



now part of



**Land West of Park Farm,
Thornbury**
Utilities and Foul Drainage Appraisal Report

On behalf of **Barwood Development Securities Ltd & North West Thornbury
Landowner Consortium**

Project Ref: 39209/2501 | Rev: V5 | Date: December 2018

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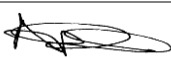

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For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
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V2	03/09/18	Client Issue	DM	AD	MP
V3	21/09/18	Client Issue	DM	AD	MP
V4	09/11/18	Client Issue	DM	AD	MP
V5	11/12/18	Final Issue	DM	AD	MP

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1 Introduction

1.1 The Brief

- 1.1.1 Peter Brett Associates LLP, now part of Stantec (PBA) has been commissioned by Barwood Development Securities Ltd & North West Thornbury Landowner Consortium (the Developer) to prepare a Utilities and Foul Drainage Appraisal Report in support of an outline planning application in relation to the proposed development known as Land West of Park Farm, Thornbury.
- 1.1.2 A location plan is included as **Appendix A**. The proposed development site is located on the northwest of the town of Thornbury, South Gloucestershire and is currently greenfield land.
- 1.1.3 The site is bounded by Oldbury Lane to the north, an existing residential development to the east and greenfield land to the south and west.
- 1.1.4 The proposals comprise the following:
- Up to 630 residential dwellings;
 - Land for a Neighbourhood Hub (up to 700sqm of retail and community uses);
 - Two vehicle access junctions from Oldbury Lane; and
 - A sustainable travel corridor, including a bus, cycle and pedestrian links, south east through to the Park Farm development.
- 1.1.5 A copy of the current Illustrative Masterplan can be found in **Appendix B**.

1.2 The Study

- 1.2.1 This Utilities and Foul Drainage Appraisal will outline and assess the utility issues in relation to the proposed site and will identify the need for new utility infrastructure, potential upgrade/reinforcement works, or the need for further investigation/modelling.

2 Utility Providers

2.1 Introduction

2.1.1 This section provides an overview of the existing utility infrastructure within and adjacent to the site.

2.2 Statutory Undertakers Contact List

2.2.1 The following table identifies the Statutory Undertakers that have been approached for record drawings and summarises the reported presence of utility infrastructure in the vicinity of the site, along with the likely requirement for diversion or protection of any existing infrastructure.

Utility Medium	Statutory Undertaker	Existing Infrastructure On/Near Site	Diversions Works Required	Enquiry Date
Electricity	Western Power Distribution	Yes – on site	Yes	03/11/17
Electricity	ENGIE	No	No	03/11/17
Electricity	Utility assets Ltd	No	No	03/11/17
Electricity	Energetics	No	No	06/11/17
Electricity	GTC	Yes – near site	No	01/12/17
Gas	Wales and West Utilities	Yes – near site	No	30/11/17
Oil	CLH Pipeline	Yes – on site	No	07/11/17
Telecoms	Openreach	Yes – on site	Yes	03/11/17
Telecoms	Vodafone	No	No	09/11/17
Telecoms	COLT Telecommunications	No	No	13/11/17
Telecoms	CityFibre	No	No	03/11/17
Telecoms	GTT (Hibernia Networks)	No	No	03/11/17
Telecoms	Telia (Telent)	No	No	20/11/17
Telecoms	Interoute	No	No	03/11/17
Telecoms	TATA	No	No	10/11/17
Telecoms	MBNL	No	No	03/11/17
Telecoms	KPN	No	No	06/11/17
Telecoms	Sky UK	No	No	06/11/17
Telecoms	Verizon UK Ltd	No	No	03/11/17
Telecoms	Virgin Media	Yes – near site	No	06/11/17
Potable Water	Bristol Water	Yes – near site	No	01/12/17
Foul Drainage	Wessex Water	Yes – on site	No	13/11/17
Other	Mast Finder	No	No	07/11/17

Table 2.1: Statutory Undertaker Contact List

- 2.2.2 An Existing Utility Infrastructure Constraints plan (Drawing No. 39209-2501-001_H) has been prepared showing the extent of the existing utility infrastructure within and adjacent to the site, and is contained within **Appendix C**.
- 2.2.3 The information on utilities contained within this report has been derived from data provided by the main public utility companies. No information is provided in relation to “private” infrastructure that might be present on site.
- 2.2.4 Where Statutory Undertakers have identified services within or near to the proposed development, those services are discussed within the following sections.

3 Electrical Infrastructure

Western Power Distribution (WPD)

3.1 Existing Electrical Infrastructure

- 3.1.1 WPD record mapping show an 11kV overhead line crossing the northern area of the site in an east to west alignment with a pole mounted transformer (79/3048 (7683) OAK FM) on the northern boundary from which low voltage (LV) overhead lines emanate to supply existing developments to the north of the site.
- 3.1.2 Underground 11kV cables are recorded to be within the verges of Oldbury Lane.

