



Preliminary Services Appraisal

Land at Woodgate Centre, Woodgate

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Charles & Associates

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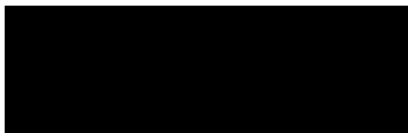
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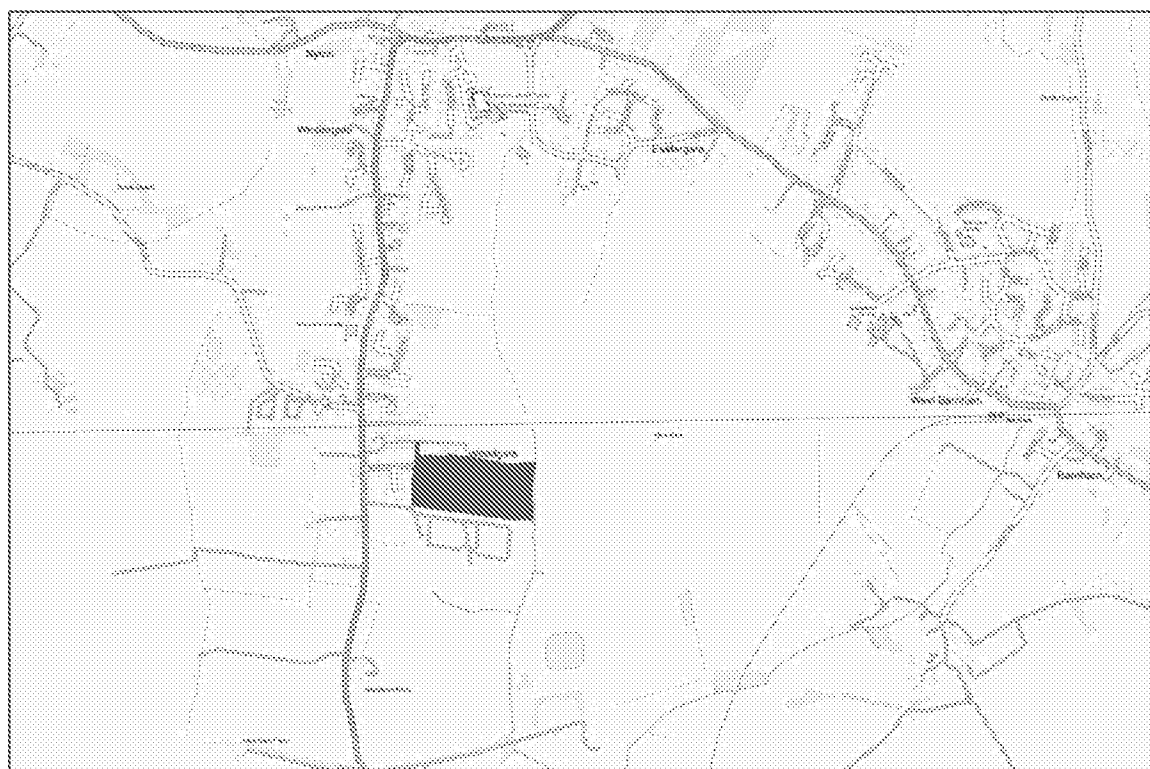


1 Introduction

1.1 Introduction

- 1.1.1 Charles & Associates Consulting Engineers Ltd (C&A) have been commissioned by Pye Homes Limited to prepare a Preliminary Services Appraisal for the proposed development of Land at Woodgate Centre, Oak Tree Lane, Woodgate PO20 3GU within West Sussex County Council (WSSC), under the planning jurisdiction of Arun District Council (ADC) hereafter referred to as 'the site'. The location is shown on Figure 1-1.

Figure 1-1: Site Location



1.2 Purpose

- 1.2.1 The detailed planning application will seek permission for the construction of up to 180 dwellings with associated amenity and open space provision, landscaping and vehicle access. This report has been prepared as a means of demonstrating that existing services would not constrain the development of the site. It also confirms that the site will enable to make new connections and utilise the existing infrastructure.

