

Utilities Assessment



Homes
England

Brislington Meadows, Bristol

Utilities Assessment Report
13492-CRH-XX-XX-RP-C-0003

For



Homes
England

Project Number:

13492

March 2022

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1.0 INTRODUCTION

- 1.1. Homes England propose to develop a 9.6 ha site located south of Broomhill and north of Victory Park in the southeast of Bristol, approximately 3.4 km east of Bristol City Centre (grid reference 362615, 171114). Up to 260 residential dwellings are proposed on the site.
- 1.2. CampbellReith has been instructed by Homes England to complete a Utilities Assessment to address the following:
- To confirm existing services located close to and within the site.
 - To determine utility diversionary services works required to make way for development of the site.
 - To confirm available capacity within the existing services networks to service the proposed development.
- 1.3. The purpose of this report is to research existing utilities within and in close proximity to the site. To identify onsite utility diversions and to determine any offsite service reinforcement works required to facilitate the proposed development.
- 1.4. The report is structured as follows:
- Section 4 – Reviews the existing utility infrastructure within and around the site.
- Section 5 – Reviews the extent of diversionary works required.
- Section 6 – Sets out the proposed utility infrastructure.

2.0 EXISTING SITE

2.1. Location

2.1.1. The site is located in Brislington in the southeast of Bristol within the administrative boundary of Bristol City Council and the Ward of Brislington East. The site comprises an irregular shaped parcel of land (9.6 hectares) known as Brislington Meadows. The site is centred approximately on Nation Grid Reference 362681, 171168 and the nearest postcode reference is BS4 4NZ.

2.1.2. A site location plan is illustrated in Appendix A.

2.2. Site Characterisation / Land Use

2.2.1. The site currently comprises open fields crossed by two public rights of way and a network of informal trodden paths. The site is not subject to specific environmental or landscape designations and has an allocation for housing development in the Council's Local Plan.

2.2.2. There is no public vehicular access into the Site at present. There are two public rights of way across the Site, one running east-west along the southern boundary connecting Bonville Road and School Road, and one north-south between Belroyal Avenue and Bonville Road. In addition, a network of informal trodden paths crosses the site. The Applicant is in the process of formalising public access rights and the proposed development will accommodate pedestrian and cycle access across and within the site.

2.2.3. To the northeast, the Site is bound by Broomhill Road and residential properties in Condoover Road. To the north the Site is bound by residential dwellings on Belroyal Avenue and an associated rear access lane, Broomhill Junior School and Mama Bear's Day Nursery, and residences accessed off Allison Road. To the east the site is bound by Bonville Road and the protected employment area comprising the Bonville Trading Estate. To the west of the site is School Road and allotments. To the south lie Victory Park and paddocks which comprise protected open space and a Site of Nature Conservation Interest.

2.2.4. A small section of land to the north east was occupied by buildings formerly used as a police station. The demolition of these buildings was carried out during October 2020 under prior approval from Bristol City Council, application number 20/02571/N.

3.0 DEVOLPMENT PROPOSALS

3.1. Proposed Scheme

- 3.1.1. The “proposed development” comprises of up to 260 dwellings with pedestrian, cycle and vehicular access, cycle and car parking, public open space and associated infrastructure. All matters except access are reserved.
- 3.1.2. Refer to Appendix B for a copy of the illustrative masterplan.

4.0 EXISTING UTILITIES

4.1. Utility Searches

4.1.1. Existing asset plans were utilised to assess the presence of utilities infrastructure in and around the development area. As a result it was noted that the following services were within or close to the site boundary:

- Electricity cables and infrastructure
- Gas infrastructure
- Telecommunications cables
- A telecommunications mast
- Potable water infrastructure
- Foul water sewers
- Surface water sewers

4.2. Table 1 below provides a summary of Statutory Undertakers that were then consulted regarding record plans of their existing utility infrastructure close to and within the proposed site.

