	WC	WATER COURSE
ER	EARTHED	PV	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pxg	PEDESTRIAN	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	RL	RAIL LEVEL	WM	WIRE MESH FENCE
FL	FLOOD/RECEIVE CHAMBERS	RL	RAIN GAUGE	WO	WATER OUTLET
FL	FLOOR (LEVEL)	RL	RIDGE LEVEL	WS	WIND SOCK POLE
FL	FLOOR/RECEIVE LEVEL	RMP	RADIO MONITORING Pnt	WSR	WATER LEVEL SENSOR
Fig	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:
National Grid by GPS Observations to the OS Active Network (OSTN15)

Datum:
Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

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T: 0800 917 8227 E: rps.survey@rpsgroup.com www.rpsgroup.com
Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:

RPS Consulting
UK & Ireland

PROJECT:

West Botley

TITLE:

River Cross Sections

Drawn: JP/DR/MV/SB/RR/CPH/JE/LB	Checked: CA
Date: May 2023	Scale: 1:1250 @ A0
Org No: UAR9692_B	Sheet: 12 of 23

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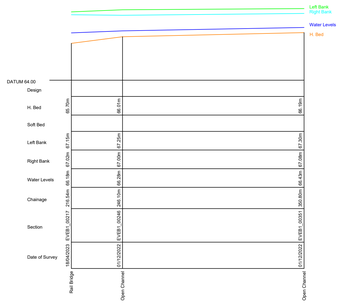
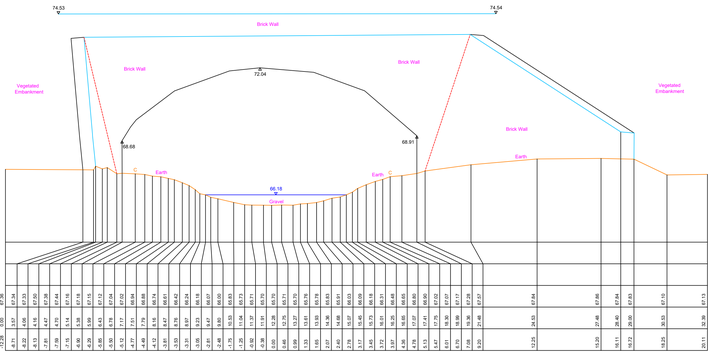
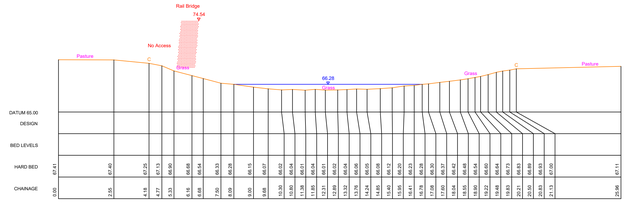


Long Section Horizontal Scale 1:1250
Long Section Vertical Scale 1:100

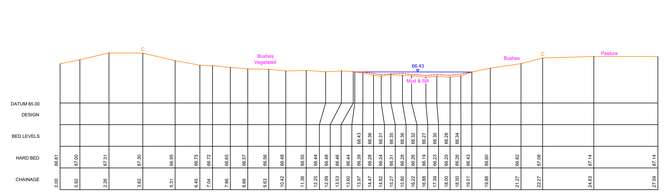
Evenlode Branch 1



Section Name: EVEB1_00217
Rail Bridge
Date of Survey: 18/04/2023
CH: 216.536
E: 443759.97E
N: 213893.22N
BEARING 310



Section Name: EVEB1_00246
Open Channel
Date of Survey: 01/12/2022
CH: 246.104
E: 443775.38E
N: 213917.68N
BEARING 311



Section Name: EVEB1_00351
Open Channel
Date of Survey: 01/12/2022
CH: 350.801
E: 443826.21E
N: 214012.64N
BEARING 300

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Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Investigated by the Contractor. A suitable method of foundation is to be provided to accommodate the from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

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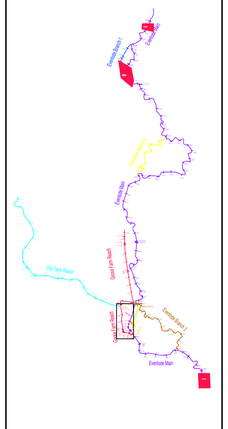
Standard Abbreviations

ACO	ACO CHANNEL/ CHANNEL DRAIN	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BE	ASSUMED INVERT	FL	FLOOR LEVEL	RWP	RAIN WATER PIPE
BB	BOREHOLE	G	GULLY	RWG	RECTANGULAR WAG
Bh	BOLLARD	GP	GAS GUARD POST	SB	SOIL BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SB	SOIL BOX
BP	BOUNDARY POST	GV	GAS VALVE	SE	SOIL STACK
B Pag	BUSH PLANG	GV	GAS VALVE COVER	SL	SLOPE LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SP	SETTLEMENT PLATE
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BW	BRICK WALL/ BLOCK WORK	IP	IRON PIPE	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spt Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMPLING POINT
CA	CARRIAGEWAY CENTRE	LA	LOCAL AUTH	SS	SOIL STACK PIPE
CAP	CATHWAY LEVEL	LG	LOCK GATE	ST	STUMP
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pav	STONE PAVING SLABS
CF	CHAIN LINK FENCE	LP	LAMP POST (with)	STP	STOP POST
CI	CHAMBER DEPTH	LP	LAMP POST	SPO	STAY POST
CL	CABLE	MH	MANHOLE	STR	STRUT
CP	CAST IRON	MH	MANHOLE	STW	STATIONS
CP	CONCRETE POST	MP	MARKER POST	SW	STOP VALVE
CL	COVER LEVEL	MP	MARKER POST	SW	STONE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Con	CONCRETE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	ELECTRIC METER	TBM	BOLLARD (Rail Transport)
CP	CATCHPIT	NP	NAME PLATE	TBM	TEMPORARY BENCH MARK
CP	CONCRETE POST	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDREN'S PLAY EQUIPMENT	OA	OPEN AMENITY/PLAY AREA	TL	TRAFFIC LIGHTS
Cpt	BUILDING CANOPY	OBM	OS BENCH MARK	TL	TIMEBOUS LEVEL
Cpw	CARPARK	OHC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CS	CONCRETE SET	OHL	OVERHEAD CABLES	TP	TELEGRAPH POST
CT	CABLE TV	OHL	OVERHEAD ELECTRIC	TVP	TELEVISION PLATE
CW	CONCRETE WALL	OHL	OVERHEAD LINE	TW	TRIAL WELL
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	TW	TRIAL PIT
D	DRAIN	OP	OVERHEAD POWER	UC	UNKNOWN
DC	DUCT COVER	OVH	OVERHEAD VANTOPIN	UTA	UNABLE TO ACCESS
DP	DOWN PIPE	P	PIPE	UTC	UNABLE TO CLEAN
DRN2	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DP	DOWN PIPE	PC	POST CONCRETE	UTL	UNABLE TO LOCATE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DW	DRAIN WELL	PM	PARKING METER	VP	VENT PIPE/ DETECTION PAD
Ent	EAVES LEVEL	PR	PETROL POMP	VP	VENT PIPE
EOT	END OF TRACK (rail)	Pst	PEDESTRIAN PUSH	WB	WATER BOARD
EOT	END OF TRACK (rail)	Pst	PENSTOCK	WB	WEIGH BRIDGE
EP	ELECTRIC POST	PV	PRIVATE VALVE	WC	WATER COURSE
ER	EARTH ROD	PV	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pag	PEDESTRIAN	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Pag	PEDESTRIAN GATE	WMH	WATER MAIN HYDRANT
EV	ELECTRICITY VAULT/ CHAMBER	RE	RAIN GAUGE	WP	WIRE POST/ FENCE
F	FOOTBRIDGE	RG	RAIN GAUGE	WS	WHEELWASH PADS
FL	FLOOR LEVEL	RL	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FLC	FINISHED FLOOR LEVEL	RM	RADAR MONITORING Pnt		
Flg	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid: National Grid by GPS Observations to the OS Active Network (OSTN15)

Datum: Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

MAKING COMPLEX EASY

A TETRA TECH COMPANY

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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:

RPS Consulting
UK & Ireland

PROJECT:

West Botley

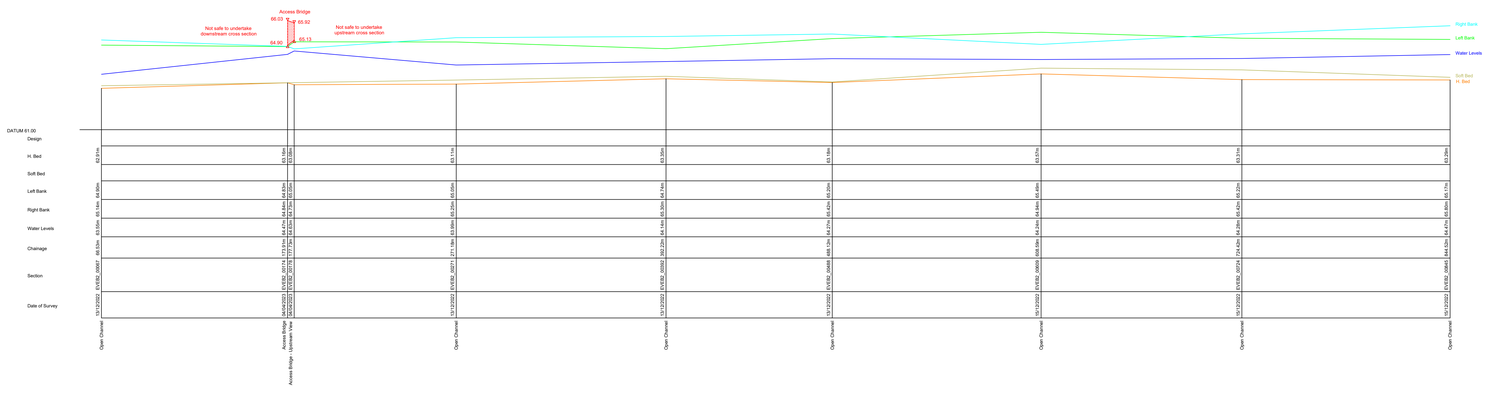
TITLE:

River Cross Sections

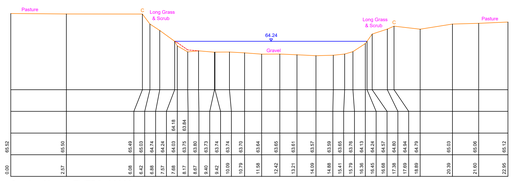
Drawn: JP/DR/MV/SB/RR/CPH/JE/LB	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Org No: UAR3692_B	Sheet: 13 of 23

MAKING COMPLEX EASY

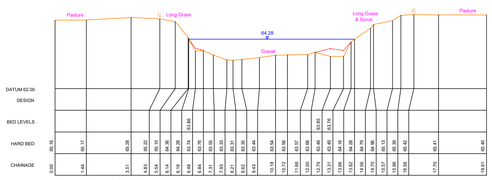
Evenlode Branch 2



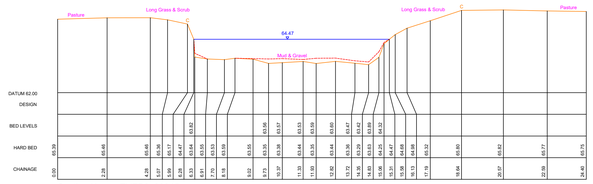
Long Section Horizontal Scale 1:1250
Long Section Vertical Scale 1:100



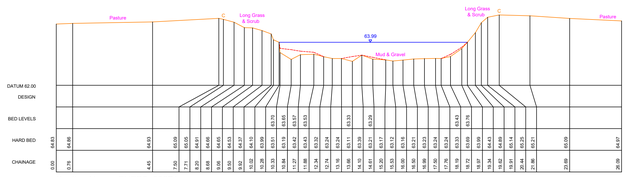
Section Name: EVEB2_00609
Open Channel
Date of Survey: 15/12/2022
CH: 608.593
E: 444077.16E
N: 212896.26N
BEARING 043



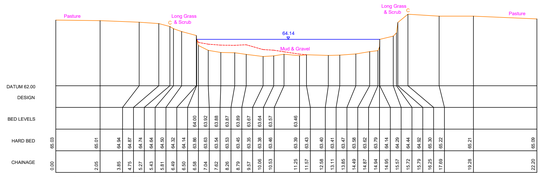
Section Name: EVEB2_00724
Open Channel
Date of Survey: 15/12/2022
CH: 724.423
E: 444188.48E
N: 212886.56N
BEARING 358



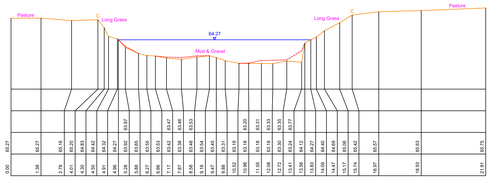
Section Name: EVEB2_00845
Open Channel
Date of Survey: 15/12/2022
CH: 844.521
E: 444208.59E
N: 212944.74N
BEARING 004



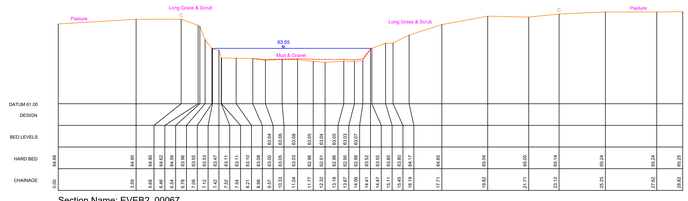
Section Name: EVEB2_00271
Open Channel
Date of Survey: 13/12/2022
CH: 271.180
E: 444027.76E
N: 212690.10N
BEARING 278



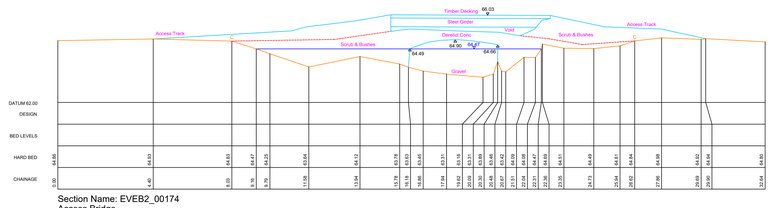
Section Name: EVEB2_00392
Open Channel
Date of Survey: 13/12/2022
CH: 392.215
E: 444022.18E
N: 212807.11N
BEARING 289



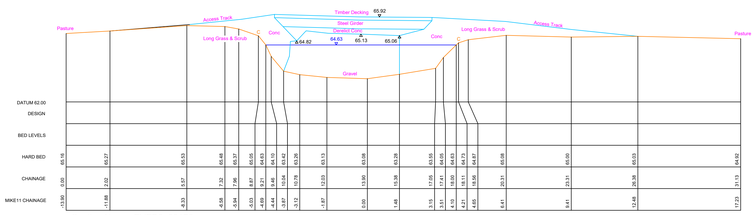
Section Name: EVEB2_00488
Open Channel
Date of Survey: 13/12/2022
CH: 488.123
E: 444099.10E
N: 212841.64N
BEARING 264



Section Name: EVEB2_00067
Open Channel
Date of Survey: 13/12/2022
CH: 66.532
E: 443970.74E
N: 212591.35N
BEARING 346



Section Name: EVEB2_00174
Access Bridge
Date of Survey: 04/04/2023
CH: 173.912
E: 443981.67E
N: 212655.16N
BEARING 242



Section Name: EVEB2_00178
Access Bridge - Upstream View
Date of Survey: 04/04/2023
CH: 177.726
E: 443974.67E
N: 212655.83N
BEARING 241

Notes:

This drawing and the building works depicted are the copyright of RPS and may not be reproduced or amended except by written permission. No liability will be accepted for amendments made by other persons.