1.3 Report Limitations

- 1.3.1 The findings, recommendations and conclusions of this report are based on information obtained from a variety of external sources which are understood to be reputable. However, C&A cannot guarantee the authenticity or reliability of any data and/or records provided by third parties.

1.4 Planning Background

- 1.4.1 Adopted in 2018, the ADC Local Plan (Ref 4) sets the framework for development in the district until 2031. This site, known as Woodgate Centre, is allocated for residential development as part of a wider strategic site known as SD5 Barnham/Eastergate/Westergate (BEW) which is allocated for up to 2,300 dwellings.

2 Site Location & Details

2.1 Site Location

- 2.1.1 The site is in the village of Woodgate, between Westergate to the north and Lidsey to the south. It is located east of the A29 Lidsey Road and south of the railway line running between Chichester and Barnham. It is bordered by farmland to the northern and eastern boundaries, the Willows Caravan Park to the south and residential development to the west, see Figure 2.1 below.

Figure 2-1: Site Location



- 2.1.2 Access can currently be taken from Woodgate Road to the west and Oak Tree Lane to the north, however only the Woodgate Road access will initially be utilised for the proposed development. The planning application includes for a new bridge over the Lidsey Rife on the eastern boundary, enabling access to the wider BEW allocation.
- 2.1.3 The site has an area of approximately 7.25ha and is generally rectangular in shape. There are currently mix use premises on the site known as the Woodgate Centre. This essentially is a collection of small, poor quality buildings occupied by a variety of small businesses. There are also with several horse paddocks located across the site. As such the site can be classified as brownfield in nature.

- 2.1.4 There are two residential properties, The Lodge and Ryefield Bungalow, with the business properties being referred to as the Outbuildings in this report.

2.2 Existing Services

- 2.2.1 Services records were sourced via Envirocheck's Landmark service which separates them into two categories – 'Affected' and 'Not affected'. Some of the 'Affected' services were within the search area but sufficiently far away so as not to be a constraint to the development.

- 2.2.2 'Affected' services include the following:

- Electricity – Scottish & Southern Electricity (SSE)
- Water – Portsmouth Water
- Gas – Southern Gas Networks (SGN)
- Telecoms – BT Openreach
- Sewers – Southern Water
- Highway assets – West Sussex County Council (WSCC)

- 2.2.3 The above 'Affected' services are discussed further in **Sections 3 to 7**.

- 2.2.4 'Affected' services that were within the search area, but sufficiently far away so as not to be a constraint to the development, include the following:

- Gas – GTC
- Telecoms – Instalcom (CenturyLink, Global Crossing, Fibernet & Fiberspan)
- Telecoms – Virgin Media
- Telecoms – Vodafone
- Railway assets – Network Rail

- 2.2.5 'Not affected' services include the following:

- Telecoms – C.A.Telecom UK / Colt Technology Services
- Telecoms – Last Mile
- Telecoms – Sky Telecommunications Services Ltd

2.3 Utility trace survey

- 2.3.1 A utility trace survey was undertaken by MK Surveys to determine the actual position of services and drainage beneath the site. A copy of this can be found in **Appendix C**.

2.4 Development proposals

- 2.4.1 The proposed development is a residential scheme for the construction of up to 180 dwellings together with associated amenity and open space provision, landscaping and vehicle access as shown on the preliminary Masterplan in **Appendix D**.
- 2.4.2 It is intended that the proposed development will be accessed from Woodgate Road to the west of the site, however provision will be allowed for a future link to the east as part of the wider BEW masterplan.
- 2.4.3 This report identifies the existing services and potential points of connection (POC) onto the existing services to serve the new development. It does not identify diversion/protection that may be necessary or associated costs. Nor does it provide any costs for reinforcement to existing apparatus that may also be required. These can be investigated should the site gain planning permission.
- 2.4.4 Surface water management and disposal in the form of a Sustainable Drainage System (SuDS) arrangement for the proposed development is discussed in the Flood Risk Assessment (FRA). Similarly, foul water disposal for the proposed development is discussed in the FRA. This Preliminary Services Appraisal discusses any development constraints imposed by existing surface and foul water sewers.