3.2 Diversionsary Works

- 3.2.1 Based on the current masterplan design, it will be necessary to divert the existing 11kV overhead line that cross the site. The LV underground cables within the verge of Oldbury Lane will be affected by the development of the access junctions.
- 3.2.2 WPD will need to remove the overhead line, install new termination poles and stays and install the 11kV underground diversion along the boundary of the site. Lowering works will also be required at the location of the proposed assess junctions.

3.3 Proposed Infrastructure

- 3.3.1 WPD have assessed the impact that the proposed development will have on the local electrical network and the availability of network capacity to supply the development. They concluded that in order to supply the proposed development, it is likely that two new ground mounted electricity substations will need to be established on the site. The proposed substation footprints, excluding external access provision, is 4m x 4m. In addition, 24-hour vehicle access will be required for access and maintenance purposes. The locations of the proposed electricity substations will need to be agreed with WPD and considered within the masterplanning process.
- 3.3.2 WPD have advised that a 5m “stand off” to any proposed residential dwellings be adhered to due to potential noise disturbance from the substation enclosure.
- 3.3.3 In addition, low voltage cable feeds would emanate from the substation for supply purposes. The layout of this infrastructure is dependent on the final design of the proposed development.
- 3.3.4 A detailed study, which would be carried out as part of the formal connection offer, may highlight some areas for reinforcement but based on the current investigations it is anticipated that a local connection should be sufficient.

4 Gas and Oil Pipelines

Gas - Wales & West Utilities (WWU) and GTC

4.1 Existing Gas Infrastructure

- 4.1.1 No gas infrastructure is recorded to be within the proposed development boundary.
- 4.1.2 The closest WWU medium pressure (MP) gas main is within Park Road approximately 550m south east of the site. This MP gas main continues to a gas pressure reducing station off Park Road from which low pressure (LP) gas mains supply the existing surrounding development areas.
- 4.1.3 The Park Farm site to the east of the proposed development site is supplied by GTC LP gas mains.

4.2 Diversionary Works

- 4.2.1 As there is no recorded gas infrastructure within the development boundary or at the location of the proposed access junctions, no diversionary works will be required.

4.3 Proposed Infrastructure

- 4.3.1 WWU have undertaken a capacity check of their network within the area of the proposed site. The result of this capacity check has shown that their nearest main with sufficient capacity is a 125mm low pressure main situated approximately 550m south east of the proposed site.
- 4.3.2 It is advised that GTC be contacted to determine if there is a closer point of connection to their embedded network within the existing development to the east of the site.

Oil Pipelines – CLH Pipeline System (CLH)

4.4 Existing Oil Infrastructure

- 4.4.1 A CLH oil pipeline crosses the north-west corner of the proposed development site.

4.5 Diversionary Works

- 4.5.1 No buildings or structures will be permitted within 3m either side of the pipeline. The current masterplan considers the location of this oil pipeline. No diversion works will be required.

5 Telecommunications

Openreach, Surf Telecoms and Virgin Media

5.1 Existing Telecommunications Infrastructure

- 5.1.1 Underground Openreach cable ducts, chambers and overhead lines as well as Surf underground cable ducts are recorded to be within a section of the southern verge of Oldbury Lane, west of Severdale Redcliffe House, that falls within the proposed development boundary.
- 5.1.2 Openreach and Surf Telecoms infrastructure is recorded within and along Oldbury Lane.
- 5.1.3 Virgin media supply Thornbury. The closes Virgin media infrastructure to the proposed development is within the footways of the existing development to the east of the site.

5.2 Diversionary Works

- 5.2.1 The Openreach and Surf infrastructure along Oldbury Lane will be affected by the construction of the development access junctions.
- 5.2.2 For Openreach to assess the extent of works required, they will need to undertake a detailed survey. At this stage, these survey works have not been commissioned.
- 5.2.3 It has been confirmed that there are two 95mm diameter Surf ducts within the verge of Oldbury Lane that will need to be diverted, slewed or lowered so as not to be compromised by the proposed works. Surf require a minimum of 30 days' notice prior to these works taking place.

5.3 Proposed Infrastructure

- 5.3.1 It is assumed the supply strategy will be via a new connection to the existing duct networks along Oldbury Lane at the locations of the proposed access junctions with new infrastructure running through the development in line with the proposed masterplan.
- 5.3.2 Openreach normally undertake to provide telephone and broadband services to all new developments free of charge with the end user ultimately paying for connection costs. All civils works will typically be undertaken by the developer using free issue Openreach ducts and Openreach specified duct boxes to Openreach confirmed design. Openreach will then pull cables through the newly installed ducts as and when required.
- 5.3.3 Openreach will make payments to the developer for the construction and installation of the Openreach network on new developments on a per unit basis. The payment amounts are agreed between Openreach and the House Builders Federation (HBF). Openreach will make payments for all sites of 11 or more plots, providing standards are met on completion, of £140 per house and £50 per flat.

5.4 Broadband

- 5.4.1 A check of the availability and quality of BT Broadband within the area of the proposed development has been undertaken.
- 5.4.2 The estimated download speed at the present time is 2.5Mb-6.5Mb for standard broadband with a minimum guaranteed speed of 1.5Mb for fibre broadband.
- 5.4.3 The actual speeds being made available will need to be discussed in detail with BT at the design/ delivery stage. A copy of these results can be found in **Appendix D**.
- 5.4.4 The above information has been sourced online from bt.com-BT-Official Site.