The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. This drawing is to be read in conjunction with all relevant Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Any trees shown are indicative only. Where trees are to be retained they should be subject to a full investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing trees and proposed trees. Foundations should be designed by a structural engineer and should be investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees to be felled should be removed by a competent tree surgeon and the roots should be grubbed out to 1m from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

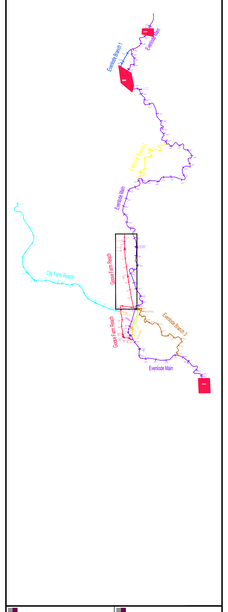
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and design. Sketch proposals are based upon an OS map & site visit observations only. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. All proposals need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

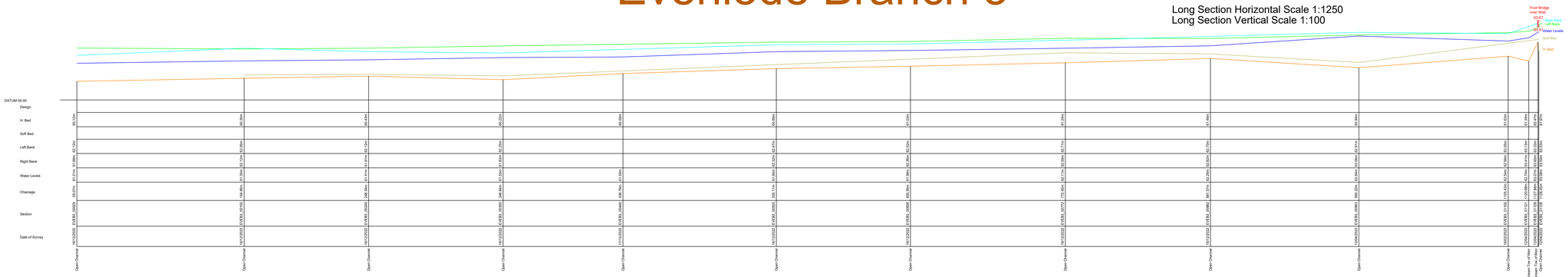
ACD	ACCESS CHANNEL	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
ASS	ASSUMED INVERT	FL	FLAG POLE	RWP	RAIN WATER PIPE
BB	BOREHOLE	G	GULLY	RWG	RECTANGULAR WAG
BH	BOREHOLE	GP	GUARD POST / POINT	SB	SAMPLE BOREHOLE
BO	BOLLARD	GR	GUIDE POST	SE	SIGN BOARD
BP	BOLLARD POST	GPR	GROUND PROBING RADAR	SW	SHED TEP
BT Pot	BT POT	GV	GAS VALVE	SL	SLOPE LEVEL
BT Pip	BLOCK PAVING	GC	GAS VALVE COVER	SL	SUPPLY LEVEL
BS	BUS STOP	H	HEDGE	SM	SETTLEMENT MARKER
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BSC	BRICK SCREEN / SCREEN COVER	IL	INVERT LEVEL	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMPLING POINT
CAB	CABLE BOX / CABINET	LG	LOCAL GATE	SS	SOIL SAMPLE
CAT	CATENARY LEVEL	LG	LOCK GATE	ST	STAIRS
CB	CONTROL BOX	LP	LAMP POST	ST	STOP PIPE / SUPPLY TAP
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pav	STONE PAVING SLABS
CF	CHAIN LINK FENCE	LT	LIGHTING (with 'unit')	SV	STOP VALVE
CO	CHAMBER DEPTH	LP	LAMP POST	SPO	STAY POST
CP	CAR PARK	MH	MANHOLE	SW	STEPS
CP	CAST IRON	MH	MANHOLE	SW	STATHAM
CP	CAST IRON POINT	MP	MARKER POST	SW	STOP VALVE
CL	COVER LEVEL	MP	MARKER POST	SW	STONE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
CL	CLOSE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	ELECTRIC MOTOR	TBM	BOLLARD (Post Transport)
CP	CONCRETE PAVING	NP	NOTICE BOARD POST	TBM	TEMPORARY BENCH MARK
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
Cpe	CHILDREN'S PLAY EQUIPMENT	OHW	OVERHEAD TELEGRAPH WIREA	TL	TRENCH LEVEL
Cpe	BUILDING CANOPY	OSBM	OS BENCH MARK	TL	THRESHOLD LEVEL
Cpe	CANOPY	OSC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CAR PARK	OSC	OVERGROUND CABLE	TP	TELEGRAPH POLE
CP	CAR PARK / PICNIC	OHL	OVERHEAD ELECTRIC	TP	TELEGRAPH POLE
CW	CONCRETE WALL	OHL	OVERHEAD LINE	TP	TELEPHONE POLE
CW	CONCRETE WALL	OHStruc	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DOOR	P	POST / PILLAR	TS	TRAFFIC SIGN
DC	DUCT COVER	PHV	OVERHEAD HANDRAIL	UTA	UNABLE TO ACCESS
DRN	DRAINAGE	PI	PIT INSPECTION	UTA	UNABLE TO ACCESS
DRNG	GALVANISED	PB	POST BOX	UTR	UNABLE TO RAISE
DRN	DRAINAGE	PC	PEDESTRIAN CAMERA	UTR	UNABLE TO RAISE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	UC	UTHREED CLECTR
DS	DIRECTION SIGN	PP	PHOTO POINT	UC	UNDERGROUND ELECTRON PAD
Ent	EAVES LEVEL	PL	PETROL PUMP	VP	VENT PIPE
EOT	END OF TRACK (gpr)	PL	PETROL STORAGE	WB	WATER BOARD
EOT	END OF TRACK (utility)	Pnt	PENSTOCK	WB	WEIGH BRIDGE
ES	ELECTRIC SIGN	PV	PETROL VENT PIPE	WL	WATER LEVEL
ER	EARTH ROD	PV	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pg	PEDGEMETER	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	RL	RAIL LEVEL	WM	WATER METER FENCE
FC	FOOTBRIDGE CLEARANCE	RL	RAIN GAUGE	WS	WHEELWASH SLAB
FL	FLOOR LEVEL	RL	RIDGE LEVEL	WS	WHEELWASH SYSTEM
FLP	FLOOR LEVEL PROTECTION LEVEL	RMP	REFLECTOR MONITORING Pnt	WSR	WATER LEVEL SENSOR
FLP	FLOOR LIGHT	RP	REFLECTOR POST		

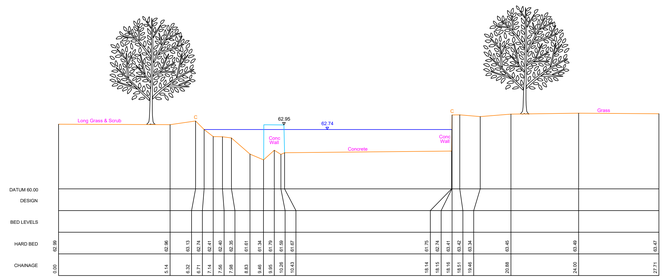
Key Plan



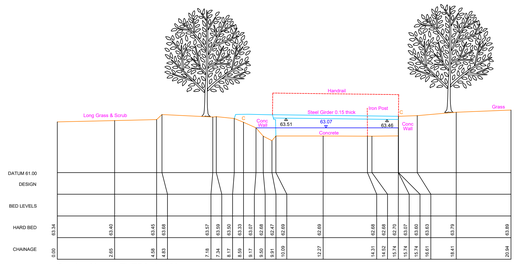
Evenlode Branch 3

Long Section Horizontal Scale 1:1250
Long Section Vertical Scale 1:100

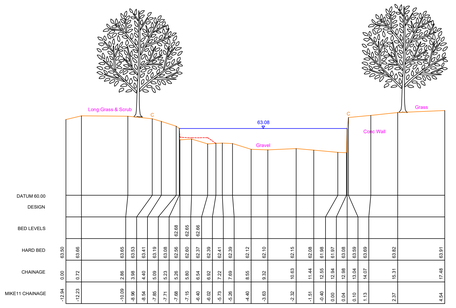




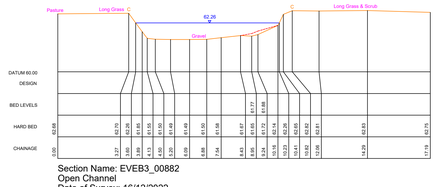
Section Name: EVEB3_01121
Upstream Toe of Weir
Date of Survey: 12/04/2023
CH: 1120.876
E: 443924.78E
N: 211084.54N
BEARING 185



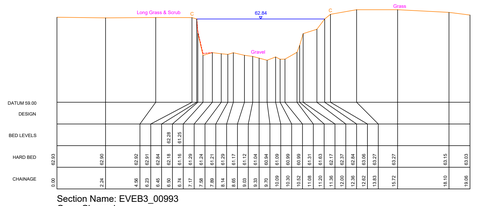
Section Name: EVEB3_01128
Upstream Toe of Weir
Date of Survey: 12/04/2023
CH: 1127.856
E: 443918.43E
N: 211084.38N
BEARING 187



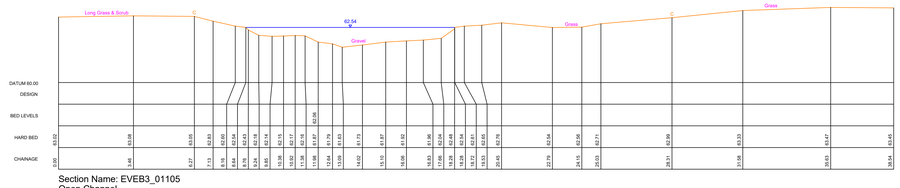
Section Name: EVEB3_01129
Open Channel
Date of Survey: 12/04/2023
CH: 1128.446
E: 443917.29E
N: 211081.13N
BEARING 187



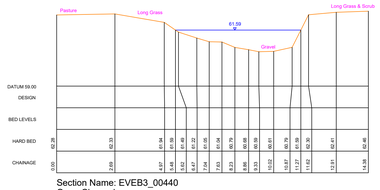
Section Name: EVEB3_00882
Open Channel
Date of Survey: 16/12/2022
CH: 881.567
E: 444028.78E
N: 210949.26N
BEARING 289



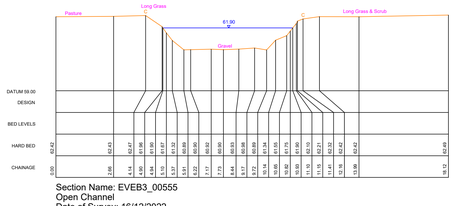
Section Name: EVEB3_00993
Open Channel
Date of Survey: 12/04/2023
CH: 993.222
E: 443963.64E
N: 210998.04N
BEARING 296



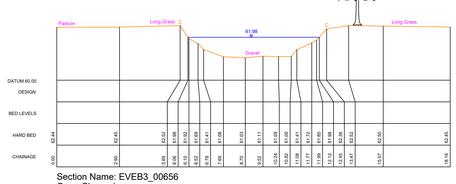
Section Name: EVEB3_01105
Open Channel
Date of Survey: 16/02/2023
CH: 1105.427
E: 443942.41E
N: 211084.72N
BEARING 195



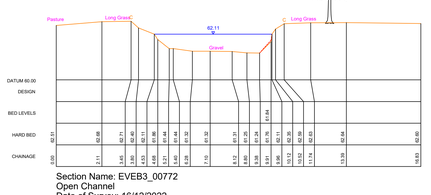
Section Name: EVEB3_00440
Open Channel
Date of Survey: 17/12/2022
CH: 439.785
E: 444277.72E
N: 210764.53N
BEARING 112



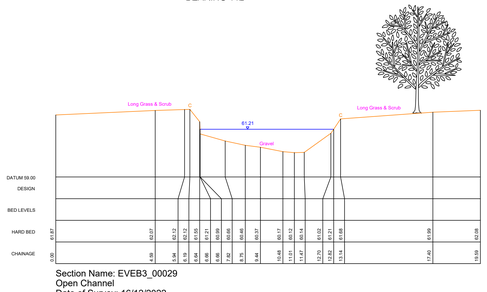
Section Name: EVEB3_00555
Open Channel
Date of Survey: 16/12/2022
CH: 555.106
E: 444214.73E
N: 210805.72N
BEARING 247



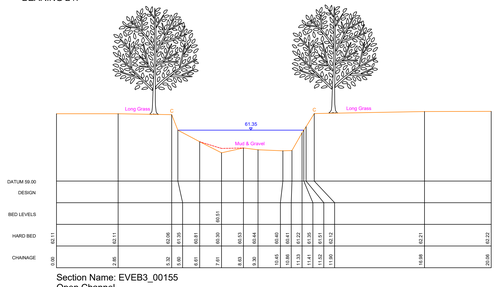
Section Name: EVEB3_00656
Open Channel
Date of Survey: 16/12/2022
CH: 655.955
E: 444170.99E
N: 210900.65N
BEARING 215



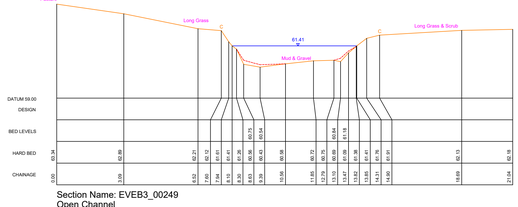
Section Name: EVEB3_00772
Open Channel
Date of Survey: 16/12/2022
CH: 772.417
E: 444069.51E
N: 210916.84N
BEARING 208



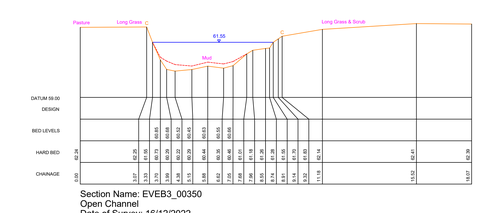
Section Name: EVEB3_00029
Open Channel
Date of Survey: 16/12/2022
CH: 29.073
E: 444397.36E
N: 210558.44N
BEARING 242



Section Name: EVEB3_00155
Open Channel
Date of Survey: 16/12/2022
CH: 154.850
E: 444411.30E
N: 210642.50N
BEARING 314



Section Name: EVEB3_00249
Open Channel
Date of Survey: 16/12/2022
CH: 248.541
E: 444441.64E
N: 210728.09N
BEARING 236



Section Name: EVEB3_00350
Open Channel
Date of Survey: 16/12/2022
CH: 349.645
E: 444353.88E
N: 210746.44N
BEARING 227

Notes:

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The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. This drawing is to be read in conjunction with all relevant Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Where trees are to be retained, adequate precautions to avoid damage to roots and foundations must be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing trees and proposed trees. Foundations should be designed by a suitably qualified engineer and should be investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction works by barriers and/or ground boards to prevent damage from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