3 Electricity supply

3.1 Existing

- 3.1.1 The area is served by Scottish & Southern Electricity (SSE).
- 3.1.2 With reference to the asset records in **Appendix A**, the existing Woodgate Centre complex is served by an underground LV supply entering from Woodgate Road and aligned west-east. This supply is marked "185 Wavecon".
- 3.1.3 With reference to the utility trace in **Appendix C**, the existing Woodgate Centre complex is served by two underground LV supplies entering from Woodgate Road, both broadly aligned west-east. The northern of these two supplies serves The Lodge, while the southern one serves the Outbuildings.
- 3.1.4 The nearest substation is 'Neals Estate Woodgate' which is located 280m from the site entrance onto Woodgate Road. This distance is measured west along Woodgate Road, south on the A29 Lidsey Road and east along the grassed access to the substation.

3.2 Proposed

- 3.2.1 The development would likely take a point of connection (POC) at the Woodgate Road entrance. See the Preliminary Services Appraisal Plan in **Appendix E**. The existing supplies would be disconnected and the cables removed.
- 3.2.2 An application will need to be made to SSE for them to review the development loading on their existing infrastructure and confirm whether network reinforcements will be required to their existing cabling or at the existing substation and whether a substation will be required on site. This application should provide contestable and non-contestable costs along with a layout plan for any network improvements.

3.3 Temporary Builder's Supply (TBS)

- 3.3.1 One of the existing supplies from Woodgate Road could, subject to an agreement from SSE, be used as a temporary builder's supply to serve the initial site compound.

4 Water supply

4.1 Existing

- 4.1.1 The area is served by Portsmouth Water.
- 4.1.2 With reference to the asset records in **Appendix A**, the existing Woodgate Centre complex is served by a 4" water supply (material unknown) entering from Woodgate Road, with a meter box and washout hydrant at the site entrance.
- 4.1.3 With reference to the utility trace in **Appendix C**, the existing Woodgate Centre complex has 3x 20mm diameter polyethylene (PE) water supplies from the meter box. Due to the plastic pipework, it was not possible to trace the route and alignment of these supplies across the site. It is assumed that these serve The Lodge, Ryefield Bungalow and the Outbuildings.
- 4.1.4 The asset records also show an 18" cast iron (CI) trunk water main passing centrally through the site on a south-north alignment, with an air valve located near the southern boundary.
- 4.1.5 The utility trace also shows this trunk main but an overlay between the trace and the records shows that the actual position is, in places, around 4m further west than recorded.
- 4.1.6 The trunk main has a legal easement in place, which is understood to be 5m beyond the edge of the pipe on both sides, so 10.45m overall. A copy of the easement is awaited from Portsmouth Water.

4.2 Proposed

- 4.2.1 A possible point of connection (POC) would be at the Woodgate Road entrance. See the Preliminary Services Appraisal Plan in **Appendix E**. The existing supplies would be removed.
- 4.2.2 An application will need to be made to Portsmouth Water for them to review the development loading on their existing infrastructure and confirm whether this POC is suitable or if network reinforcements will be required to their existing network.

4.2.3 The masterplan for the development has been designed to ensure that the trunk main easement is incorporated within future public or communal/managed land, including roads. Any pinch points on the easement will need agreement from Portsmouth Water.

4.3 Temporary Builder's Supply (TBS)

4.3.1 One of the existing mains from Woodgate Road could, subject to an agreement from Portsmouth Water, could be used as a temporary builder's supply to serve the initial site compound.

5 Gas supply

5.1 Existing

- 5.1.1 The area is served by Southern Gas Networks (SGN).
- 5.1.2 With reference to the asset records in **Appendix A**, the existing Woodgate Centre complex is served by a 90mm diameter polyethylene (PE) low pressure (LP) gas supply entering from Woodgate Road and aligned west-east. This supply becomes 63mm diameter PE as it approaches Ryefield Bungalow.
- 5.1.3 The utility trace in **Appendix C** shows that the existing Woodgate Centre complex is served by a 90mm diameter polyethylene (PE) low pressure (LP) gas supply entering from Woodgate Road, and aligned west-east. Due to the plastic pipework, it was not possible to trace the route and alignment of this supply in full, however a confirmatory depth recording was traced over the recorded alignment at a location halfway between the site entrance and Ryefield Bungalow. From Ryefield Bungalow it appears that 40mm PE gas supplies serve The Lodge and the Outbuildings.