5.5 TV and DAB Services

- 5.5.1 The proposed development site is predicted to receive a good terrestrial TV signal from the Mendip transmitter in the West TV region.
- 5.5.2 The standard reception forecast for the area has 103 channels classed as good reception. The HD forecast for the area has 11 channels classed as good reception. A copy of these results can be found in **Appendix E**.

6 Potable Water

Bristol Water

6.1 Existing Potable Water Infrastructure

- 6.1.1 An abandoned BW potable water main runs along the northern boundary within the proposed development.
- 6.1.2 A 125mm diameter distribution main reducing to a 4-inch diameter distribution main is recorded to be within the southern verge of Oldbury Lane.
- 6.1.3 BW mapping shows a private water main entering the site from Oldbury Lane and continuing approximately 180m into the proposed development site.

6.2 Diversionary Works

- 6.2.1 The abandoned BW water main within the site does not pose constraint on the proposed development.
- 6.2.2 The existing private water main entering the site from Oldbury Lane will need to be decommissioned prior to development works.
- 6.2.3 Protective works may be required to the distribution main at the locations of the proposed access junctions. These works are dependent on the detailed design of the access junctions and depth of the mains.

6.3 Proposed Infrastructure

- 6.3.1 BW has undertaken an in-depth network modelling assessment and confirmed that reinforcement works will be required prior to the onsite mains being made live. The reinforcement works will be undertaken at BW's cost.
- 6.3.2 BW has provided an approximate timescale of 5-6 months for the reinforcement works and will strive to undertake the works to meet the development timescales.
- 6.3.3 It will be necessary for BW to arrange for data loggers to be fitted to assess the Network accurately to ensure the reinforcement works will be sufficient for this site, they will need to be out for 1-2 weeks before any works start.

6.4 Water Quality

- 6.4.1 The proposed development site is within a supply area with water hardness classed as hard. A copy of these findings can be found in **Appendix F**.

7 Foul Water

Wessex Water (WW)

7.1 Existing Foul Sewer Network

- 7.1.1 Two parallel 375mm diameter strategic sewers cross the site in an approximate south to north alignment. An additional 600mm diameter strategic sewer enters the site from the east and discharges to one of the 375mm diameter sewers within the site. The sewers continue along Oldbury Lane to the receiving sewerage treatment works (STW).

7.2 Diversionary Works

- 7.2.1 As the sewers crossing the site are strategic and transfer the flows from Thornbury to the STW, WW has stated that diversion of these sewers will not be permitted.
- 7.2.2 No buildings or structures will be permitted within 6m either side of the sewers. The current development masterplan reflects this constraint.
- 7.2.3 Protective works may be required at the location of the western development access junction. These works are dependent on the detailed design of the access junction and depth of the sewers.
- 7.2.4 The need for diversions or protection works to the sewer at the location of the development junction depends on the construction depth of the proposed junction. However, it is not anticipated that there will be a need for protection works. If reduced cover to the sewer is encountered, then it is likely that a protection slab can be used to provide sufficient protection to the sewer.

7.3 Proposed Infrastructure

- 7.3.1 WW has undertaken an appraisal of the capacity of the local foul network to accommodate the additional flows. This Appraisal indicated that there is inadequate capacity to accommodate the additional foul flows. The existing hydraulic conditions show the trunk sewers remain surcharging close to ground level during rainfall events.
- 7.3.2 WW are undergoing upgrade works within this area and have plans to upgrade the 375mm diameter sewer within the site to a 600mm diameter sewer. These upgrade works will continue from the point the existing 600mm diameter sewer connects to the 375mm diameter sewer to the STW. If additional upgrade works are required to accommodate the proposed development, this responsibility falls upon WW with no costs being passed onto the developer.
- 7.3.3 WW will review and plan their works whilst considering the phasing and anticipated build rate of the proposed development.
- 7.3.4 Further consultation with WW will be required to determine a point of connection and progress of the ongoing upgrade works.
- 7.3.5 The onsite drainage will need to be designed and constructed to adoptable standards. A S104 agreement of the Water Industry Act 1991, will need to be completed for the onsite sewers with the offsite sewers and final connection to the existing foul water sewer network being undertaken via S98 Agreement of the Water Industry Act 1991.