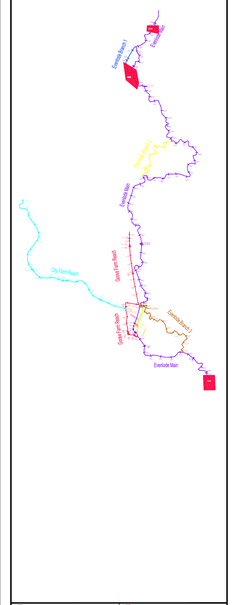
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and survey. Existing underground services are shown for guidance only and their accuracy cannot be relied upon. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. Accurate dimensions need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	ACCESS CHANNEL COVER	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
AB	ASSUMED BOLTS	G	GULLY	RWP	RAIN WATER PIPE
BH	BOREHOLE	T	GULLY TOP	RWG	RECTANGULAR WAG
BH	BOREHOLES	GP	GUY WIRE POST	SB	SAMPLE BORE
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SB	SAND BOX
BP	BOUNDARY POST	GV	GAS VALVE	SP	SAND PIT
BV Pit	BUTAN PIT/VALVE	GV	GAS VALVE COVER	SL	SLOPE LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SP	SOIL VENT PIPE
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BW	BRICK WALL	IL	IRON RAILING	SP	SPOT LEVEL
BWP	BARBED WIRE FENCE	IW	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWP	BARBED WIRE FENCE	KO	KERB OUTLET	SPR	SAMPLING POINT
CP	CATHODIC PROTECTION	LG	LAMP GATE	SV	STOP VALVE
CL	CATENARY LEVEL	LG	LOCK GATE	ST	STOP VALVE
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pvg	STONE PAVING SLABS
CF	CHAINLINK FENCE	LW	LOW RAILING (with)	SW	STREET LIGHT
CO	CHAMBER DEPTH	LP	LAMP POST	SPO	STAY POST
CL	CABLE LEVEL	MH	MANHOLE	SW	STAY WIRE
CP	CAST IRON	MH	MANHOLE	SW	STAYWIRE
CP	CATHODIC POINT	MP	MARKER POST	TP	TEST PIT
CL	COVER LEVEL	MP	MARKER POST	TW	STONE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
CP	CONCRETE	MP	MILE POST	TM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	EXISTING MAST/UP	TBM	BOLLARD (Peak Transport)
CP	CONCRETE POSTS (fencing)	NP	NAME PLATE	TBM	TEMPORARY BENCH MARK
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDREN'S PLAY EQUIPMENT	OA	OVERHEAD ADVERTISEMENT AREA	TL	TRAFFIC LIGHTS
CP	BUILDING CANOPY	OAM	OS BENCH MARK	TL	THRESHOLD LEVEL
Cable	CAPSTAN	OC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CP	CONCRETE POST	OD	OVERHEAD DUCTING	TP	TELEPHONE POST
CL	CABLE LEVEL	OEL	OVERHEAD ELECTRIC	TP	TOP OF BANK (FLUP)
CP	CONCRETE POST	OEL	OVERHEAD ELECTRIC	TP	TOP OF BANK (FLUP)
CW	CONCRETE WALL	OHStruc	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DRAIN	OL	OVERHEAD LINES	TS	TRAFFIC SIGN
DV	DATT CLOCK	OW	OVERHEAD WARNING	U/S	UNABLE TO ACCESS
DP	DRAINAGE POINT	P	PIPE	U/S	UNABLE TO ACCESS
DRN0	DILAPIDATED	PB	POST BOX	U/S	UNABLE TO RAISE
DP	DRAIN POINT	PC	PEDESTRIAN CAMERA	U/S	UNABLE TO RAISE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	U/T	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	UC	UTILITIES COVER
DS	DIRECTION SIGN	PO	PARKING METER	VP	VENT PIPE (SEWER PIPE)
Dw	DAVES LEVEL	PP	PETROL PUMP	VP	VENT PIPE
EOT	END OF TRACK (rail)	PP	PHOTOGRAPHIC POINT	WB	WATER BOARD
EOT	END OF TRACK (utility)	Pnt	PENSTOCK	WB	WEIGH BRIDGE
EP	ELECTRIC POST	PL	PLANTING AREA (PE)	WC	WATER COURSE
ER	EARTH ROD	PU	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	RP	RECESSED PIPE	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Rly	RAILWAY LINE	WM	WATER METER FENCE
FC	FLOOD/DRAINAGE CHAMBER	RL	RAIN LEVEL	WP	WATER POLO POST
FL	FLOOR (LEVEL)	RL	RAIN GAUGE	WP	WING NOTA POST
FL	FINISHED FLOOR LEVEL	Ris	RISING LEVEL	WSR	WATER LEVEL SENSOR
FL	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



GRE: National Grid by GPS Observations to the OS Active Network (OSTN15)	Datum: Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision	Amendments	Date	Name
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

MAKING COMPLEX EASY
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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire. ST18 9AB

CLIENT:
RPS Consulting
UK & Ireland

PROJECT:
West Botley

TITLE:
River Cross Sections

Drawn: JP/DRM/VSB/RR/CPH/JE/LB	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Drg No: UAR3662_B	Sheet: 15 of 23

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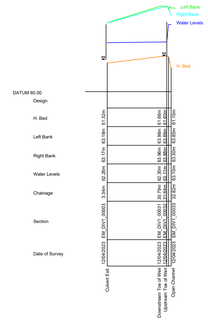
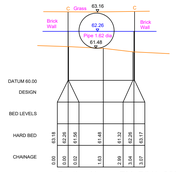
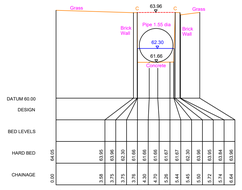
Evenlode Div 1



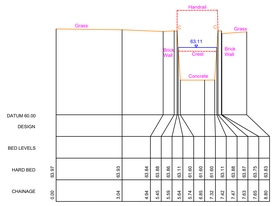
Long Section Horizontal Scale 1:1250
Long Section Vertical Scale 1:100



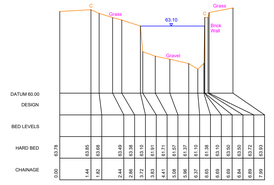
Section Name: EM_DIV1_00003
Culvert Exit
Date of Survey: 12/04/2023
CH: 3.342
E: 443867.35E
N: 210848.56N
BEARING 193



Section Name: EM_DIV1_00031
Downstream Toe of Weir
Date of Survey: 12/04/2023
CH: 30.788
E: 443848.19E
N: 210867.80N
BEARING 216

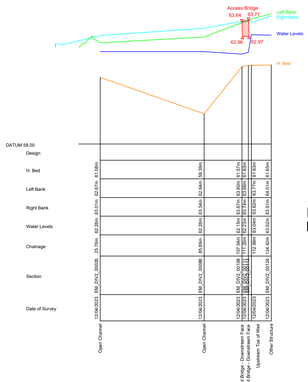


Section Name: EM_DIV1_00032
Upstream Toe of Weir
Date of Survey: 12/04/2023
CH: 31.636
E: 443848.81E
N: 210869.76N
BEARING 218

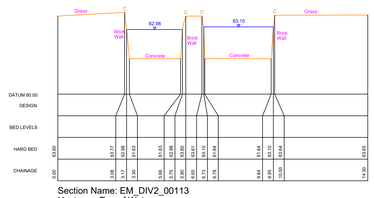


Section Name: EM_DIV1_00033
Open Channel
Date of Survey: 12/04/2023
CH: 32.822
E: 443845.95E
N: 210870.26N
BEARING 203

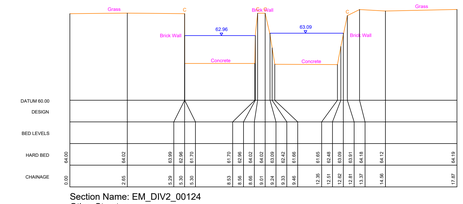
Evenlode Div 2



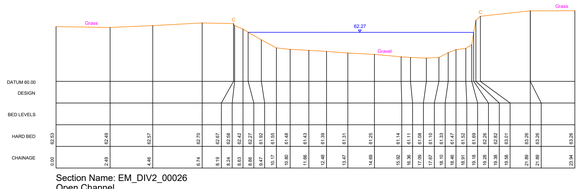
Long Section Horizontal Scale 1:1250
Long Section Vertical Scale 1:100



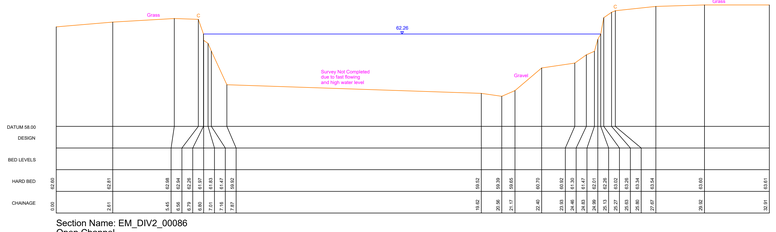
Section Name: EM_DIV2_00113
Upstream Toe of Weir
Date of Survey: 12/04/2023
CH: 112.987
E: 443858.99E
N: 210853.34N
BEARING 203



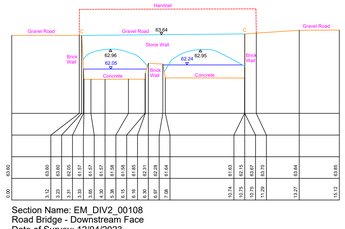
Section Name: EM_DIV2_00124
Other Structure
Date of Survey: 12/04/2023
CH: 124.422
E: 443849.09E
N: 210859.65N
BEARING 202



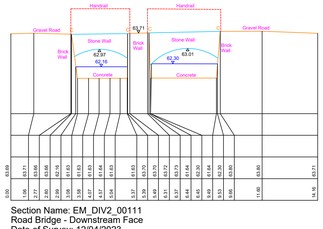
Section Name: EM_DIV2_00026
Open Channel
Date of Survey: 12/04/2023
CH: 25.757
E: 443879.81E
N: 210770.40N
BEARING 264



Section Name: EM_DIV2_00086
Open Channel
Date of Survey: 12/04/2023
CH: 85.688
E: 443889.56E
N: 210833.68N
BEARING 250



Section Name: EM_DIV2_00108
Road Bridge - Downstream Face
Date of Survey: 12/04/2023
CH: 107.545
E: 443863.03E
N: 210850.27N
BEARING 200



Section Name: EM_DIV2_00111
Road Bridge - Downstream Face
Date of Survey: 12/04/2023
CH: 111.198
E: 443860.03E
N: 210852.27N
BEARING 200

Notes:

The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. This drawing is to be read in conjunction with all relevant Statutory Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Any trees shown are indicative only. Where trees are to be retained they should be subject to a full investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing trees and proposed trees. Where trees are to be removed the stump and roots should be fully investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Where trees are to be retained adequate protection should be provided to the root protection area from damage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

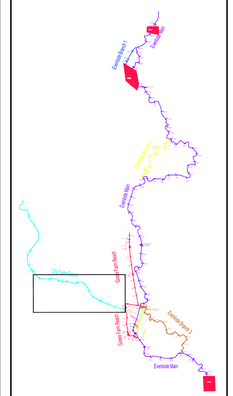
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and survey. Sketch proposals should not be relied upon for the purposes of entering into contracts. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. Proposals will need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	ACCESS CHANNEL	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BB	ASSUMED ROOTS	G	GULLY	RWP	RAIN WATER PIPE
BE	BOTTOM EDGE	GT	GULLY GRATE / FONT	RWG	RECORDED WING
BH	BOREHOLE	GP	GUIDE POST	SB	SAND BAG
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SB	SAND BOARD
BP	BOUNDARY POST	GV	GAS VALVE	SW	SHED TRY
BTap	BLOCK PAVING	GC	GAS VALVE COVER	SL	SLOPE LEVEL
BW	BOUNDARY WALL	HR	HEDGE ROW	SV	SLOTTY LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BSH	BUTTERFLY SHOW COVER	IP	IRON PIPE	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWP	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMPLING POINT
CA	CARRIAGEWAY CENTRE	LA	LAMP COLUMN	SS	SOIL VENT PIPE
CAP	CATHWAY LEVEL	LG	LOCK GATE	ST	STAIRS
CB	CONTROL BOX	LP	LAMP POST	SV	STOP VALVE
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (grt)	Stone Pvg	STONE PAVING SLABS
CF	CHAIN LINK FENCE	LW	LOSS OF REFLECTION (wtr)	SW	STORM WATER
CI	CHAMBER (DEPTH)	LP	LAMP POST	SPO	STAY POST
CL	CABLE LINK	MH	MANHOLE	SW	STOPWAY
CP	CAST IRON	MH	MANHOLE	SW	STOPWIRE
CP	CONCRETE POST	MP	MARKER POST	TA	TRAFFIC ARM
CL	COVER LEVEL	MP	MARKER POST	TW	STONE WALL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Con	CONCRETE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	EXISTING MOTOR	TBM	ROLLAPAK (Asphalt)
CS	CONCRETE SURROUND	NP	NAME PLATE	TBM	TEMPORARY BENCH MARK
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDRENS PLAY EQUIPMENT	OA	OVERHEAD ADVERTISEMENT ARCH	TL	TRAFFIC LIGHTS
Cpy	BUILDING CANOPY	OABB	OS BENCH MARK	TL	THRESHOLD LEVEL
Cpw	CARPORT	OHC	OVERHEAD CONDUIT	TL	TRAFFIC SIGNAL POST
CS	CABLE STAY	OHL	OVERHEAD LINES	TP	TRIAL PIT
CT	CABLE TV	OHL	OVERHEAD ELECTRIC	TP	TRIAL PIT
CTP	CABLE TRACK / PICKUP	OHL	OVERHEAD LINES	TP	TRIAL PIT
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DOOR	OL	OVERHEAD LINES	TS	TOE STAKE
DC	DUCT COVER	OHV	OVERHEAD VANTERN	UTA	UNABLE TO ACCESS
DP	DRAINAGE POINT	P	PIPE	UTC	UNABLE TO CONNECT
DRM2	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DRM	DRAIN	PC	PEDESTRIAN CAMERA	UTL	UNABLE TO LOCATE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DW	DRAIN WELL	PP	PHOTO POINT	VC	VITRIFIED SECTION PAD
Dw	DAVES LEVEL	PR	PETROL PUMP	VP	VENT PIPE
EOT	END OF TRACK (bank)	Pol	POLICE BOX	WC	WATER COURSE
EOT	END OF TRACK (other)	Pot	PENSTOCK	WB	WEIGH BRIDGE
ES	ELECTRIC SIGN	PV	PRESSURE VALVE	WG	WATER GAUGE
ER	EARTH ROD	PU	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pg	PEDGEMETER	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Pg	PEDGEMETER	WMP	WATER MONITORING
FC	FLOOD CONTROLLED CHAMBER	RL	RAIN GAUGE	WS	WIND SOCK POLE
FL	FLOOR (LEVEL)	Rs	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FL	FINISHED FLOOR LEVEL	RMP	RAIN MONITORING Pnt		
Flg	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:	Datum:
National Grid by GPS Observations to the OS Active Network (OSTN15)	Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

MAKING COMPLEX EASY
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T: 0800 917 8227 E: rps.survey@rpsgroup.com www.rpsgroup.com
Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:

RPS Consulting
UK & Ireland

PROJECT:

West Botley

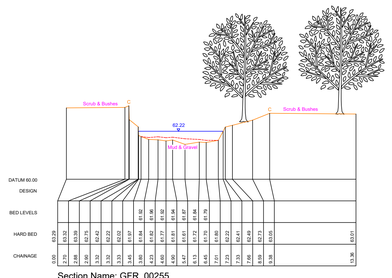
TITLE:

River Cross Sections

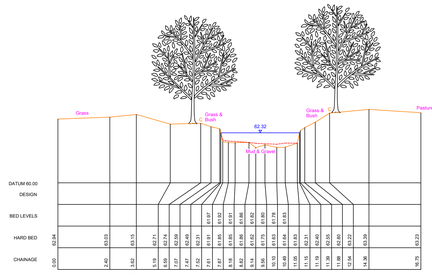
Drawn: JP/DR/MV/SB/RR/CP/HJ/EL/B	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Org No: UAR3692_B	Sheet: 16 of 23

MAKING COMPLEX EASY

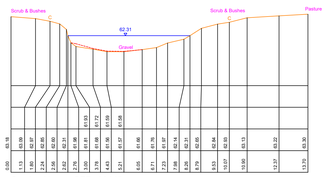
Goose Farm Reach



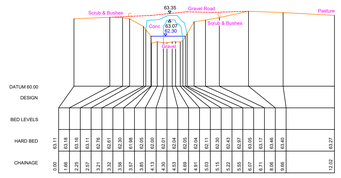
Section Name: GFR_00255
Open Channel
Date of Survey: 02/12/2022
CH: 255.109
E: 443754.42E
N: 210869.30N
BEARING 258