5.2 Proposed

- 5.2.1 A suggested point of connection (POC) would be at the Woodgate Road entrance. See the Preliminary Services Appraisal Plan in **Appendix E**. The existing supply would be disconnected and removed.
- 5.2.2 An application will need to be made to SGN for them to review the development loading on their existing infrastructure and confirm whether any network reinforcements will be required to their existing pipework. This application should provide contestable and non-contestable costs along with a layout plan for any network improvements.
- 5.2.3 Subject to this assessment by SGN it may be that not all of the 180 dwellings can be served from the existing gas infrastructure, without some necessary network reinforcement. Development phasing may therefore need to be aligned with any timescale at which SGN are able to provide sufficient supplies.

6 Telecommunications

6.1 Existing

6.1.1 The area is served by BT Openreach.

6.1.2 With reference to the asset records in **Appendix A**, the existing Woodgate Centre complex is served by both overhead and underground cables entering from Woodgate Road and aligned west-east. The northern of these two supplies is underground and appears to serve The Lodge, Ryefield Bungalow and the Outbuildings, while the southern one appears to serve only the Outbuildings.

6.1.3 With reference to the utility trace in **Appendix C**, the existing Woodgate Centre complex is served by underground cables entering from Woodgate Road and aligned west-east, with the overhead cables no longer apparent.

6.2 Proposed

6.2.1 The proposed development would likely take a point of connection (POC) at the Woodgate Road entrance and provide a telecom box for an underground supply. See the Preliminary Services Appraisal Plan in **Appendix E**. The existing cables would be disconnected and removed.

6.2.2 An application will need to be made to BT Openreach for them to design the new infrastructure.

7 Foul water drainage

7.1 Existing

- 7.1.1 The area is served by Southern Water as the incumbent sewerage undertaker.
- 7.1.2 With reference to the asset records in **Appendix A**, the existing Woodgate Centre complex is served by a 225mm diameter vitrified clay (VC) foul water sewer that passes west to east through the site. This sewer receives foul water flows from the village of Woodgate, south of the railway line, and runs west along Woodgate Road into manhole 9102 just outside the site entrance. From here the sewer runs through the middle of the site, via 6 manholes (refs. 9103, 0102, 1101, 2101, 3001 and 3002) before connecting onto a 450mm diameter foul water sewer at manhole 3003 which is beyond the site to the east of the Lidsey Rife. This 450mm diameter sewer runs north to south, following the eastern edge of the Lidsey Rife, heading towards the outfall at Lidsey Wastewater Treatment Works approximately 1km further south.
- 7.1.3 With reference to the utility trace in **Appendix C**, the existing Woodgate Centre complex is served by manhole 0102 which has an incoming 150mm diameter VC branch entering from the north. This provides a foul water outfall for most of the existing buildings on site, along with surface water flows from some rainwater pipes. Manhole 0102 also provides the outfall for Ryefield Farmhouse, which sits beyond the site to the north on Oak Tree Lane.
- 7.1.4 Under the transfer of ownership rules, the 100mm diameter VC foul water drain entering from Ryefield Farmhouse is classified as a public sewer, to include the 150mm diameter foul water drain entering Southern Water manhole 0102.

7.2 Proposed

- 7.2.1 The development proposals will require a diversion of the foul water sewer from manhole 9102 in Woodgate Road, through manhole 9103 and into manhole 0102. This diversion will be within the proposed spine road and would require a Section 185 approval in principle from Southern Water. This diversion would then be used to serve as an outfall for the western half of the development.
- 7.2.2 The existing sewer east of manhole 0102 will remain in place and provide an outfall for the eastern half of the development.