8 Conclusion

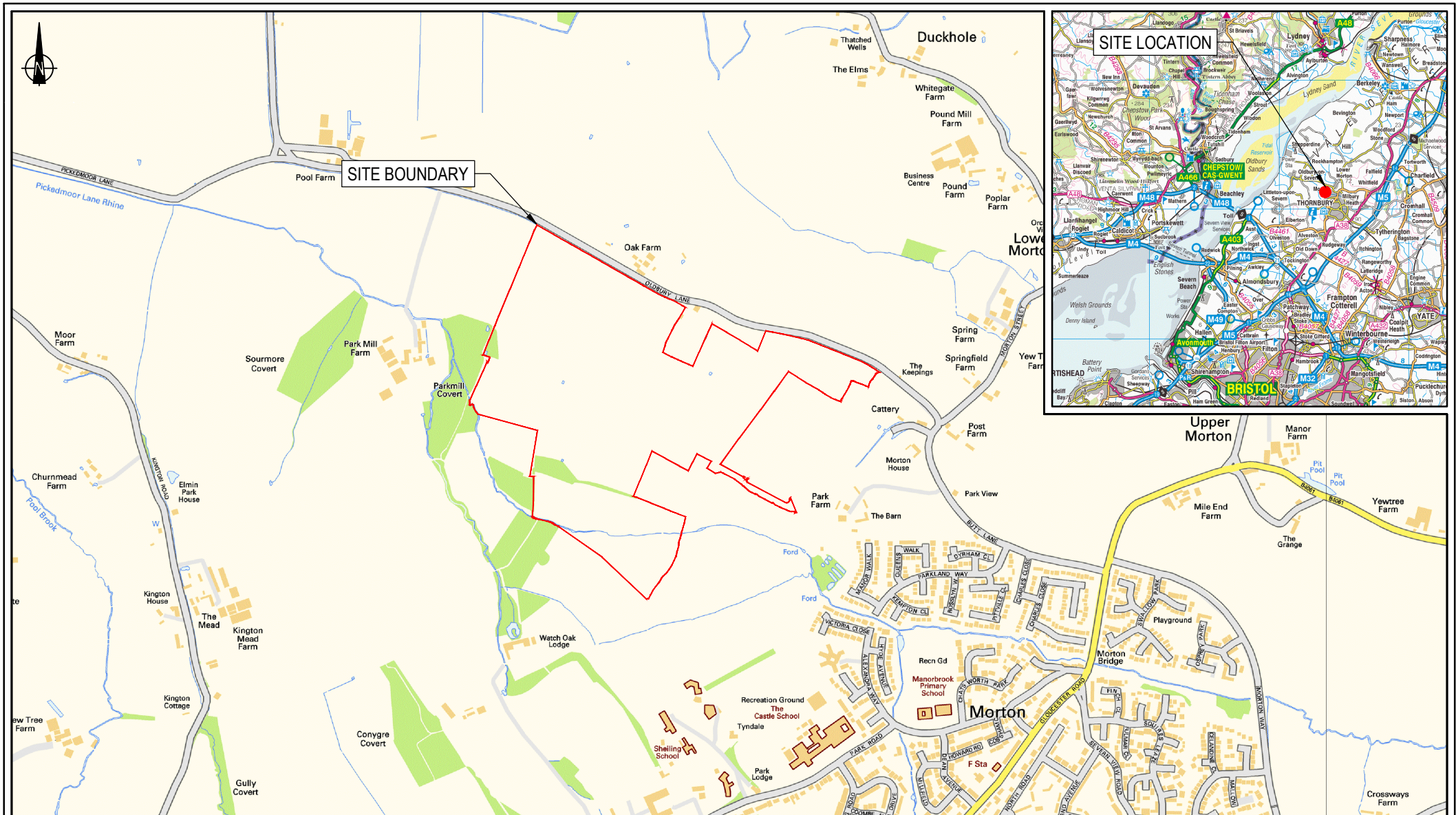
8.1 Summary of Investigations

The following table summarises the results of the investigations undertaken by PBA.

Statutory Undertaker	Existing Utility Infrastructure		New Utility Infrastructure
	Onsite / Near Development	Diversion Requirements	Requirements
Western Power Distribution	11kV overhead lines cross the northern area of the site. Underground cables are recorded within the verges of Oldbury Lane.	The 11kV overhead lines will need to be diverted. Lowering works will be needed at the location of the proposed access junctions.	Three new ground mounted substation will need to be established onsite.
WWU	No infrastructure within the immediate vicinity of the site. There is a MP gas main approximately 550m south east of the site.	No diversions required.	Preliminary point of connection (POC) to the MP main 550m south east of the site.
GTC	GTC supply the existing development to the east of the site.	No diversions required	It is advised that GTC be contacted to determine if they can provide a closer POC to supply the site.
CLH Pipeline System	A CLH oil pipeline crosses the north-west corner of the site.	Based on the current masterplan no diversion works are required.	N/A
Openreach	Openreach cable ducts and chambers are within and along Oldbury Lane.	Diversion/lowering works will be needed at the locations of the development access junctions.	Assumed connection to the existing duct network along Oldbury Lane at the location of the proposed access junctions.
Virgin Media	The closest Virgin Media infrastructure is within the footways of the existing development to the east of the site.	No diversions required.	Potential connection to the existing network within the development to the east of the site.
Surf	Two cable ducts are recorded within the southern verge of Oldbury Lane.	Diversion/lowering works will be needed at the locations of the development access junctions.	N/A
Bristol Water (Potable)	A 4-inch distribution main and an abandoned main are within the southern verge of Oldbury Lane.	Protective works may be required at the location of the access junctions. This is dependent on detailed design and depth of the main.	BW will need to undertake reinforcement works. An approximate timescale of 5-6 months has been provided to undertake the required works.
Wessex Water (Foul)	Two 375mm diameter and a 600mm diameter foul strategic sewer cross the site.	No onsite diversions will be permitted. No buildings or structures will be permitted within 6m either side of the sewers. Protection works may be required at the location of the development access junction.	There is currently inadequate capacity within the network to accommodate the additional flows. WW are undergoing upgrade works and there are plans for future upgrade works.