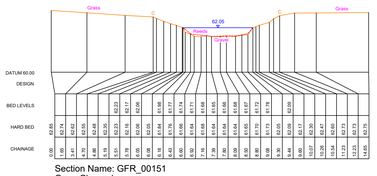
Section Name: GFR_00332
Open Channel
Date of Survey: 02/12/2022
CH: 331.657
E: 443761.80E
N: 210942.62N
BEARING 276



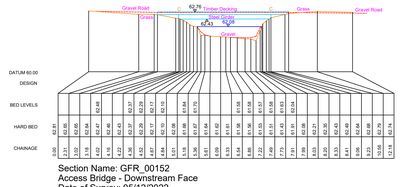
Section Name: GFR_00445
Open Channel
Date of Survey: 02/12/2022
CH: 445.473
E: 443746.05E
N: 211055.48N
BEARING 269



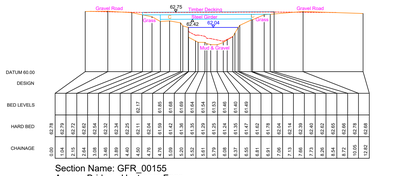
Section Name: GFR_00449
Access Bridge - Downstream Face
Date of Survey: 02/12/2022
CH: 449.263
E: 443745.13E
N: 211058.65N
BEARING 274



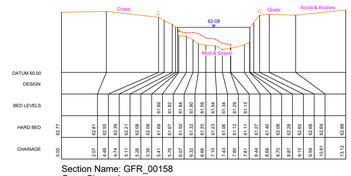
Section Name: GFR_00151
Open Channel
Date of Survey: 05/12/2022
CH: 151.101
E: 443769.59E
N: 210776.59N
BEARING 230



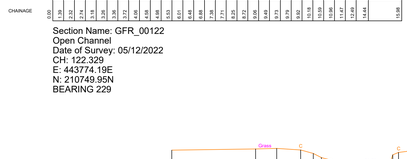
Section Name: GFR_00152
Access Bridge - Downstream Face
Date of Survey: 05/12/2022
CH: 152.107
E: 443768.39E
N: 210776.73N
BEARING 231



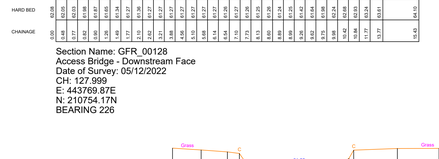
Section Name: GFR_00155
Access Bridge - Upstream Face
Date of Survey: 05/12/2022
CH: 154.769
E: 443766.35E
N: 210778.42N
BEARING 231



Section Name: GFR_00158
Open Channel
Date of Survey: 05/12/2022
CH: 158.058
E: 443766.98E
N: 210779.67N
BEARING 250

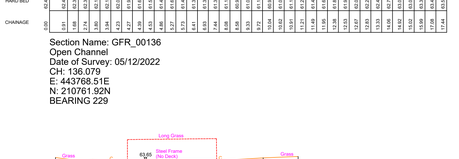


Section Name: GFR_00122
Open Channel
Date of Survey: 05/12/2022
CH: 122.329
E: 443774.19E
N: 210749.95N
BEARING 229

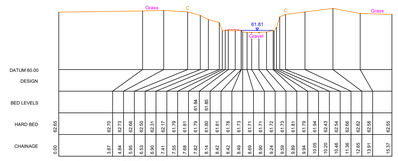


Section Name: GFR_00128
Access Bridge - Downstream Face
Date of Survey: 05/12/2022
CH: 127.999
E: 443769.87E
N: 210754.17N
BEARING 226

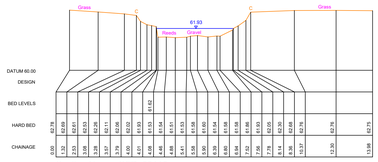
Section Name: GFR_00133
Access Bridge - Upstream Face
Date of Survey: 05/12/2022
CH: 132.718
E: 443771.18E
N: 210761.23N
BEARING 226



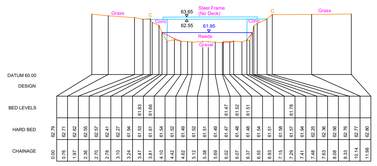
Section Name: GFR_00136
Open Channel
Date of Survey: 05/12/2022
CH: 136.079
E: 443768.51E
N: 210761.92N
BEARING 229



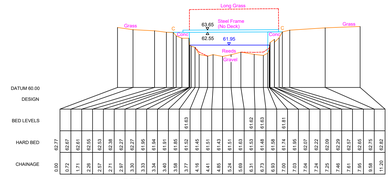
Section Name: GFR_00061
Open Channel
Date of Survey: 12/12/2022
CH: 60.539
E: 443826.20E
N: 210741.03N
BEARING 164



Section Name: GFR_00110
Open Channel
Date of Survey: 05/12/2022
CH: 109.519
E: 443782.50E
N: 210742.19N
BEARING 216



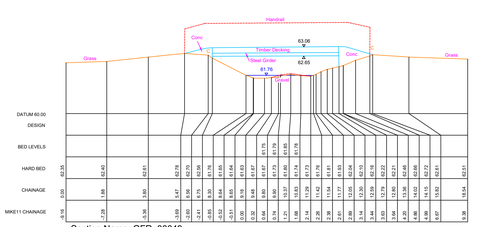
Section Name: GFR_00112
Footbridge - Downstream Face
Date of Survey: 05/12/2022
CH: 112.156
E: 443780.47E
N: 210743.29N
BEARING 220



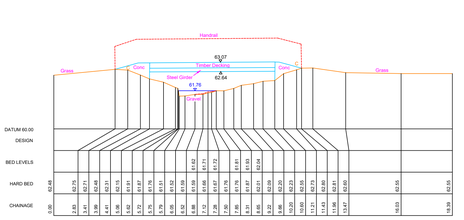
Section Name: GFR_00113
Footbridge - Upstream Face
Date of Survey: 05/12/2022
CH: 113.053
E: 443779.48E
N: 210743.79N
BEARING 218

Section Name: GFR_00015
Open Channel
Date of Survey: 12/12/2022
CH: 15.386
E: 443858.45E
N: 210723.35N
BEARING 160

Section Name: GFR_00045
Open Channel
Date of Survey: 12/12/2022
CH: 44.507
E: 443849.12E
N: 210729.67N
BEARING 254



Section Name: GFR_00049
Footbridge - Downstream Face
Date of Survey: 12/12/2022
CH: 48.642
E: 443844.18E
N: 210738.94N
BEARING 213



Section Name: GFR_00052
Footbridge - Upstream Face
Date of Survey: 12/12/2022
CH: 52.060
E: 443839.92E
N: 210738.57N
BEARING 213

Notes:

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   The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before commencing any work or shop drawings. This drawing is to be read in conjunction with all Engineer's drawings, Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

   This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Where trees are to be retained, the adequacy of foundations to withstand root action should be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing and proposed trees, in accordance with the recommendations of a qualified engineer who should be employed by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

   Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction by suitable fencing and ground protection to prevent harm from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

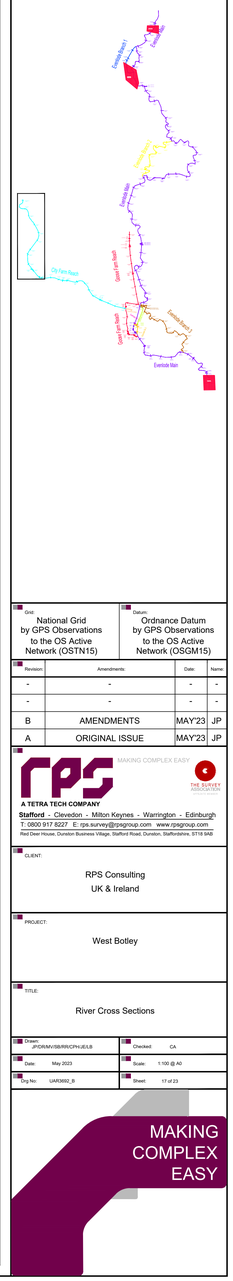
   Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation including ground conditions, underground services, trees, ecology, archaeology, etc. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. Boundaries will need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

   Survey carried out to client specification and in accordance with RICS publication:
   SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	ACCESS CHANGE CHANNEL	FLR	FLAT ROOF LEVEL	RSJ	RSJ/S SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BH	BOREHOLE/ACCESS	G	GULLY	RWP	RAIN WATER PIPE
BB	BUILDING	GP	GUIDE POST / POINT	RWG	RAIN WATER GRILL
BH	BOREHOLE	GP	GUIDE POST	SB	SAND BOX
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SW	SHED/ SW
BP	BOUNDARY POST	GV	GAS VALVE	SI	SURVEY INFO
B Pav	BLOCK PAVING	GV	GAS VALVE COVER	SL	SURVEY LEVEL
BS	BUS STOP	H	HEDGE	SP	SETTLEMENT PLATE
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BT	BRITISH TELECOM COVER	K	KERB	SP	SIGN POST
BW	BRICK WALL	KR	IRON RAILING FENCE	Spt Hedge	SPREAD HUMP
BWF	BARBED WIRE FENCE	KG	KERB OUTLET	SPS	SAMELING POINT
CA	CARRIAGEWAY/ ASPHALT	LC	LAMP COLUMN	SS	SOIL STACK PIPE
CA	CATTAWAY LEVEL	LG	LOCK GATE	ST	STAIRS
CB	CONTROL BOX	LP	LAMP POST	Stone Pit	STONE PAVING SLABS
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (grt)	Stone Pit	STONE PIT
CD	CHAMBER DEPTH	LP	LAMP POST	SPD	STEP POST
CF	CAST IRON	LP	LAMP POST	SPI	STEP IRON
CF	CAST IRON	MH	MANHOLE	STW	STOPWIRE
CL	COVER LEVEL	MBP	MARKER POST	SW	STORM WALL
CL	COVER LEVEL	MP	MARKER POST	SW	STORM WELL
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Cnc	CONCRETE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Cnc	CONCRETE	MP	ELECTRIC MOTOR	TBM	BENCH MARK (Temporary)
CP	CONCRETE PAVING	MP	MARKER POST	TC	TELEPHONE CALL BOX
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDREN'S PLAY EQUIPMENT	OHW	OVERHEAD HIGH WEIR	TL	TIMEBALL LEVEL
CS	BUILDING CANOPY	OWM	OS BENCH MARK	TL	THRESHOLD LEVEL
Cable	CANOPY	OHC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CT	CABLE TV	OHL	OVERHEAD LINE	TL	TOP OF LEVEL
CT	CABLE TV	OHL	OVERHEAD ELECTRIC	TL	TOP OF WALL (R.L.)
CW	CONCRETE BLOCK / PICKUP	OHP	OVERHEAD POWER	TP	TRIAL PIT
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DOOR	OHT	OVERHEAD TELEPHONE	TR	TRENCH
DC	DATA CABLE	OHW	OVERHEAD WARNING	UTA	UNABLE TO ACCESS
DP	DRAINAGE POINT	P	PIPE	UTL	UNABLE TO LOCATE
DRNG	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DW	DOOR WAY	PC	PETROL CHAMBER	UTS	UNABLE TO SURVEY
EPC	EMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
ES	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
ES	ELECTRIC SIGN	PO	PETROL PUMP	VP	VERTICAL ALIGNMENT PNT
EW	EAVES LEVEL	PP	PETROL POINT	VW	VENT PIPE
EOT	END OF TRACE (overhead)	PP	PETROL STORAGE	WB	WATER BOARD
EOT	END OF TRACE (UIR)	Pnt	PENSTOCK	WB	WIDOW BRIDGE
EP	ELECTRIC POST	PW	PUMPING WELL	WL	WATER LEVEL
ER	EARTH ROD	PY	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	R	RESERVOIR	WM	WATER METER
ESP	ELECTRICITY SUPPLY POINT	RG	RODDING EYE	WM	WATER MONITORING
FC	FOOTBRIDGE/ACCESS CHANGE	RL	RAIN GAUGE	WMP	WATER MONITORING Pnt
FL	FLOOR LEVEL	Rs	RINGS LEVEL	WSR	WATER LEVEL SENSOR
FMP	FLOOD MONITORING LEVEL	RP	REFLECTOR POST		
Flg	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:
National Grid by GPS Observations to the OS Active Network (OSTN15)

Datum:
Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

MAKING COMPLEX EASY
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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:
RPS Consulting UK & Ireland

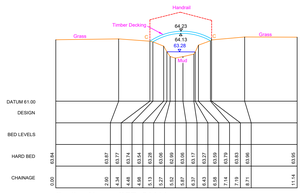
PROJECT:
West Botley

TITLE:
River Cross Sections

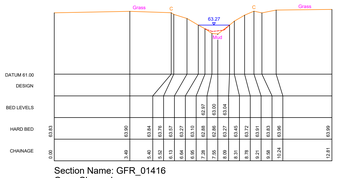
Drawn: JP/DRM/VSB/RR/CPH/JE/LB	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Org No: UAR3692_B	Sheet: 17 of 23