Table 1: Statutory Undertaker Contacts List

| UTILITY TYPE | STATUTORY UNDERTAKER | EXISTING INFRASTRUCTURE |
|-------------------------|----------------------------------|-------------------------|
| Electricity | Western Power Distribution (WPD) | ✓ |
| Gas | Wales and West Utilities (WWU) | ✓ |
| Storm and Foul Drainage | Wessex Water (WW) | ✓ |
| Potable Water | Bristol Water (BW) | ✓ |
| Telecoms | British Telecom (BT) | ✓ |
| Telecoms | Virgin Media (VM) | ✓ |

4.3. Electricity

4.3.1. Western Power Distribution (WPD) are the utility undertaker responsible for supplying electricity within Bristol.

4.3.2. The records provided by WPD show a 132Kv HV overhead line that runs across the south section of the site parallel to the site boundary, a pair of LV underground cables that supply the telecommunications mast north of the site entrance on Bonville Road and LV underground cable that previously supplied the disused police station.

4.3.3. Refer to Appendix C for the utility records plan from WPD.

4.4. Gas

4.4.1. Wales & West Utilities Limited (WWU) are the statutory utility undertaker responsible for supplying gas to Bristol.

4.4.2. The utility records provided by WWU show that there is no WWU infrastructure present on the site, however there are a number of underground Low Pressure gas mains present close to the site boundary along Bonville Road, School Road, Broomhill Road and Allison Road.

4.4.3. Refer to Appendix D for the utility records plan from WWU.

4.5. Storm and foul water drainage

4.5.1. Wessex Water (WW) are the statutory utility undertaker responsible for providing drainage to Bristol.

4.5.2. The records show that there is no WW infrastructure present on the site, however said record indicate that the surrounding residential areas are served by WW infrastructure through a combination of Foul, Storm and Combined Water sewers.

4.5.3. Refer to Appendix E for the utility records plan from WW.

4.6. Potable Water

4.6.1. Bristol Water (BW) are the statutory utility undertaker responsible for providing potable water to Bristol.

4.6.2. The utility records show a private water main that previously connected to the now demolished police station. There is no other BW infrastructure present on site, however said records also indicate the neighbouring residential areas are well served with BW infrastructure.

4.6.3. Refer to Appendix F for utility records plan from BW.

4.7. Telecom

4.7.1. British Telecom (BT) & Virgin Media (VM) are the utility undertakers with cable/fibre infrastructure used for supplying telecoms services to Bristol.

4.7.2. The utility records shows BT infrastructure connecting to the telecoms mast and the associated underground cables north of the site access point off Bonville Road. Additionally said record indicate an existing underground cable that previously served the former police station and an overhead wire which runs over the site from a pole to the north of former police station to a neighbouring residential property. Moreover the neighbouring residential areas are well served with BT infrastructure.

4.7.3. There is no Virgin Media (VM) plant within the existing site, however the neighbouring residential areas are well served with VM infrastructure.

4.7.4. Refer to Appendix G for utility records plan from BT and VM.

4.7.5. The aforementioned telecommunications mast on the site contains electronic communications equipment operated by Telefónica UK Ltd ("O2") who are the de facto lease holder for the mast. In addition, Vodafone, EE Ltd ("EE") and Hutchison 3G UK Ltd ("Three") also operate similar equipment from this mast as sharers via the terms of the existing lease.

5.0 DIVERSIONARY WORKS TO EXISTING UTILITY INFRASTRUCTURE

- 5.1. The following comments on diversions are made in reference to the proposed site layout shown in Appendix B.
- 5.2. Electricity – Western Power Distribution
 - 5.2.1. There are no proposed electricity diversions on the site
 - 5.2.2. The existing electricity pylons and associated cables are to be retained on the site. They will remain a constraint to the proposed development since the cost of diversion was considered prohibitive to the development. The WPD easements on the retained electricity supply infrastructure are to be noted. The connection to the former police station will be made redundant along with the connection serving the telecommunications mast.
- 5.3. Gas – Wales & West Utilities
 - 5.3.1. There is no Wales & West Utilities (WWU) infrastructure within the site boundary; therefore no diversionary works are required.
- 5.4. Storm and Foul Water – Wessex Water
 - 5.4.1. There is no Wessex Water (WW) infrastructure within the site boundary; therefore no diversionary works are required.
- 5.5. Potable Water – Bristol Water
 - 5.5.1. The existing Bristol Water (BW) infrastructure serving the former police station has been disconnected; therefore no diversionary works are required.
- 5.6. Telecommunication – British Telecom & Virgin Media
 - 5.6.1. The British Telecom's connection to the telecommunications mast will be made redundant upon relocation of the mast itself.
 - 5.6.2. There is no Virgin Media (VM) infrastructure within the site boundary; therefore no diversionary works are required.
 - 5.6.3. The existing telecommunications mast will be relocated offsite. The relocation of the mast is being dealt with by a specialist appointed by Home England. Therefore, it is outside of the scope of this report.