Table 7.1: Summary of Investigations

Appendix A Site Location Plan



Offices throughout
the UK and Europe
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Client
**BARWOOD DEVELOPMENT
SECURITIES**

**LAND TO THE WEST OF PARK FARM,
THORNBURY**

SITE LOCATION PLAN

Date 26.01.2018

A4 Scale NTS

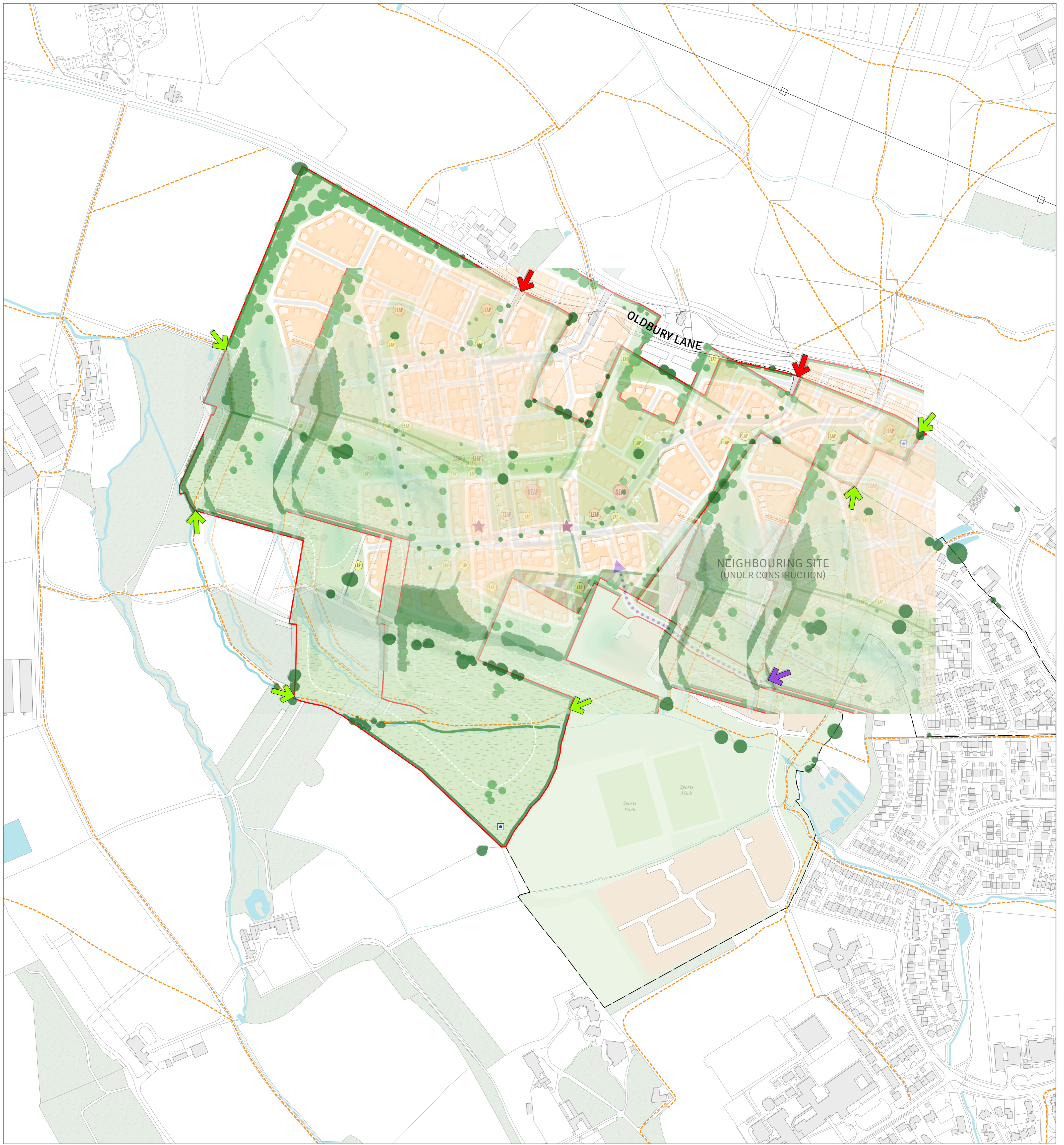
Drawn by EW

Checked by JHI

Figure Number

FIGURE 1

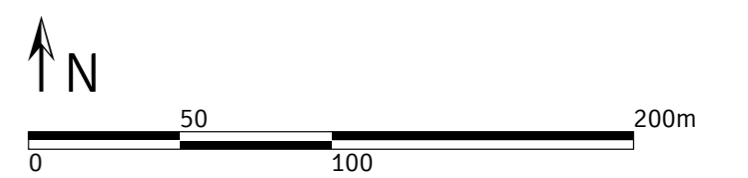
Appendix B Masterplan



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The scaling of this drawing cannot be assured
 Rev A (23.08.18) - Update to site boundary (GR)
 Rev B (06.09.18) - Plan amended to reflect updated tree survey (GR)
 Rev C (16.09.18) - Sustainable Transport Connection added (GR)
 Rev D (30.10.18) - Layout adjusted (GR)
 Rev E (01.11.18) - Proposed hedgerow adjusted (GR)
 Rev F (07.11.18) - Proposed hedgerow adjusted (GR)
 Rev G (08.11.18) - Illustrative tree planting updated (GR)