MAKING COMPLEX EASY

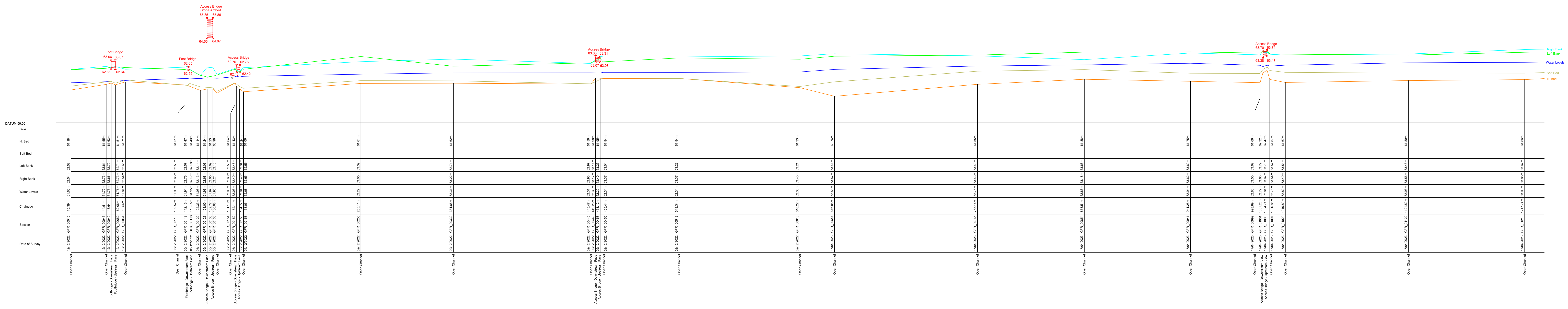
Goose Farm Reach

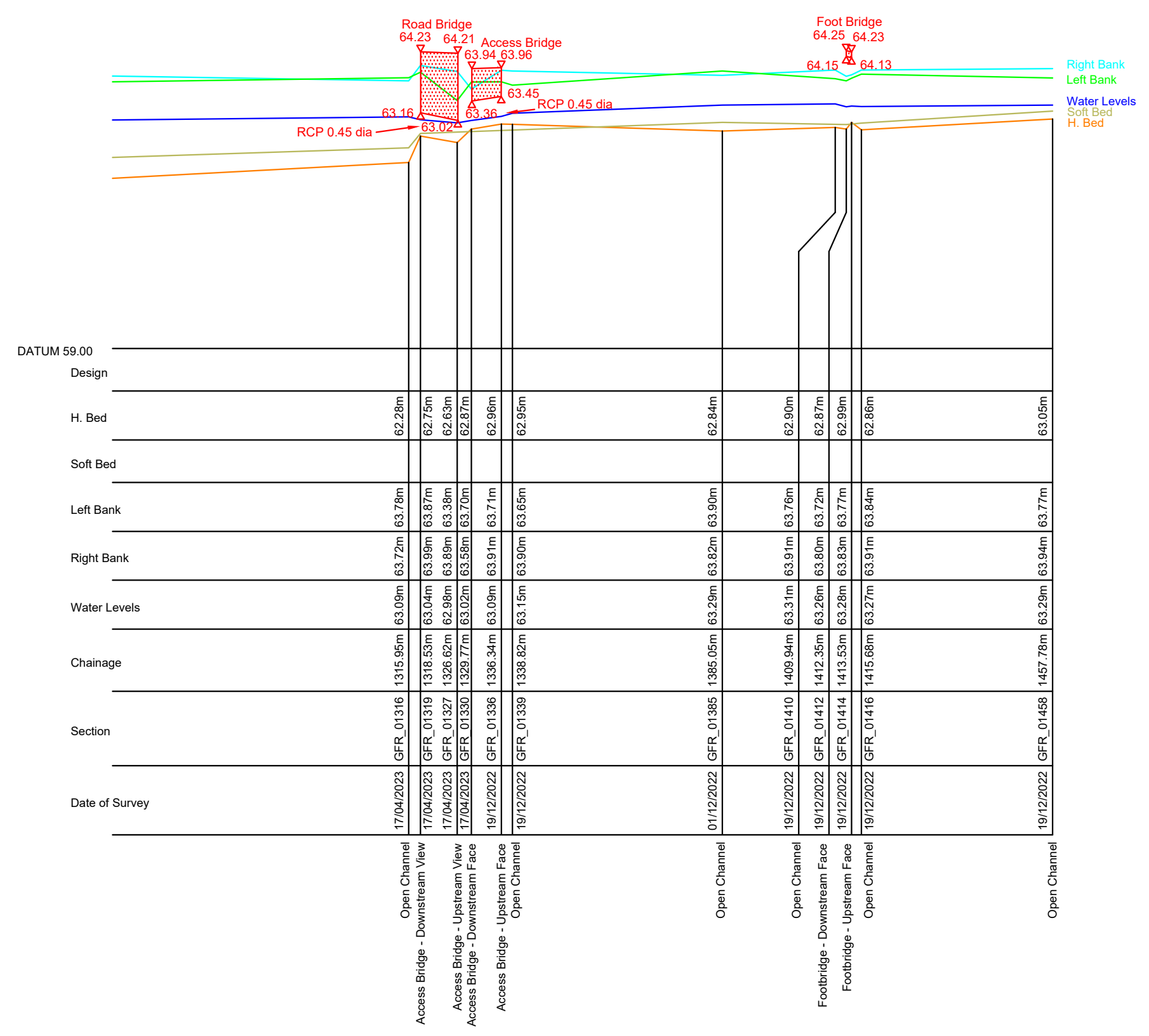


Section Name: GFR_01414
Footbridge - Upstream Face
Date of Survey: 19/12/2022
CH: 1413.533
E: 443784.40E
N: 211847.36N
BEARING 274



Goose Farm Reach





Notes:

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The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or fluid ground, contaminates on or within the ground, should be further investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 3 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

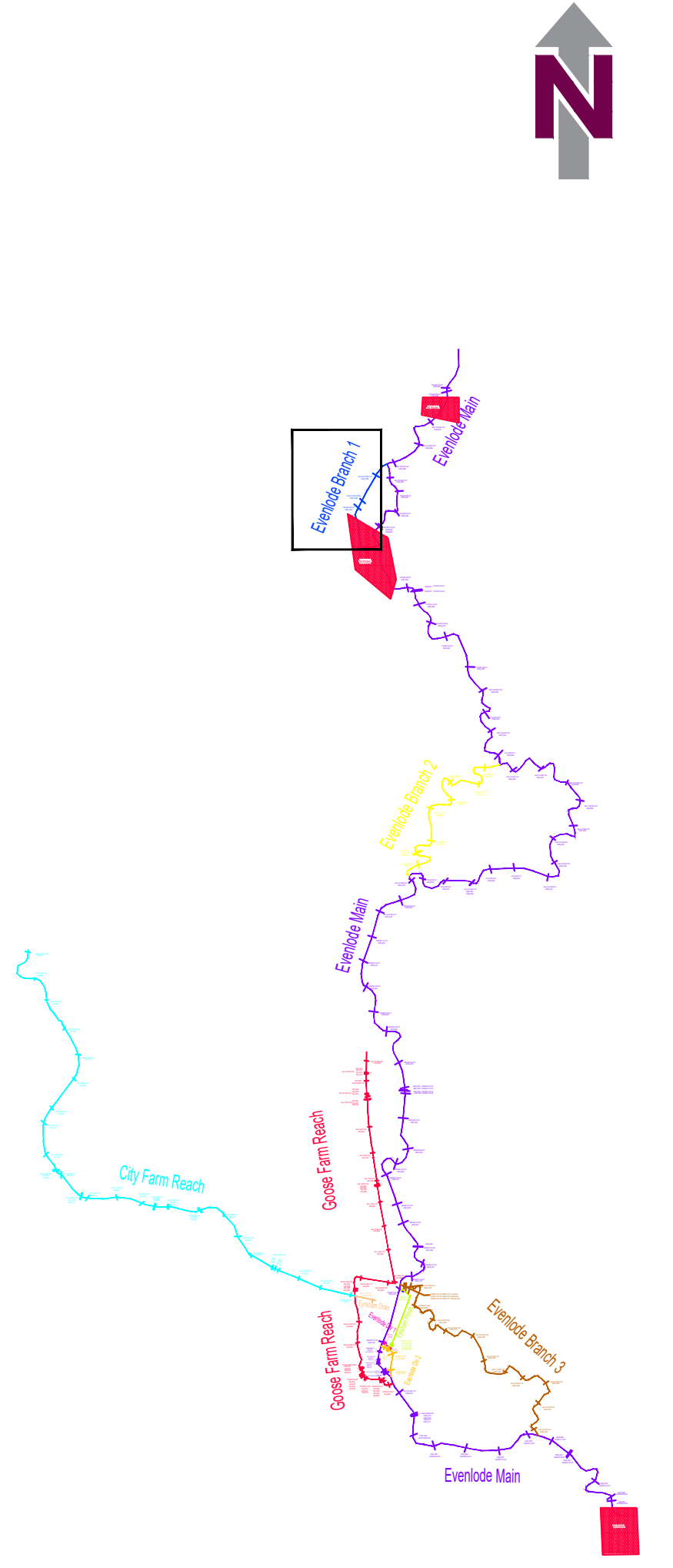
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation including ground conditions/contaminants, drainage, design & planning/density negotiations. Sketch proposals may be based upon enlargements of OS sheets & visual estimations of existing site features, accuracy will therefore need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	LINEAR DRAINAGE CHANNEL	FLR	FLAT ROOF LEVEL	RS	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
A/R	ASSUMED ROUTE	FS	FLAG STAFF	RW	RETAINING WALL
BB	BELISH BEACON	G	GULLY	RWP	RAN WATER PIPE
BdL	BED LEVEL	GIS	GAS INLET POINT	Sap	SAPLING
BH	BOREHOLE	GP	GUIDE POST	SB	SIGN BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	Shlt	SHELTER
BP	BOUNDARY POST	Grl	GRILLE COVER	Si	SPUN IRON
B Pvg	BLOCK PAVING	GV	GAS VALVE COVER	SL	SOFFIT LEVEL
BRck	BICYCLE RACK	Hrl	HAND RAIL	Slt	SILT LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BT	BRITISH TELECOM COVER	IL	INVERT LEVEL	SP	SIGN POST
BW	BRICK WALL	I/R	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPt	SAMPLING POINT
CAP	CABLE WINDING MACHINE	Lby	LIFEBUOY	SS	STRUCTURE POINT
Cat	CATENARY LEVEL	Lck	LOCK GATE	ST	STAND PIPE / SUPPLY TAP
CATV	CABLE TV COVER	Ldr	LADDER	Sti	STILE
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pvg	STONE PAVING SLABS
C/B	CLOSE BOARDED FENCE	LOS	LOSS OF SIGNAL (eml)	STP	STAND PIPE
CD	CHAMBER DEPTH	LP	LAMP POST	StPO	STAY POST
Cgd	CATTLE GRID	Mcy	MACHINERY	Stu	STUMP
Ci	CAST IRON	MH	MANHOLE	StW	STAYWIRE
CIP	CABLE INLET POINT	MgP	MOORING POST	SV	STOP VALVE
CL	COVER LEVEL	Mkr	MARKER POST	SW	STONE WALL
C/L	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Col	COLUMN	MS	MILESTONE	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	ELECTRIC MOTOR	TBol	BOLLARD (Dept' Transport)
Conc Pvg	CONCRETE PAVING	NVP	NO VISIBLE PIPE	TCB	TELEPHONE CALL BOX
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
Cpe	CHILDRENS PLAY EQUIPMENT	OSA	OUTSIDE SURVEY AREA	TEL	TELECOM COVER
Cpy	BUILDING CANOPY	OSBM	OS BENCH MARK	ThL	THRESHOLD LEVEL
Cpsn	CAPSTAN	OGC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CR	CRANE / HOIST	OHC	OVERHEAD CONDUIT	TM	TICKET MACHINE
Cul	CULVERT	OHE	OVERHEAD ELECTRIC	ToV	TOP OF VALVE LEVEL
Ct	CABLE TRAY/ TROUGH	OHG	OVERHEAD GANTRY	TP	TELEGRAPH POLE
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
Dav	Davit	OHT	OVERHEAD TELECOMS	Tr	TROUGH
DC	DUCT COVER	OHU	OVERHEAD UNKNOWN	UTA	UNABLE TO ACCESS
Di	DUCTILE IRON	P	POST	UTL	UNABLE TO LOCATE
(dilap)	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
(dis)	DISUSED	PC	SECURITY CAMERA	UTS	UNABLE TO SURVEY
DPC	DAMP PROOF COURSE	Pcg	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PD	PIT DEPTH	VC	VITRIFIED CLAY
DSW	DRYSTONE WALL	P/F	PANEL FENCE	VDP	VEHICLE DETECTION PAD
Eav	EAVES LEVEL	PP	PETROL PUMP	VP	VENT PIPE
EIC	ELECTRICITY COVER	P/R	POST & RAIL FENCE	VW	VALVE WHEEL
EOT	END OF TRACE (utility)	Psk	PENSTOCK	WB	WEIGH BRIDGE
EP	ELECTRICITY POLE	PV	VERTICAL PIPE	WG	WATER GAUGE
ER	EARTH ROD	Pyl	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POINT	PZ	PIEZOMETER	WM	WATER METER
ESW	ELECTRICITY SWITCH BOX	Rdg	RIDGE LEVEL	W/M	WIRE MESH FENCE
EVC	ELECTRIC VEHICLE CHARGING	RE	RODDING EYE	WO	WASHOUT COVER
FB	FOOTBRIDGE	RG	RAIN GAUGE	WS	WIND SOCK POLE
FL	FLOOR LEVEL	RL	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FFL	FINISHED FLOOR LEVEL	RMP	RESRVOIR MONITORING Pnt		
Flgt	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:
National Grid
by GPS Observations
to the OS Active
Network (OSTN15)

Datum:
Ordnance Datum
by GPS Observations
to the OS Active
Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

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AFFILIATE MEMBER
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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:
RPS Consulting
UK & Ireland

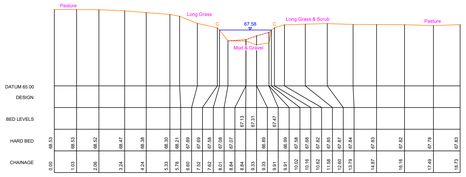
PROJECT:
West Botley

TITLE:
River Cross Sections

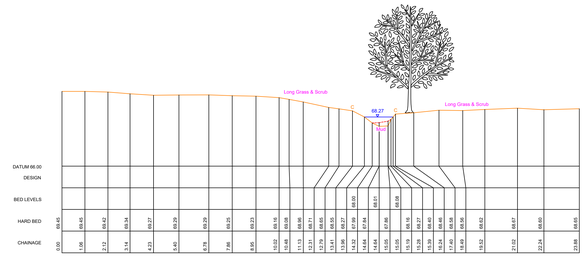
Drawn: JP/DR/MV/SB/RR/CPH/JE/LB
Checked: CA
Date: May 2023
Scale: 1:1250 @ A0
Drg No: UAR3692_B
Sheet: 19 of 23

MAKING
COMPLEX
EASY

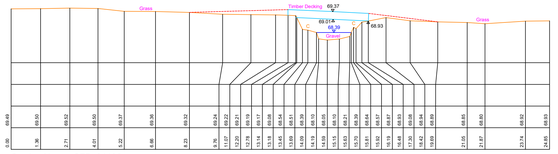
City Farm Reach



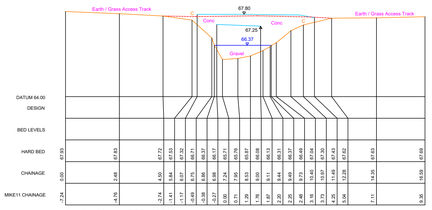
Section Name: CFB_01002
Open Channel
Date of Survey: 07/12/2022
CH: 1001.802
E: 442868.47E
N: 211404.65N
BEARING 163



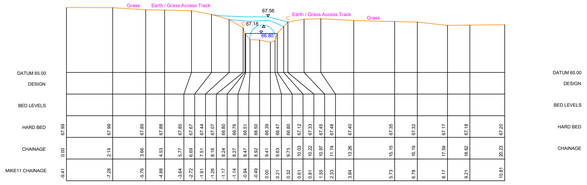
Section Name: CFB_01110
Open Channel
Date of Survey: 07/12/2022
CH: 1109.845
E: 442771.73E
N: 211403.16N
BEARING 215



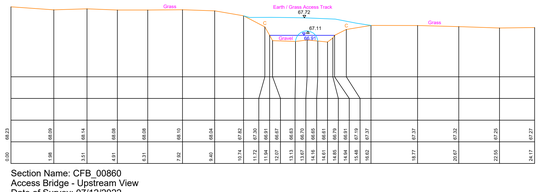
Section Name: CFB_01132
Footbridge - Downstream Face
Date of Survey: 07/12/2022
CH: 1131.504
E: 442746.96E
N: 211411.56N
BEARING 197



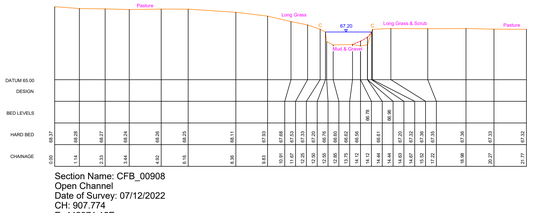
Section Name: CFB_00810
Access Bridge - Upstream View
Date of Survey: 05/12/2022
CH: 810.433
E: 443056.85E
N: 211370.07N
BEARING 184



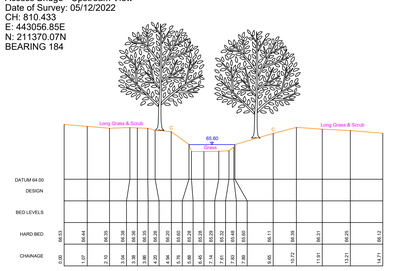
Section Name: CFB_00856
Access Bridge
Date of Survey: 07/12/2022
CH: 856.021
E: 443014.52E
N: 211368.81N
BEARING 205



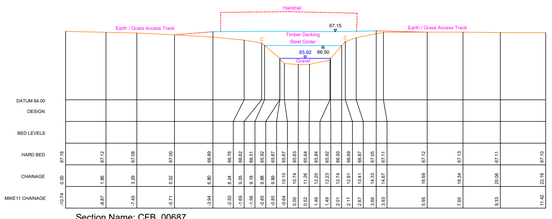
Section Name: CFB_00860
Access Bridge - Upstream View
Date of Survey: 07/12/2022
CH: 860.005
E: 443011.00E
N: 211374.78N
BEARING 197