6.0 OFFSITE REINFORCEMENT WORKS REQUIRED TO PROVIDE UTILITY SUPPLIES TO THE SITE

- 6.1. The following statutory utility undertakers have been consulted for pre-development enquiries relating to offsite reinforcement required to service the proposed site. Table 2 below provides a summary of the statutory utility companies contacted.

Table 2: Consulted Statutory Undertakers

| UTILITY TYPE | STATUTORY UNDERTAKER | Contact Made | Response Received |
|-------------------------|------------------------------------|--------------|-------------------|
| Electricity | Western Power Distribution (WPD) | ✓ | ✓ |
| Gas | Wales and West Utilities Ltd (WWU) | ✓ | ✓ |
| Storm and Foul Drainage | Wessex Water (WW) | ✓ | ✓ |
| Potable Water | Bristol Water (BW) | ✓ | ✓ |
| Telecoms | British Telecom (BT) | ✓ | ✓ |
| Telecoms | Virgin Media (VM) | ✓ | ✓ |

6.2. Enquiry Assumptions

- 6.2.1. Enquires to utility provider were made based on the following assumptions:

- Three options are proposed for this site: Option 1 is that all properties on the site are solely use electricity for heating and cooking with no gas usage. Option 2 is that fifty percent of the properties utilise electricity for all heating and cooking whilst the other half solely use gas. Option 3 is that all the proposed properties utilise gas for heating and cooking.
- Potable Water will be fed via mains rather than stored on site.
- Up to 300 residential properties were to be constructed on the site.
- 450 x 7kW EV chargers are to be installed on the site.

6.3. Electricity – Western Power Distribution

- 6.3.1. Detailed correspondence with Western Power Distribution received July 2021 is shown in Appendix H.

- 6.3.2. Western Power Distribution (WPD) propose to connect into their existing 11kV network adjacent to the site on School Road. WPD stated that reinforcement will be required at their Feeder Road substation site, comprising of the construction of a new 132-11kV transformer and the rearrangement of their existing network. In addition, a new high voltage road crossing and associated trench will be required to ensure full connectivity to the site. WPD estimated the budget for these works, at the time of consultation, at £222,840 if Option 1 was followed and £184,620 if Option 2 was chosen.

6.4. Gas – Wales and West Utilities

6.4.1. Detailed correspondence with Wales and West Utilities received October 2020 is shown in Appendix I.

6.4.2. Wales and West Utilities (WWU) propose to connect off the existing 180mm PE low pressure gas main on School Road. A new low pressure gas main will be laid to and through the site to serve the domestic dwellings. WWU will expose the pipe and excavate fully in public land, whilst the client is responsible for excavation and reinstatement in private land. WWU have confirmed that there is sufficient capacity within their network and that offsite reinforcement will not be required.

6.5. Foul Water – Wessex Water

6.5.1. Detailed correspondence with Wessex Water received December 2020 is shown in Appendix J.

6.5.2. The site has been split into 3 foul water drainage catchments with each catchment discharging to different points. For foul drainage catchments refer to Appendix K. Catchment A will discharge into the existing 225 mm public foul sewer located in The Rock road west of the site. This will require approximately 176 m of sewers to be installed within the local highway (off-site) to make this connection. Catchment B will discharge into the existing 225mm public foul water sewer in Bonville Road. Catchment C will discharge into the existing 225mm public foul water sewer in Broomhill Road and approximately 94 m of foul sewers will need to be installed in Broomhill Road. Wessex Water have confirmed that there is sufficient capacity within their network and offsite reinforcement will not be required.