- | | | | |
|--|---|--|--------------------------------------|
| | Site Boundary | | Existing Trees |
| | Residential | | Proposed Trees |
| | Public Open Space | | Hedgerows |
| | Key Public Open Space | | Neighbourhood Equipped Area of Play |
| | Drainage | | Local Equipped Area of Play |
| | Natural / Semi-Natural Open Space | | Local Area of Play |
| | Primary Vehicle Access Point | | PROW |
| | Retained Pedestrian Access (PROW) | | Allotments |
| | Pedestrian, Cycle and Bus Access Point (Sustainable Transport Link) | | Potential Wildlife Pond Location |
| | Sustainable Transport Connection | | Indicative Location of Community Hub |



PROJECT
NW Thornbury

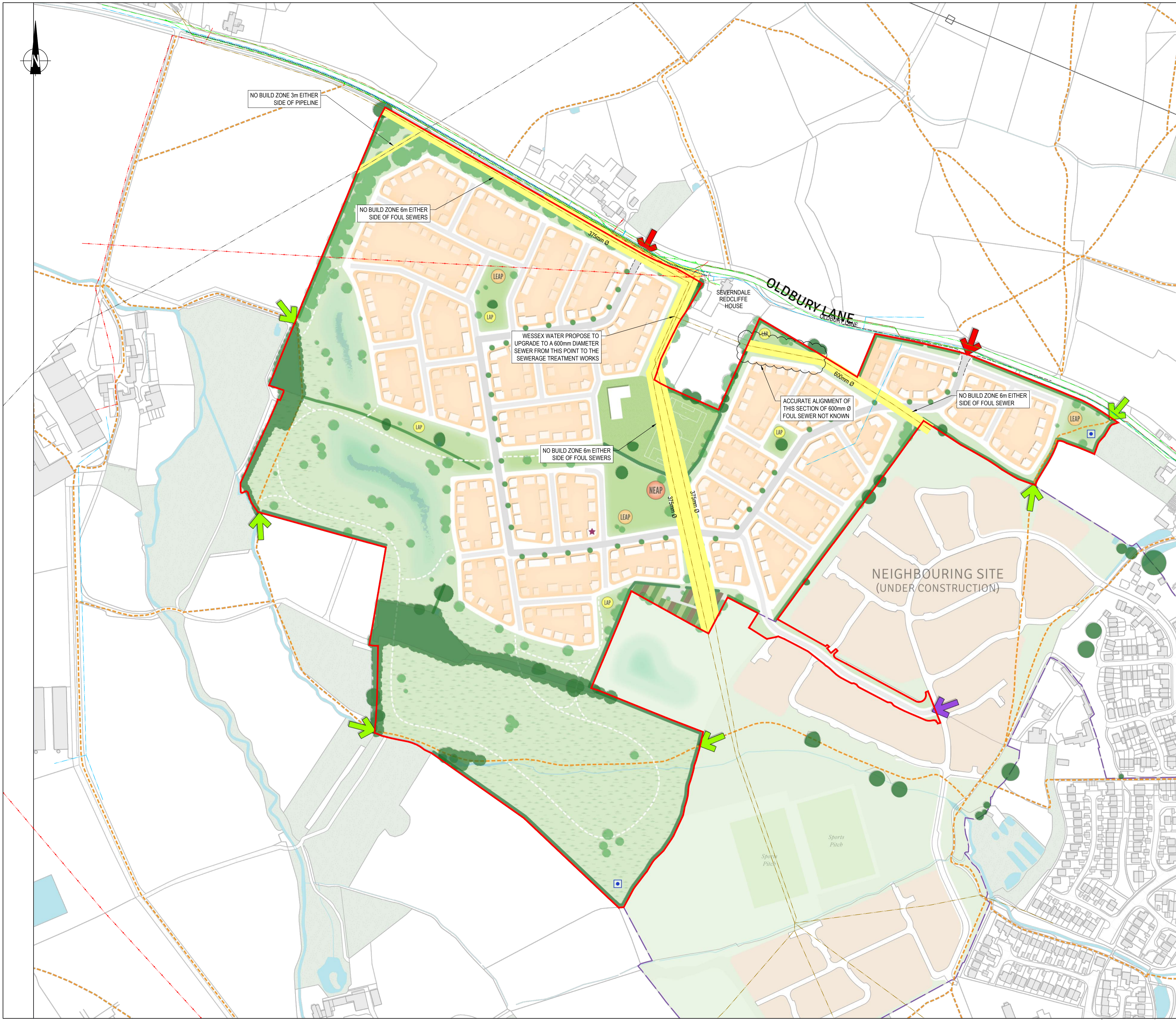
DRAWING TITLE
Illustrative Masterplan

DATE 15.08.18	SCALE 1:2500@A1 1:5000@A3	DRAWN BY GR	CHECK BY AJT
PROJECT NO 27982	DRAWING NO 9410	REVISION G	

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 Planning • Master Planning & Urban Design • Architecture •
 Landscape Planning & Design • Environmental Planning • Graphic
 Communication • Public Engagement • Development Economics