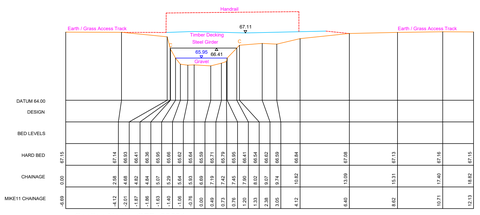
Section Name: CFB_00908
Open Channel
Date of Survey: 07/12/2022
CH: 907.774
E: 442971.15E
N: 211380.82N
BEARING 232



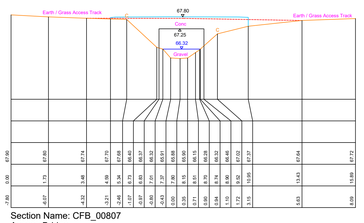
Section Name: CFB_00593
Open Channel
Date of Survey: 05/12/2022
CH: 592.585
E: 443259.37E
N: 211340.86N
BEARING 177



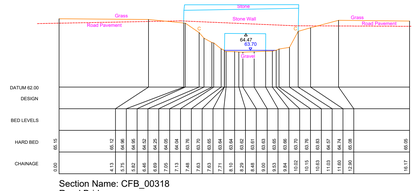
Section Name: CFB_00687
Access Bridge
Date of Survey: 05/12/2022
CH: 687.346
E: 443168.13E
N: 211358.85N
BEARING 139



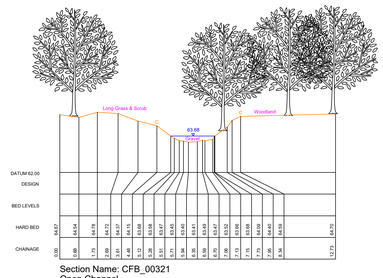
Section Name: CFB_00691
Access Bridge - Upstream View
Date of Survey: 05/12/2022
CH: 691.079
E: 443167.07E
N: 211354.42N
BEARING 138



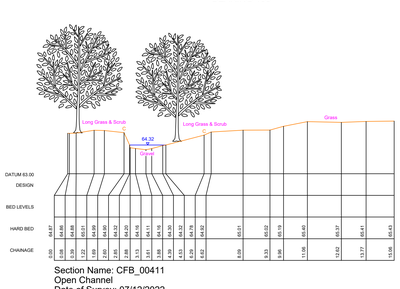
Section Name: CFB_00807
Access Bridge
Date of Survey: 05/12/2022
CH: 806.599
E: 443060.52E
N: 211369.28N
BEARING 183



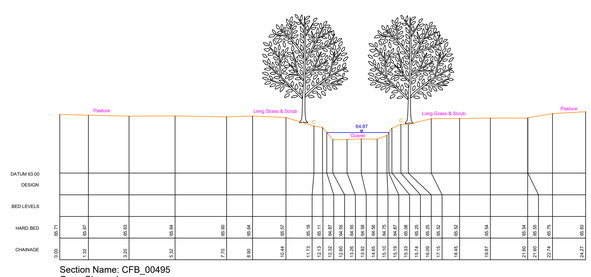
Section Name: CFB_00318
Road Bridge
Date of Survey: 12/12/2022
CH: 318.059
E: 443440.76E
N: 211148.59N
BEARING 195



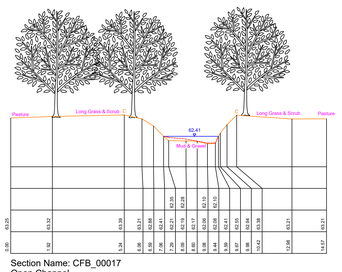
Section Name: CFB_00321
Open Channel
Date of Survey: 12/12/2022
CH: 320.935
E: 443437.65E
N: 211147.30N
BEARING 196



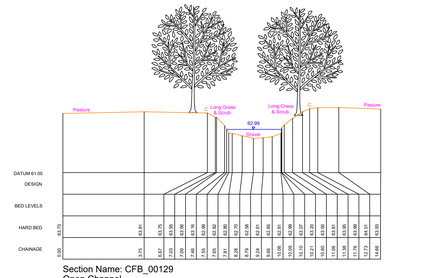
Section Name: CFB_00411
Open Channel
Date of Survey: 07/12/2022
CH: 410.565
E: 443356.52E
N: 211191.98N
BEARING 163



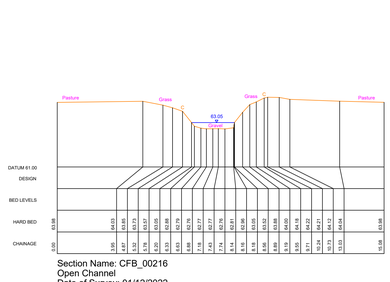
Section Name: CFB_00495
Open Channel
Date of Survey: 05/12/2022
CH: 494.734
E: 443324.82E
N: 211255.01N
BEARING 267



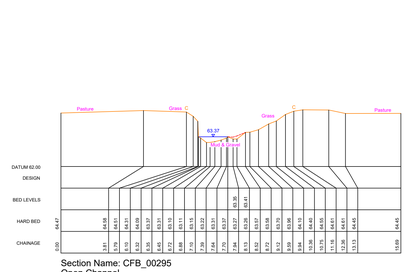
Section Name: CFB_00017
Open Channel
Date of Survey: 02/12/2022
CH: 16.870
E: 443723.38E
N: 211048.71N
BEARING 193



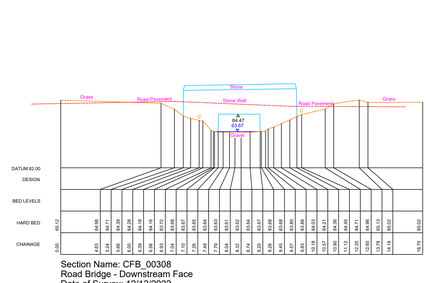
Section Name: CFB_00129
Open Channel
Date of Survey: 02/12/2022
CH: 129.367
E: 443615.33E
N: 211074.86N
BEARING 201



Section Name: CFB_00216
Open Channel
Date of Survey: 01/12/2022
CH: 215.826
E: 443535.70E
N: 211109.01N
BEARING 199



Section Name: CFB_00295
Open Channel
Date of Survey: 12/12/2022
CH: 294.670
E: 443464.09E
N: 211137.74N
BEARING 211



Section Name: CFB_00308
Road Bridge - Downstream Face
Date of Survey: 12/12/2022
CH: 308.218
E: 443450.00E
N: 211145.83N
BEARING 194

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The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. This drawing is to be read in conjunction with all relevant Statutory Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Any trees shown are indicative only and their relationship to foundations and services should be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing trees and their future growth. Any proposals for tree removal or pruning should be discussed with and investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction works by fencing off the root protection area to prevent harm from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

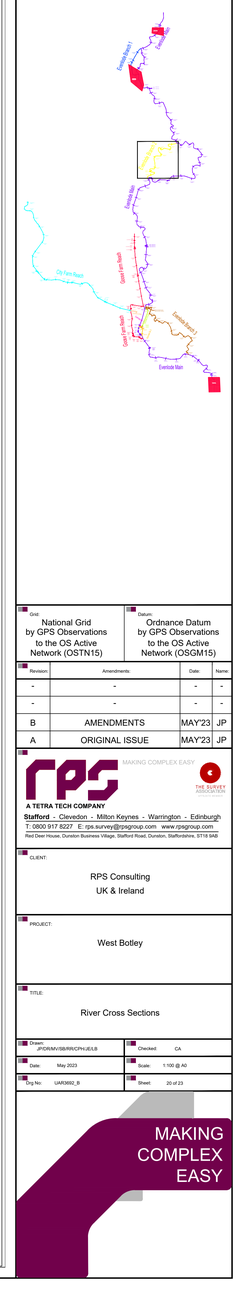
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and design. Information contained within this drawing is to be used for indicative purposes only. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. Accurate information need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

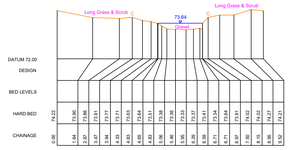
Standard Abbreviations

ACD	ACCESS CHANNEL DRAIN	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BM	ASSUMED NODE	G	GULLY	RWP	RAIN WATER PIPE
BB	BOREHOLE	GT	GULLY & KERB POINT	SP	SOCKET
BH	BOREHOLES	GP	GUIDE POST	SB	SOIL BORING
Bol	BOLLARD	GPR	GROUND PENDING RADAR	SW	SHED TOP
BP	BOUNDARY POST	GV	GAS VALVE	SL	SLOPE LEVEL
B Pag	BUTAN PIPING	GV	GAS VALVE COVER	SL	SUPPLY LEVEL
BT	BT MANHOLE	HL	HEDGE LINE	SM	SOIL MONITOR
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
CC	CABLE TELEVISION COVER	IL	INVERT LEVEL	SP	SOCKET
BW	BRICK WALL	IR	IRON RAILING FENCE	Spt Hook	SPEED HUMP
BWP	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMPLING POINT
CAB	CONTROL CABINET	LC	LAMP COLUMN	SS	SOIL SAMPLE
CP	CATENARY POST	LG	LOCK GATE	ST	STAND PIPE
CB	CONTROL BOX	LP	LAMP POST	STA	STAND PIPE SUPPLY TAP
CF	CHAINLINK FENCE	LOR	LOSS OF REFLECTION (gpr)	Stone Pit	STONE PAVING SLABS
CO	CHAMBER OUTLET	LS	LIGHTING SWITCH	STP	STOP POST
CP	CAST IRON	LP	LAMP POST	SWD	STAY POST
CP	CAST IRON	MH	MANHOLE	SWP	SIGN POST
CP	CONCRETE POST	MBP	MARKER POST	SW	STATIONS
CL	CHAIN LINK FENCE	MP	MILE POST	TW	TOP OF WALL
CW	CONCRETE	MP	MILE POST	TW	TRAFFIC WELL
Conc	CONCRETE SURFACING	MV	MOTOR VEHICLE	TBM	TACTILE PAVING
CP	CATCHPIT	NP	NAME PLATE	TBM	TEMPORARY BENCH MARK
CPE	CHILDRENS PLAY EQUIPMENT	NTW	NO TRESPASSING WITH WEIR	TBM	BOLLARD (Rail Transport)
CW	BUILDING CANOPY	OSM	OS BENCH MARK	TC	TELEPHONE CALL BOX
Cpet	CARPORT	OHC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CS	CAST STONE	OHL	OVERHEAD CABLES	TP	TELEGRAPH POLE
CT	CABLE TV	OHL	OVERHEAD ELECTRIC	TP	TELEPHONE PILLAR
CTV	CLOSED CIRCUIT TELEVISION	OHL	OVERHEAD LINES	TS	TRAFFIC SIGNAL
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
D	DOOR	OP	OVERHEAD POWER	TR	TRENCH
DT	DUCT CLOSE	OHV	OVERHEAD VANTOPIN	UTA	UNABLE TO ACCESS
DP	DRAINAGE POST	PB	POST BOX	UTB	UNABLE TO BURY
DRNG	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DW	DRY WELL	PC	PEDESTRIAN CAMERA	UTS	UNABLE TO SURVEY
DPC	DAMP PROOF COURSE	PX	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
EB	ELECTRIC BOX	PP	PETROL PUMP	VP	VENT PIPE
Ent	ENTRANCE	PR	PETROL POINT	VP	VENT PIPE
EP	ELECTRIC POWER	PC	PETROL STORAGE	WB	WATER BOARD
EOT	END OF TRACE (utility)	Pnt	PENSTOCK	WB	WATER BRIDGE
ES	ELECTRIC SUPPLY	PW	PLANTING WELL (PW)	WC	WATER COURSE
ES	SWITCHED	PU	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	RL	RECESS LEVEL	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Rly	RAILWAY LINE	WP	WATER PIPE FENCE
EW	EXTENSION WALL	RM	RAIN GAUGE	WS	WATER SUPPLY
FC	FLOOD CHECK	RG	RAIN GAUGE	WS	WATER SUPPLY
FL	FLOOR LEVEL	RGL	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FP	FLOOD PROTECTION WALL	RMP	RAILWAY MARSHALLING Pnt		
Flg	FLOOR LIGHT	RP	REFLECTOR POST		

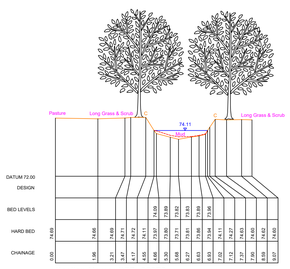
Key Plan



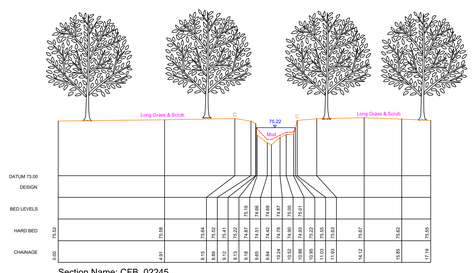
City Farm Reach



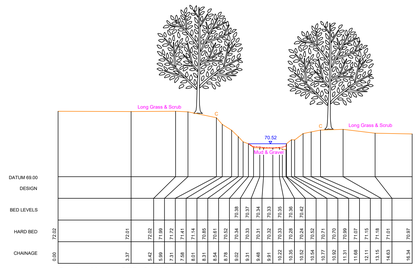
Section Name: CFB_01980
Open Channel
Date of Survey: 08/12/2022
CH: 1979.998
E: 442621.04E
N: 212113.34N
BEARING 270



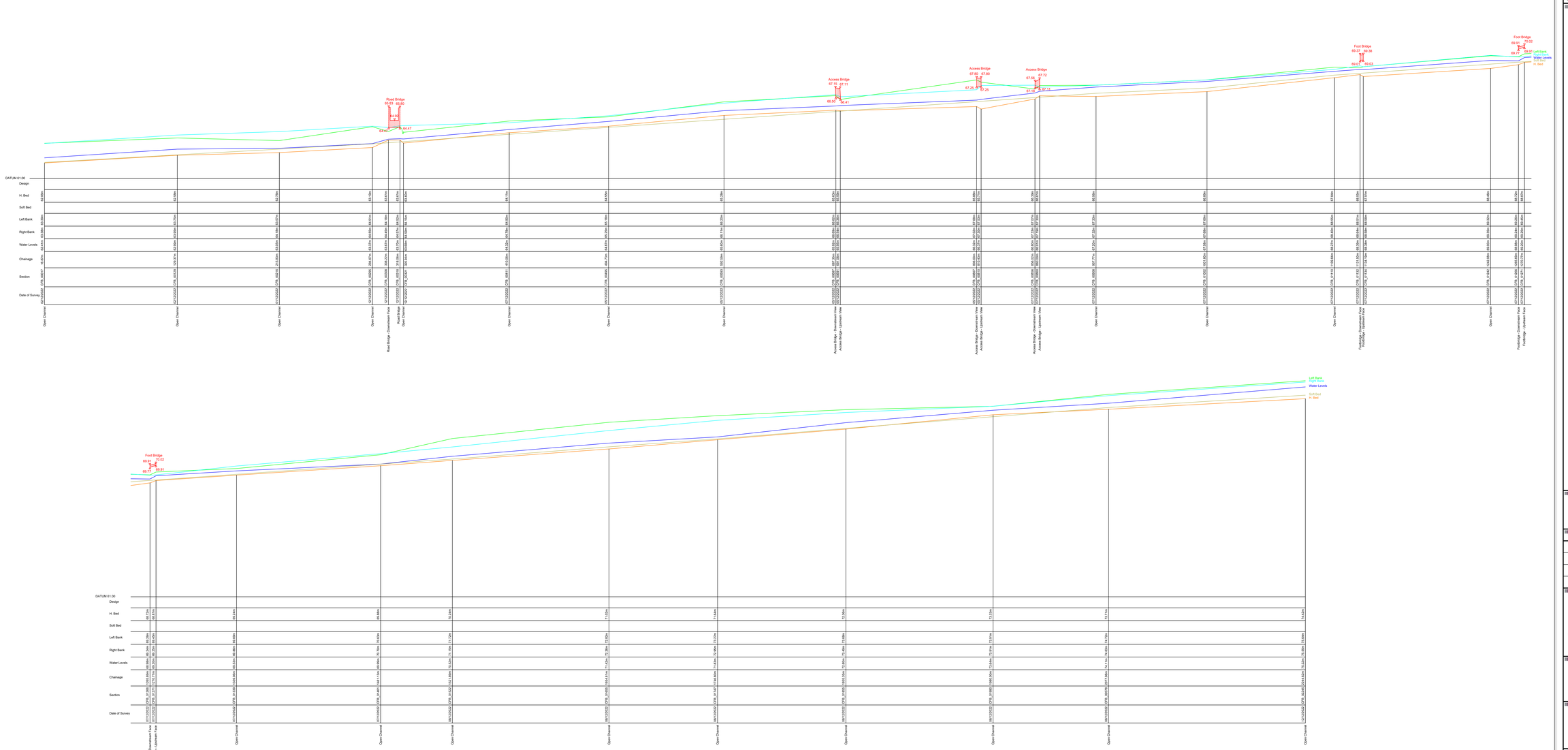
Section Name: CFB_02078
Open Channel
Date of Survey: 08/12/2022
CH: 2077.978
E: 442571.89E
N: 212193.83N
BEARING 172