6.6. Surface Water

6.6.1. For the preliminary surface water drainage strategy, refer to Flood Risk Assessment and Drainage Strategy Report.

6.7. Potable Water – Bristol Water

6.7.1. Detailed correspondence with Bristol Water received October 2020 is shown in Appendix L.

6.7.2. BW has confirmed there is sufficient capacity within their existing public network to serve the proposed development. BW has indicated the 6" SI diameter water main located at Bonville Road would be the most preferable due to its larger capacity. They also offered up the 5"CI main in School Road as an alternative option. Both of these proposed connection points are within 10 metres of the site boundary and will not require offsite reinforcement.

6.8. Telecommunication – British Telecom

6.8.1. Detailed correspondence British Telecom received November 2021 is shown in Appendix M.

6.8.2. British Telecom (BT) have been approached regarding their ability to supply broadband to the development. BT have confirmed that they have fibre infrastructure in the area of the site however, they require a formal approach be made post planning for their design to service the site.

6.9. Telecommunication – Virgin Media

6.9.1. Detailed correspondence with Virgin Media received March 2022 is shown in Appendix N.

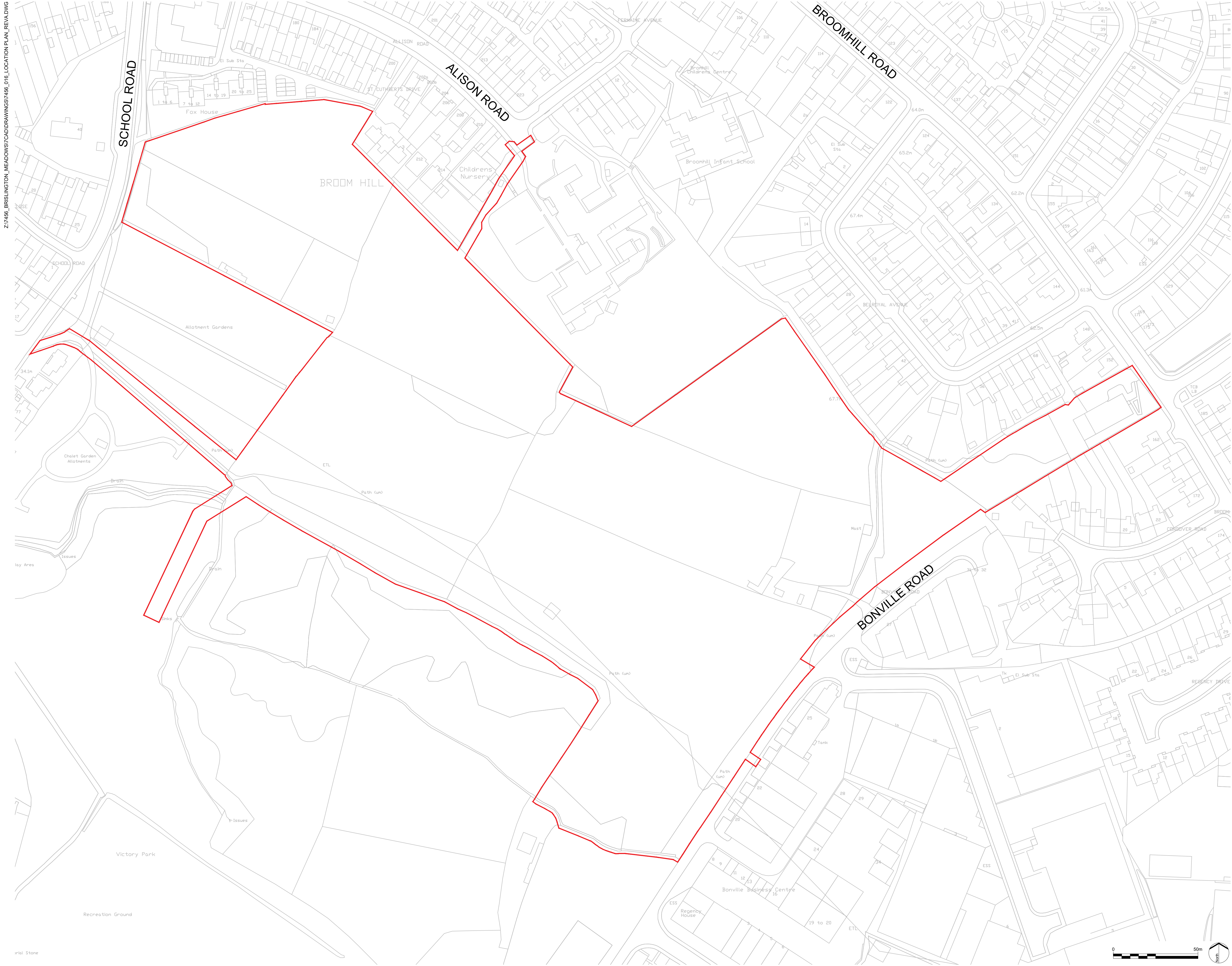
- 6.9.2. Virgin Media (VM) have confirmed that their “full portfolio of products” would be available to the development including “superfast broadband” as defined by OFCOM.