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Appendix C Existing Utility Infrastructure Constraints Plan



NOTES

1. ABANDONED SERVICES MAY NOT BE SHOWN ON THIS PLAN.
 2. TRUE POSITION OF THE SERVICES MAY BE DIFFERENT TO THAT SHOWN ON THIS PLAN, WHICH IS INTENDED FOR GENERAL GUIDANCE ONLY. NO GUARANTEE CAN BE GIVEN TO ITS ACCURACY AND IT SHOULD NOT BE RELIED UPON DURING MASTERPLANNING, INTRUSIVE INVESTIGATIONS, EXCAVATIONS AND CONSTRUCTION.
 3. THESE SERVICES MAY NOT RUN IN A STRAIGHT LINE EITHER HORIZONTALLY OR VERTICALLY BECAUSE OF GROUND CONDITIONS, OBSTACLES AND OTHER REASONS.
 4. BURIED SERVICES MAY EXIST AT VARIOUS DEPTHS AS GROUND LEVEL MAY HAVE BEEN ALTERED SINCE THE UTILITY APPARATUS WAS LAID.
- BEFORE EXCAVATING OR GROUND WORKS**
5. ANY SITE INVESTIGATION OR GROUND PENETRATING ACTIVITY SHALL COMPLY WITH THE REQUIREMENTS OF HSE GUIDANCE DOCUMENT HS(G) 47 "AVOIDING DANGER FROM UNDERGROUND SERVICES"
 6. ALL UNDERGROUND SERVICES I.e. CABLES, PIPES, DUCTS SHOULD BE LOCATED USING THE FOLLOWING TECHNIQUES:
 - a. REFERENCE TO DETAILED LARGER SCALE DRAWINGS AND CABLE ROUTE PROFILES. THESE WILL NEED TO BE REQUESTED FROM THE SERVICE PROVIDER AND REFERRED TO DURING THE DESIGN STAGE AND MADE AVAILABLE ON SITE TO SITE OPERATIVES PRIOR TO THE COMMENCEMENT OF ANY GROUNDWORKS.
 - b. SUITABLE INSTRUMENTS I.e. GROUND PENETRATING RADAR, CABLE LOCATING DEVICES WILL NEED TO BE USED TO DETERMINE THE LOCATION AND PRESENCE OF UNDERGROUND SERVICES/OBSTRUCTIONS BEFORE EXCAVATION WORKS PROCEED.
 - c. SAFE DIGGING TECHNIQUES (HAND EXCAVATION) AS DETAILED IN HS(G) 47 WILL BE NECESSARY TO DETERMINE THE EXACT POSITION OF BURIED SERVICES AND OBSTRUCTIONS BEFORE WORK CAN PROCEED.
 - d. ALL APPARATUS FOUND SHOULD BE CROSS REFERENCED WITH THE DETAILED RECORD PLANS. ANY ABNORMALITIES SHOULD BE REPORTED TO THE PROJECT MANAGER.
 7. INFORMATION CONCERNING THE POSITION OF EXISTING UTILITY INFRASTRUCTURE HAS BEEN EXTRACTED FROM RECORD MAPPING OBTAINED FROM THE FOLLOWING STATUTORY UNDERTAKERS:

STATUTORY UNDERTAKER	MAPPING RECEIVED
WESTERN POWER DISTRIBUTION	03/12/2017
CLH PIPELINES	07/11/2017
OPENREACH	03/11/2017
BRISTOL WATER	03/11/2017
WESSEX WATER	13/11/2017

KEY


- - - - - ABANDONED UTILITY
- EXISTING LV OVERHEAD LINES
- EXISTING 11KV CABLES
- EXISTING 11KV OVERHEAD LINES
- EXISTING OIL PIPELINES
- EXISTING OPENREACH CABLE DUCT
- EXISTING OPENREACH OVERHEAD LINE
- EXISTING SURF CABLE
- EXISTING POTABLE WATER MAINS
- EXISTING PRIVATE WATER MAIN
- EXISTING FOUL SEWER
- TEMPORARY PHYSICAL CONSTRAINT
- SITE BOUNDARY