Section Name: CFB_02245
Open Channel
Date of Survey: 12/12/2022
CH: 2244.622
E: 442556.33E
N: 212286.98N
BEARING 277



City Farm Reach



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The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before commencing any work or shop drawings. All work is to be carried out to current Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Where trees are to be retained, the potential effect of excavations on tree roots should be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing trees and proposed trees. Ground conditions and contaminants should be investigated by a suitable expert. Ground investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees should be protected during construction works and adequate space should be provided for growth from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and design. Existing underground services are shown for guidance only & should be confirmed on site. Sketch proposals may be based upon arrangements of OS sheets & visual estimations of existing site conditions. Dimensions should need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

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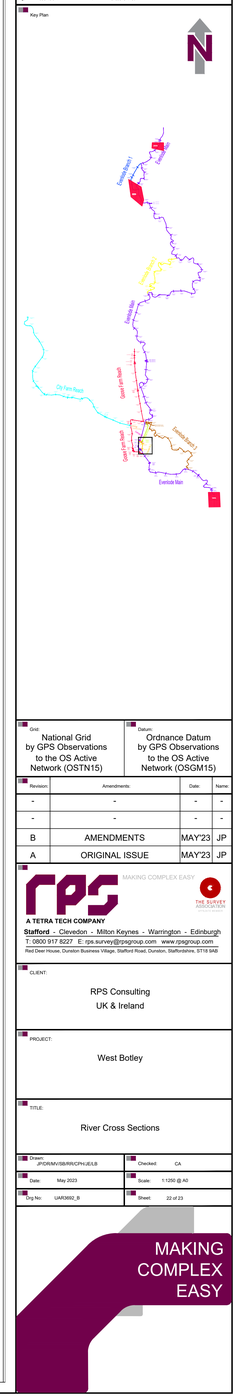
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	ACCESS COVER	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
BE	ASSUMED INVERT	FL	FLAG POST	RWP	RAIN WATER PIPE
BH	BOREHOLE	G	GULLY	RWP	RECTANGULAR
BH	BOREHOLE	GP	GUARD POST / POINT	SB	SAMPLE BOREHOLE
BO	BOLLARD	GR	GUIDE POST	SB	SIGN BOARD
Bol	BOLLARD	GPR	GROUND PROBING RADAR	SW	SHELTER
BP	BOUNDARY POST	GV	GAS VALVE	SI	SOIL INLET
B Pap	BUSH PLANG	GV	GAS VALVE COVER	SL	SUPPLY LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SM	SOIL MANHOLE
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BW	BRICK WALL BELOW COVER	IP	IRON PIPE	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPR	SAMPLING POINT
CA	CATCHPIT CHANNEL	LA	LOCAL AUTH.	SS	SOIL SAMPLE
CAT	CATHWAY LEVEL	LG	LOCK GATE	ST	STAGE
CB	CATCHPIT	LP	LAMP POST	STAP	STAGE RIPR / SUPPLY TAP
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pit	STONE PAVING SLABS
CBF	CLOSE BOARDED FENCE	LP	LAMP POST (with)	STP	STOP POST
CC	CHAMBER (CBTV)	LP	LAMP POST	SWS	STAY POST
CH	CHIMNEY	MH	MANHOLE	SY	SYCAMORE
CP	CAST IRON	MH	MANHOLE	SYM	SYCAMORE
CP	CAST IRON POINT	MP	MARKER POST	TA	TRAFFIC ARM
CL	COVER LEVEL	MP	MARKER POST	TAP	TRIANGULATION MARK
CL	CHAIN LINK FENCE	MP	MILE POST	Tac	TACTILE PAVING
Cnc	CONCRETE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	ELECTRIC METER	TBM	BOLLARD (Real Transport)
CP	CATCHPIT	NP	NAME PLATE	TBM	TEMPORARY BENCH MARK
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
Cpt	CHILDRENS PLAY EQUIPMENT	OBH	OBSERVATION BOREHOLE WELL	TL	TRAFFIC LIGHTS
Cpy	BUILDING CANOPY	OSBM	OS BENCH MARK	TN	TIMEWALK LEVEL
Cpw	CARPORT	OSC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CS	CAST STEEL	OSC	OVERGROUND CONDUIT	TP	TELEPHONE POLE
CT	CABLE TRACT / RCASH	OHL	OVERHEAD ELECTRIC	TVP	TELEVISION PLATE
CW	CONCRETE WALL	OHL	OVERHEAD ELECTRIC	TW	TRAFFIC WARDEN
D	DOOR	OHStruct	OVERHEAD STRUCTURE	Tpt	TRIAL PIT
DC	DUCT COVER	OHW	OVERHEAD WIRES	TR	TREE
DC	DUCT COVER	OHW	OVERHEAD WARDEN	UTA	UNABLE TO ACCESS
DRN	DRAINAGE	P	POST	UTA	UNABLE TO ACCESS
DRNG	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DT	DRAIN TRAP	PC	PEDESTRIAN CAMERA	UTR	UNABLE TO RAISE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DW	DRY WELL	PK	PARKING BAY	VP	VENT PIPE / DETECTION PAD
Ear	EARTH LEVEL	PR	PETROL POMP	VT	VENT PIPE
EB	ELECTRICITY BOX	PS	PRESSURE SENSOR	WB	WATER BOARD
EOT	END OF TRACE (utility)	Pnt	PENSTOCK	WB	WAGON BRIDGE
EP	ELECTRIC POLE	PV	PETROL VENT PIPE	WC	WATER COURSE
Ear	EARTH LEVEL	Py	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	RA	RESERVATOIR	WM	WATER METER
FBF	FEATHER BOARDED FENCE	Rail	RAILWAY LEVEL	WMF	WIRE MESH FENCE
FL	FLOOD/DRAINAGE CHAMBER	RL	RAIN GAUGE	WS	WIND SOCK POLE
FL	FLOOR (LEVEL)	RL	RIDGE LEVEL	WSR	WATER LEVEL SENSOR
FLC	FLOOR LEVEL (CELLAR LEVEL)	RMP	RAISED MOUNTAINING Pnt		
Flgt	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:
National Grid by GPS Observations to the OS Active Network (OSTN15)

Datum:
Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision:	Amendments:	Date:	Name:
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire, ST18 9AB

CLIENT:
RPS Consulting UK & Ireland

PROJECT:
West Botley

TITLE:
River Cross Sections

Drawn: JP/DR/MY/SB/RR/CPH/JELB	Checked: CA
Date: May 2023	Scale: 1:1250 @ A0
Drg No: UAR3692_B	Sheet: 22 of 23

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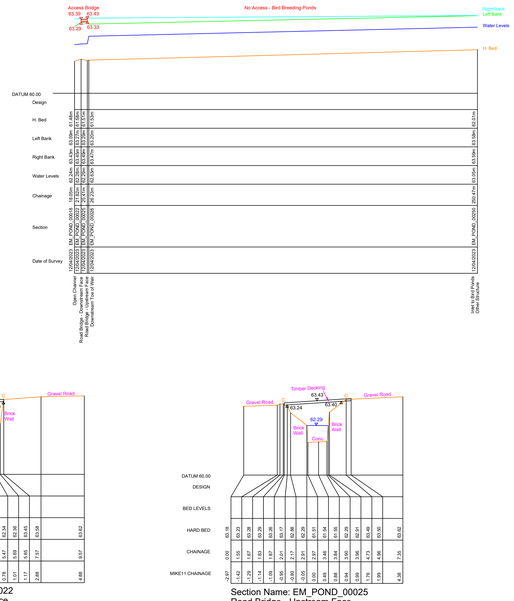
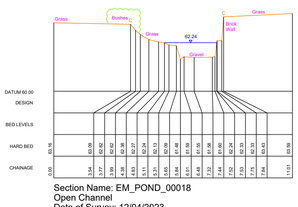
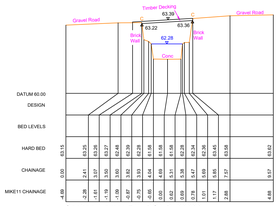
Eynsham Ponds



Long Section Horizontal Scale 1:1250
Long Section Vertical Scale 1:100

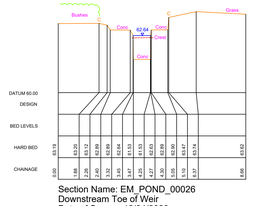


Section Name: EM_POND_00018
Open Channel
Date of Survey: 12/04/2023
CH: 18.051
E: 443876.74E
N: 210854.39N
BEARING 280

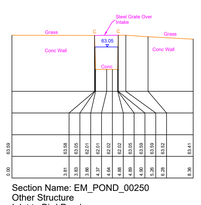


Section Name: EM_POND_00022
Road Bridge - Downstream Face
Date of Survey: 12/04/2023
CH: 21.820
E: 443875.56E
N: 210858.61N
BEARING 277

Section Name: EM_POND_00025
Road Bridge - Upstream Face
Date of Survey: 12/04/2023
CH: 25.414
E: 443875.23E
N: 210862.37N
BEARING 275

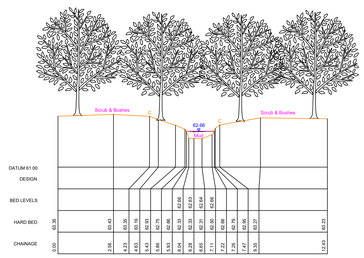


Section Name: EM_POND_00026
Downstream Toe of Weir
Date of Survey: 12/04/2023
CH: 26.230
E: 443875.85E
N: 210862.11N
BEARING 292



Section Name: EM_POND_00250
Other Structure
Inlet to Bird Ponds
Date of Survey: 12/04/2023
CH: 250.468
E: 443910.85E
N: 211062.79N
BEARING 221

Eynsham Drain



Section Name: EM_DRAI_00066
Open Channel
Date of Survey: 02/12/2022
CH: 66.236
E: 443800.40E
N: 211013.93N
BEARING 014

Notes:

This drawing and the building works depicted are the copyright of RPS and may not be reproduced or amended except by written permission. No liability will be accepted for amendments made by other persons.

The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. This drawing is to be read in conjunction with all relevant Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Where trees are to be retained, the type of foundation required and any precautions necessary must be investigated by the Contractor. A suitable method of foundation should be provided, allowing for existing and proposed trees, to prevent damage to the foundations and subsequent movement. Soil conditions to be investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert.

Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. Trees to be retained should be protected during the course of the development by the erection of barriers to prevent damage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. All tree types are provided as a guide only and a full Arboricultural survey to be conducted to determine the exact tree types should be completed.

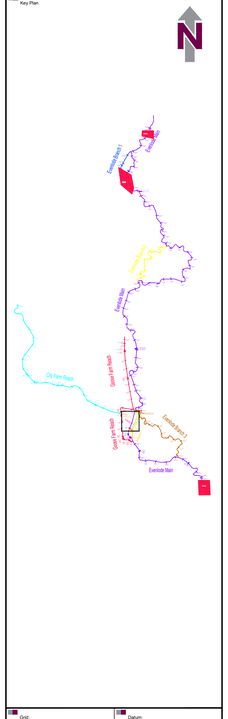
Sketch proposals are for illustrative purposes only & as such are subject to detailed site investigation and design. Sketch proposals are indicative only & as such are subject to change. Sketch proposals & drawings may be based upon arrangements of OS sheets & visual estimations of existing site conditions. Proposals need to be verified by survey. Sketch proposals have not been considered in respect of CDM Regulations.

Survey carried out to client specification and in accordance with RICS publication:
SURVEYS OF LAND , BUILDING & UTILITY SERVICES AT SCALES 1:500 & LARGER, 3rd EDITION.