7.0 SUMMARY AND RECOMMENDATIONS

- 7.1. CampbellReith have been commissioned by Homes England to provide a Utilities Capacity Assessment Report to support the development at Brislington Meadows, Bristol.
- 7.2. Electricity, Potable Water and Telecommunications infrastructure supplied by Western Power Distribution, Bristol Water and British Telecom respectively are recorded with the site boundary. The Bristol Water infrastructure is disconnected and the WPD infrastructure is either to remain in place or is already isolated from the network. The BT infrastructure is to be made redundant following the relocation of the telecoms mast.
- 7.3. Additionally, a telecommunications mast is recorded within the site boundary supporting infrastructure owned by Telefónica UK Ltd ("O2"), Vodafone, EE Ltd ("EE") and Hutchison 3G UK Ltd ("Three"). The proposed development assumes that this telecoms mast will be relocated. The relocation of the mast is being dealt with by a specialist appointed by Home England. Therefore, it is outside of the scope of this report.
- 7.4. Western Power Distribution confirm that connection will be possible to their existing 11kV network adjacent to the site on School Road. However, this will require offsite reinforcement works to their Feeder Road substation site to provide sufficient capacity for the site. WPD expect the client to cover the cost of these works.
- 7.5. Wales and West Utilities have confirmed a suitable connection point to a 180mm low pressure main in School Road. In addition WWU have stated that they have sufficient capacity and that no offsite reinforcements will be required.
- 7.6. Bristol Water have confirmed there is adequate capacity with their existing potable water network to service the site. Two connection points have been proposed with Bonville Road being their preferred option and School Road an alternative.
- 7.7. Wessex Water have confirmed that there is adequate capacity within their existing foul network to service the site. The foul discharge will be split across three catchments A, B and C each discharging into a separate 225 mm public foul water sewers at The Rock road, Bonville Road and Broomhill Road respectively.
- 7.8. For the preliminary surface water strategy refer to the Flood Risk Assessment and Drainage Strategy Report.
- 7.9. BT have not responded to correspondence regarding their ability to service the site. BT have confirmed that they have fibre infrastructure in the area of the site however they require a formal approach be made post planning for their design to service the site.
- 7.10. Virgin Media have confirmed that they will be able to provide their "full portfolio of products" to the site including "superfast broadband" as defined by OFCOM.

Appendix A: Site Location Plan

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LEGEND

Site Boundary

| REV. | DESCRIPTION | APP. | DATE |
|------|-------------|------|------|
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PROJECT TITLE

7456 Brislington Meadows

DRAWING TITLE

Site Location

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DWG. NO 7456_016

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All dimensions are to be checked on site.
Area measurements for indicative purposes only.

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Appendix B: Illustrative Masterplan

Z:\7456_Brislington_Meadows\03 Illustrative MP

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LEGEND
— Site Boundary

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LDĀDESIGN

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