Mark	Revision	Date	Drawn	Chkd	Appd
J	SITE BOUNDARY AND MASTERPLAN AMENDED	24.08.18	DBM	AD	AD
I	SITE BOUNDARY AMENDED	08.06.18	DBM	AD	AD
H	REVISED MASTERPLAN OVERLAID	05.06.18	DBM	AD	AD
G	REVISED MASTERPLAN OVERLAID	29.05.18	DBM	AD	AD
F	SERCIVES AMENDED TO ALLIGN WITH UPDATED TOPO	15.05.18	DBM	AD	AD
E	NOTE ADDED	08.05.18	DBM	AD	AD
D	NO BUILD ZONE AMENDED	04.05.18	DBM	AD	AD
C	FOUL POSITION AND NO BUILD ZONE AMENDED	02.05.18	DBM	AD	AD
B	NO BUILD ZONES ADDED & DRAWING NAME AMENDED	29.01.18	DBM	AD	AD
A	AMENDING CLIENT NAME & DRAWING BORDER TITLE	07.12.17	LB	EK	-

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.
 UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

Drawing Issue Status **FOR INFORMATION**

LAND TO THE WEST OF PARK FARM THORNBURY EXISTING UTILITY INFRASTRUCTURE CONSTRAINTS PLAN

Client BARWOOD DEVELOPMENT SECURITIES			 Offices throughout the UK and Europe www.peterbrett.com © Peter Brett Associates LLP TAUNTON Tel: 01823 218 940
Date of 1st Issue 01/12/2017	Designed -	Drawn EW	
A1 Scale 1:2000	Checked DBM	Approved AD	
Drawing Number 39209/2501/001	Revision J		

Appendix D Broadband Availability Speed



Great news

You can get speeds up to **6.5Mb** with our Broadband Unlimited, and you can get BT TV.

Oak Farm, Oldbury Lane, Bristol, BS35 1RD [Change address](#) >

[Hide more about your speed details](#) ^

Standard broadband

Download Speed:

2.5Mb-6.5Mb

Estimated download speed range*

Minimum Speed:


1.5Mb

This speed is an estimate, but it should be accurate to within 1 or 2 Mb [Learn more](#) >

Appendix E Coverage Checker Results

Results for

BS35 1RD 

-  This address is predicted to receive a good terrestrial TV signal from the Mendip transmitter in the [West TV region](#). Your local BBC news service is **Points West** and **The West Country Tonight** for ITV.

























Your retune dates and available channels depend on which transmitter you are receiving your television signal from.

To find out if there is planned engineering work which may affect your signal, click [here](#).

- [Check other transmitters which serve this address](#)
- [Check all retune dates](#)
- [Change address](#)

▼ Digital services through an aerial at your address [Click to expand](#)

▲ Reception forecast and retune dates [Click to collapse](#)

	Today	Future		
	7 Jun 2018	April - June 2019	April - June 2019	Apr - Jun 2019
	No retune required	 Retune required to retain existing services 	 Retune required to retain existing services 	 Retune required to retain existing services 
	 A wideband aerial may be required for channels with this symbol	 A wideband aerial may be required for channels with this symbol	 A wideband aerial may be required for channels with this symbol	 A wideband aerial may be required for channels with this symbol
Standard reception forecast	<ul style="list-style-type: none">  Good reception 103 channels  Variable reception 9 channels 	<ul style="list-style-type: none">  Good reception 109 channels  Variable reception 9 channels 	<ul style="list-style-type: none">  Good reception 109 channels  Variable reception 9 channels 	<ul style="list-style-type: none">  Good reception 118 channels
HD forecast	<ul style="list-style-type: none">  Good reception 11 channels  Variable reception 5 channels 	<ul style="list-style-type: none">  Good reception 11 channels  Variable reception 5 channels 	<ul style="list-style-type: none">  Good reception 11 channels  Variable reception 5 channels 	<ul style="list-style-type: none">  Good reception 16 channels

Appendix F Water Hardness

Thornbury, Shirehampton, Pill and Portishead

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Water supply zone	Thornbury, Shirehampton, Pill and Portishead (416)		
Source / supply description	Your water supply comes from surfaces waters (rivers)		
Hardness	Your drinking water supply is classed as hard.		
Calcium mg/l Ca	91		
Magnesium mg/l Mg	8.0		
Total Hardness mg/l CaCO ₃	258		
UK Degrees Clark (°C)	18		
Degrees French (°f)	26		
Degrees German (°dH)	15		
Fluoride	Bristol Water does not add - and currently has no plans to add - fluoride to the water it supplies. The water we supply does contain a small amount of fluoride that occurs naturally in the source waters we use.		
Fluoride mg/l	0.10		
Parameter	Average value	Drinking water quality standards	Units
Alkalinity mg/l CaCO ₃	184	No legal limit applies	mg/l CaCO ₃
Alkalinity mg/l HCO ₃	225	No legal limit applies	mg/l HCO ₃
Chloride mg/l	50	250	mg/l Cl
Nitrate mg/l NO ₃	20	50	mg/l NO ₃
Phosphate mg/l P	1.6	No legal limit applies	mg/l P
Sodium mg/l	25	200	mg/l Na
Sulphate mg/l	78	250	mg/l SO ₄
Conductivity µS/cm	577	2500	µS/cm @20°C
pH	7.39	6.5 to 9.5	pH value