Standard Abbreviations

ACO	ACCESS CHANNEL	FLR	FLAT ROOF LEVEL	RG	ROAD SIGN
AV	AIR VALVE	FH	FIRE HYDRANT	RSP	RAILWAY SIGNAL POST
AB	ASSUMED INVERT	FL	FLAG POST	RWP	RAIN WATER PIPE
BB	BALANCE BEAM	G	GULLY	RWG	RECTANGULAR RING
BH	BOREHOLE	GP	GUARD POST / POINT	SB	SAMPLE BOX
BO	BOLLARD	GR	GUIDE POST	SE	SIGN BOARD
BP	BOUNDARY POST	GPR	GROUND PROBING RADAR	SW	SHELTER
BPed	BUTAN PUMP	GV	GAS VALVE	SL	SOIL PIPE
BT	BUTAN TANK	GC	GAS VALVE COVER	SL	SURVEY LEVEL
BS	BUS STOP	IC	INSPECTION COVER	SMP	SETTLEMENT MONITORING Pnt
BSC	BUTTERFLY CHAMBER COVER	IL	INVERT LEVEL	SP	SIGN POST
BW	BRICK WALL	IR	IRON RAILING FENCE	Spd Hump	SPEED HUMP
BWF	BARBED WIRE FENCE	KO	KERB OUTLET	SPS	SAMPLING POINT
CAB	CABLE TELEVISION COVER	LB	LETTER BOX	SV	STOP VALVE
CAT	CATENARY LEVEL	LG	LOCK GATE	ST	STAND PIPE / SUPPLY TAP
CB	CATCH PIT / BASIN	LP	LAMP POST	SW	STREAM
CB	CONTROL BOX	LOR	LOSS OF REFLECTION (gpr)	Stone Pit	STONE PAVING SLABS
CF	CHAIN LINK FENCE	LS	LIGHTING PILLAR (with)	STP	SEWAGE WORKS
CH	CHAMBER DEPTH	LT	LAMP POST	SPD	STAY POST
CL	CABLE LEVEL	MH	MANHOLE	STR	STRUCTURE
CP	CAST IRON	MH	MANHOLE	STW	STOPWARE
CP	CONCRETE POST	MP	MARKER POST	SW	STREAM WALL
CL	COVER LEVEL	MP	MARKER POST	SW	STONE WALL
CL	CHAIN LINK FENCE	MF	MILE POST	Tac	TACTILE PAVING
CM	CONCRETE	MP	MILE POST	TBM	TEMPORARY BENCH MARK
Conc	CONCRETE	MU	MUSEUM MARKER	TBM	BOLLARD (Real Time/soft)
CP	CONCRETE PAVING	NP	ELECTRICITY METER	TC	TELEPHONE CALL BOX
CP	CATCHPIT	NP	NAME PLATE	TCP	TELEPHONE CALL POST
CP	CHILDREN'S PLAY EQUIPMENT	NP	NATIONAL GRID ENTRY AREA	TL	TRAFFIC LIGHTS
Cpt	BUILDING CANOPY	OABB	OS BENCH MARK	TL	TIMEWALK LEVEL
Cpw	CARPARK	OC	OVERGROUND CONDUIT	TL	TRAFFIC SIGNAL POST
CT	CABLE TV	OC	OVERGROUND CABLE	TP	TELEGRAPH POLE
CV	CAR STRAP / PICKUP	OHL	OVERHEAD ELECTRIC	TVP	TELEVISION AERIAL
CW	CONCRETE WALL	OHStruct	OVERHEAD STRUCTURE	TW	TRIAL PIT
D	DRAIN	OHW	OVERHEAD WIRES	TW	TIMBER
DC	DUCT COVER	OHW	OVERHEAD WARNING	UTA	UNABLE TO ACCESS
DCP	DRAINAGE CHAMBER	P	PIPE	UTC	UNABLE TO CLEAN
DRM	DILAPIDATED	PB	POST BOX	UTR	UNABLE TO RAISE
DW	DRAIN WELL	PC	PEDESTRIAN CAMERA	UTT	UNABLE TO TRACE
DPC	DAMP PROOF COURSE	Ped	PEDESTRIAN CROSSING	UTT	UNABLE TO TRACE (utilities)
DS	DIRECTION SIGN	PIT	PIT DEPTH	VC	VITRIFIED CLAY
DW	DRAIN WELL	PM	PARKING METER	VC	VEHICLE DETECTION PAD
Ent	ENTRANCE	PR	PETROL PUMP	VP	VENT PIPE
ESP	ELECTRICITY SUPPLY POST	PS	PHOTOGRAPHIC SURVEY	WB	WATER BOARD
EOT	END OF TRACE (utility)	Pwr	PENSTOCK	WB	MAGIK BRIDGE
EP	ELECTRICITY POLE	PW	PUMPING WELL (PW)	WC	WATER COURSE
ER	EARTH ROD	PU	PYLON	WL	WATER LEVEL
ESP	ELECTRICITY SUPPLY POST	Pg	PEDGEMETER	WM	WATER METER
ESP	ELECTRICITY SUPPLY POST	Pg	PEDGEMETER	WM	WATER MONITORING
FC	FOOTBRIDGE CHAMBERS	RB	RAIL BUFFER	WO	WATER OUTLET
FL	FLOOR (LEVEL)	Rs	RISING (LEVEL)	WS	WIND SOCK POLE
FL	FINISHED FLOOR LEVEL	RM	RADIO MONITORING Pnt	WSR	WATER LEVEL SENSOR
Flg	FLOOR LIGHT	RP	REFLECTOR POST		

Key Plan



Grid:
National Grid by GPS Observations to the OS Active Network (OSTN15)

Datum:
Ordnance Datum by GPS Observations to the OS Active Network (OSGM15)

Revision	Amendments	Date	Name
-	-	-	-
-	-	-	-
B	AMENDMENTS	MAY'23	JP
A	ORIGINAL ISSUE	MAY'23	JP

MAKING COMPLEX EASY
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Red Deer House, Dunston Business Village, Stafford Road, Dunston, Staffordshire. ST18 9AB

CLIENT:
RPS Consulting
UK & Ireland

PROJECT:
West Botley

TITLE:
River Cross Sections

Drawn: JP/DR/MV/SB/RR/CP/HJ/EL/B	Checked: CA
Date: May 2023	Scale: 1:100 @ A0
Drg No: UA13692_B	Sheet: 23 of 23

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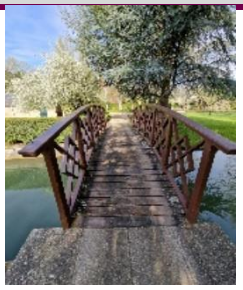
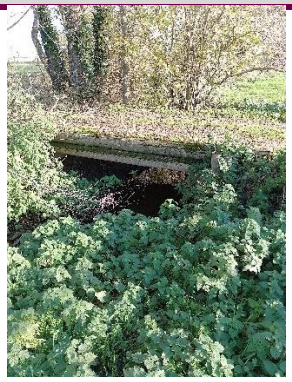
Annex B

Watercourse Structure Photos

Watercourse Structure Photos

ID	Structure	Has the structure been modelled	Photo
Survey Id – EVEM_06946 Model Id - EVEM_06946Ub	Bridges at A4095 (Main Road)	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - EVEM_06432	Pipe over River Evenlode	This structure is not modelled as it is situated above water level, and water will divert around edge, unlikely to cause significant impact	
Survey Id - EVEM_06256 Model Id - EVEM_06256Ub	Rail Bridge over River Evenlode	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - EVEM_05917 Model Id - EVEM_05917Ub	Access bridge over River Evenlode	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - EVEM_03834 Model Id – n/a	Footbridge	This timber decking footbridge is not modelled due to size and nature and it will have limited impact on flows.	
Survey Id - EVEM_02567 Model Id - EVEM_02567Ub	Road bridge over River Evenlode	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - EVEM_01867 Model Id – n/a	Footbridge over River Evenlode	This timber decking footbridge is not modelled due to size and nature.	

ID	Structure	Has the structure been modelled	Photo
Survey Id – EVEM_01394 Model Id – n/a	Footbridge over River Evenlode	This timber decking footbridge is not modelled due to inadequate survey data. The surveyors couldn't get access at this point to determine the bed level due to high water level and high flow velocity.	
Survey Id - EVEM_01364 Model Id - EVEM01364Us	Weir Crest nearby Mill Lane	This structure is modelled using a Spill unit in Flood Modeller, due to its varying geometry	
Survey Id – EVEM_01360 Model Id - EVEM_01360Ub	Access Bridge over Mill Lane	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - EVEM_01313 Model Id - EVEM_01313Ub	Footbridge over River Evenlode	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - EVEM_01122 Model Id – n/a	Footbridge over River Evenlode	This timber decking footbridge is not modelled due to size and nature and it will have limited impact on flows.	
Survey Id - EVEM_00410 Model Id -n/a	Pipe over River Evenlode	This structure is not modelled as it is situated above water level, and water will divert around edge, unlikely to cause significant impact	
Survey Id - EVEM_00071 Model Id - EVEM_00071Ub	Road Bridge over the A40	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id – CFB_01271 Model Id - CFB_01271Uo	Footbridge along City Farm Reach	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.	

ID	Structure	Has the structure been modelled	Photo
Survey Id - CFB_01134 Model Id - CFB_01134Uo	Footbridge along City Farm Reach	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Throat invert level, soffit level, bore area has been taken in accordance with the downstream face as the downstream conditions govern. Overtopping is represented in the 1D domain.	
Survey Id - CFB_00860 Model Id – CFB_00860Uo	Access Bridge along Noth-East side of City Farm cottages	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - CFB_00810 Model Id - CFB_00810Uo	Access Bridge	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Throat invert level, soffit level, bore area has been taken in accordance with the downstream face as the downstream conditions govern. Overtopping is represented in the 1D domain.	
Survey Id - CFB_00691 Model Id- CFB_00691Uo	Access Bridge over City Farm Reach	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - CFB_00318 Model Id- CFB_00318Ub	Stone Wall Road Bridge	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain	
Survey Id - GFR_01414 Model Id- n/a	Foot Bridge	This timber decking footbridge is not modelled due to size and nature and it will have limited impact on flows.	
Survey Id - GFR_01336 Model Id- GFR_01336Uc	Culvert along Goose Farm Reach	This structure is modelled using a circular conduit in Flood Modeller. Overtopping is represented in the 1D domain.	

ID	Structure	Has the structure been modelled	Photo
Survey Id - GFR_01327 Model Id- GFR_01327Uo	Access bridge	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - GFR_01005 Model Id- GFR_01005Uo	Culvert along Goose Farm Reach	This structure is modelled using an Orifice unit (due to stability) in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - GFR_00453 Model Id- GFR_00453Uo	Culvert along Goose Farm Reach	This structure is modelled using an Orifice unit (due to stability and asymmetric shape) in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - GFR_00155 Model Id- GFR_00155Ub	Access Bridge	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain	
Survey Id - GFR_00133 Model Id- GFR_00133Ub	Access Bridge along Mill Lane	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain	
Survey Id - GFR_00113 Model Id- n/a	Foot Bridge	This steel frame is not modelled as it will have limited impact on flows.	
Survey Id - GFR_00052 Model Id- GFR_00052Ub	Foot Bridge	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id - EVEB1_00217 Model Id- EVEB100217Ub	Rail Bridge along the eastern side of Lower Road	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	

ID	Structure	Has the structure been modelled	Photo
Survey Id - EVEB2_00178 Model Id- EVEB200178Ub	Access Bridge along the eastern side of College Farm	This structure is modelled using an Arch Bridge unit in Flood Modeller in accordance with the downstream face information as the downstream conditions govern. Overtopping is represented in the 1D domain.	
Survey Id - EVEB3_01128 Model Id- EVEB3u	Upstream toe of weir	This structure is modelled using a Spill unit in Flood Modeller, due to its varying geometry. The timber decking footbridge has not been modelled.	
Survey Id – EM_DIV1_00033 Model Id- Diver1_slu	Evenlode Diversion structure 1	This structure is modelled as a vertical sluice unit by implying logical control, followed by two circular conduits in Flood Modeller. The culvert exit has been modelled as a spill unit due to head difference.	
Survey Id – EM_DIV2_00113 Model Id- EMDIV2_Sl_Lu EMDIV2_Sl_Ru	Evenlode Diversion structure 2	This structure is modelled as a vertical sluice unit by implying logical control in Flood Modeller.	
Survey Id – EM_DIV2_00111 Model Id- EMDIV200111b	Road Bridge along Mill Lane and Eynsham mill	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	
Survey Id – EM_POND_00250 Model Id- EVEM_01634Us	Sluice gate, Inlet structure to the Eynsham pond	This structure is modelled as a vertical sluice unit by implying logical control in Flood Modeller. This gate has been considered as closed throughout the model simulation.	
Survey Id – EM_POND_00025 Model Id- EMPON00025Ub	Road bridge along the Eynsham pond	This structure is modelled using an Arch Bridge unit in Flood Modeller. Overtopping is represented in the 1D domain.	

Annex C

Result Maps

Notes

1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purpose for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to the correct scale. Only written dimensions should be used.

Legends

- River Channel
- 2d Model Boundary
- 20yr extent
- 30yr extent
- 100yr extent
- 100CC21yr extent
- 100CC43yr extent

20 Farringdon Street,
London, EC4A 4AB
E: rpshydrologyservices
@rpsgroup.com

Client: SolarFive Ltd

Title: Baseline Flood Extents

Site: Botley West Solar Farm

Date: 12-10-2023

Scale: 1:13,999.97	Size: A3
Job Ref: HLEF 82808	Rev: 00

Drawn	Checked	Approved
CE	MM	MM

0 100 200 300 m

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2. If received electronically it is the recipients responsibility to print to the correct scale. Only written dimensions should be used.

Legends

- River Channel
- 2d Model Boundary
- Sensitivity 04 Flood Extent
- 100 yr extent
- Sensitivity 03 Flood Extent

20 Farringdon Street,
London, EC4A 4AB
E: rpshydrologyservices
@rpsgroup.com

A TETRA TECH COMPANY

Client: SolarFive Ltd

Title: Flow Sensitivity Flood Extents

Site: Botley West Solar Farm

Date: 12-10-2023

Scale: 1:12,500	Size: A3
Job Ref: HLEF 82808	Rev: 00

Drawn	Checked	Approved
CE	MM	MM

0 100 200 300 m

N

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Notes

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2. If received electronically it is the recipients responsibility to print to the correct scale. Only written dimensions should be used.

Legends

- River Channel
- 2d Model Boundary
- Sensitivity 05 Flood Extent
- 100 yr extent
- Sensitivity 06 Flood Extent

20 Farringdon Street,
London, EC4A 4AB
E: rpshydrologyservices
@rpsgroup.com

A TETRA TECH COMPANY

Client: SolarFive Ltd

Title: Flood Extents of sensitivity testing on downstream water depth

Site: Botley West Solar Farm

Date: 12-10-2023

Scale:1:12,500	Size: A3
Job Ref: HLEF 82808	Rev: 00

Drawn	Checked	Approved
CE	MM	MM

0 100 200 300 m

N

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Notes

1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purpose for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to the correct scale. Only written dimensions should be used.

Legends

- River Channel
- 2d Model Boundary
- Sensitivity 01 Flood Extent
- 100 yr extent
- Sensitivity 02 Flood Extent

20 Farringdon Street,
London, EC4A 4AB
E: rpshydrologyservices
@rpsgroup.com

Client: SolarFive Ltd

Title: Roughness Sensitivity Flood Extents

Site: Botley West Solar Farm

Date: 12-10-2023

Scale: 1:12,500	Size: A3
Job Ref: HLEF 82808	Rev: 00

Drawn	Checked	Approved
CE	MM	MM

0 100 200 300 m

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Notes

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River Extent

2D Model Boundary

Flood Depth (m)

- <= 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.6
- 0.6 - 0.7
- 0.7 - 0.8
- 0.8 - 0.9
- 0.9 - 1
- 1 - 1.1
- 1.1 - 1.2
- > 1.2

20 Farringdon Street,
London, EC4A 4AB
E: rpshydrologyservices
@rpsgroup.com

Client: PhotoVolt Development Partners Ltd

Title:
Depth Map for 1 in 20 Year Flood Event

Site: Botley West Solar Farm

Date: 12-10-2023

Scale: 1:12,500 | Size: A3

Job Ref: HLEF 82808 | Rev: 00

Drawn	Checked	Approved
CE	MM	XX

100 0 100 200 300 m

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Notes

1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purpose for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to the correct scale. Only written dimensions should be used.

River Extent

2D Model Boundary

Flood Hazard

- Very Low Hazard: <0.75
- Hazard to some: 0.75 to 1.25
- Hazard to most: 1.25 to 2.00
- Hazard to all: > 2.0

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London, EC4A 4AB
E: rpshydrologyservices@rpsgroup.com

Client: PhotoVolt Development Partners Ltd

Title: Baseline Flood Hazard Map for 1 in 20 Year Flood Event

Site: Botley West Solar Farm

Date: 12-10-2023

Scale: 1:12,500	Size: A3
Job Ref: HLEF 82808	Rev: 00

Drawn	Checked	Approved
CE	MM	XX

100 0 100 200 300 m

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River Extent

2D Model Boundary

Flood Velocity (m/s)

- <0.3
- 0.3 to 1.00
- 1.00 to 1.50
- 1.50 to 2.5
- > 2.50

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London, EC4A 4AB
E: rpshydrologyservices@rpsgroup.com

Client: PhotoVolt Development Partners Ltd

Title:
Velocity Map for 1 in 20 Year Flood Event

Site: Botley West Solar Farm

Date: 12-10-2023

Scale: 1:12,500	Size: A3
Job Ref: HLEF 82808	Rev: 00

Drawn	Checked	Approved
CE	MM	XX

100 0 100 200 300 m

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Notes

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River Extent

2D Model Boundary

Flood Depth (m)

- <= 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.6
- 0.6 - 0.7
- 0.7 - 0.8
- 0.8 - 0.9
- 0.9 - 1
- 1 - 1.1
- 1.1 - 1.2
- > 1.2

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20 Farringdon Street,
London, EC4A 4AB
E: rpshydrologyservices@rpsgroup.com

Client: PhotoVolt Development Partners Ltd

Title:
Depth Map for 1 in 30 Year Flood Event

Site: Botley West Solar Farm

Date: 12-10-2023

Scale: 1:12,500	Size: A3
Job Ref: HLEF 82808	Rev: 00

Drawn	Checked	Approved
CE	MM	XX

100 0 100 200 300 m

N

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