- 7.2.3 A minor diversion will also be required for the 100mm VC foul water sewer entering the site from Ryefield Farmhouse to the north. This will involve connecting into the new foul water drainage for the development being offered for S104 adoption. The diversion could be included within the S185 for the main sewer diversion or submitted as a separate S185 application.
- 7.2.4 All other foul water drainage would be removed as part of the demolition works.
- 7.2.5 A foul water drainage strategy for the site has been produced and has been included in the Flood Risk Assessment, with MicroDrainage calculations showing the additional flows into the existing foul sewer network.
- 7.2.6 Following the procedures of the Water Industry Act, the developer will apply for Section 106 consent from Southern Water for the physical connections onto the existing sewer network. The developer will also pay an Infrastructure Charge to Southern Water every time a new dwelling is connected to the mains water supply.
- 7.2.7 These infrastructure charges contribute towards the costs of any necessary upgrades to the existing sewer network and/or wastewater treatment works, Water and wastewater companies plan upgrades to their networks on a strategic basis, keeping in line with Local Plans. The wider BEW site was formally allocated into the Arun Local Plan in 2018.

8 Other

8.1 Surface water drainage

- 8.1.1 The area is served by Southern Water.
- 8.1.2 With reference to the asset records in **Appendix A**, the existing Woodgate Centre complex is not served by surface water sewers. There are no surface water sewers shown within the entire search area of the asset records provided.
- 8.1.3 With reference to the utility trace in **Appendix C**, the existing Woodgate Centre complex has some rainwater pipes (RWPs) discharging directly onto the ground, as well as some that are incorrectly connected to the foul water drainage.
- 8.1.4 The proposed development will entirely separate surface water flows from foul water flows, with surface water being managed as part of a Sustainable Drainage System (SuDS) for which further details can be found in the Flood Risk Assessment.

8.2 Highway assets

- 8.2.1 The local Highways authority is West Sussex County Council (WSCC).
- 8.2.2 With reference to the asset records in **Appendix A**, only street lighting and street furniture are shown on Woodgate Road and surrounding public roads. No information is provided on highway drainage although it is noted that gullies are present on both sides of the Woodgate Road carriageway. These may connect into a highway drainage system, for which the outfall is unknown. It is possible that these gullies are connected to the foul sewer network.
- 8.2.3 With reference to the utility trace in **Appendix C**, the extents of this survey did not include Woodgate Road, so the outfall arrangement for the highway gullies are unknown.
- 8.2.4 The proposed development will manage itself in terms of surface water drainage, including the new spine road which joins onto the end of Woodgate Road. The existing highway gullies are therefore unaffected by the development.

9 Conclusions & Recommendations

9.1 Background

- 9.1.1 Charles & Associates Consulting Engineers Ltd (C&A) have been commissioned by Pye Homes Limited to prepare a Preliminary Services Appraisal for the proposed development of Land at Woodgate Centre, Oak Tree Lane, Woodgate PO20 3GU.
- 9.1.2 The detailed planning application will seek permission for the construction of up to 180 dwellings with associated amenity and open space provision, landscaping and vehicle access. This site, known as Woodgate Centre, is part of a wider strategic site known as SD5 Barnham/Eastergate/Westergate (BEW) which is allocated for up to 2,300 dwellings.
- 9.1.3 This report has been prepared as a means of demonstrating that existing services would not constrain the development of the site. It also confirms that the site will enable to make new connections and utilise the existing infrastructure.
- 9.1.4 There are currently mix use premises on the site known as the Woodgate Centre. This essentially is a collection of small, poor quality buildings occupied by a variety of small businesses along with two residential properties, The Lodge and Ryefield Bungalow.
- 9.1.5 Existing services categorised as 'Affected' include Electricity, Water, Gas, Telecoms, Sewers and Highway assets. A review of existing asset records and a utility trace survey has been undertaken.
- 9.1.6 The existing electricity, water, gas and telecoms services entering from Woodgate Road will be disconnected and removed as part of the site clearance and demolition works. However, the existing electricity, water and telecoms supplies could potentially be used as temporary builder's supplies.
- 9.1.7 The existing trunk water main running south-north across the site will need to remain in place and the proposed development has incorporates the easement into the layout.
- 9.1.8 The existing foul sewer network running west-east across the site, as well as that serving Ryefield Farmhouse to the north of the site, will remain in place albeit with diversions undertaken by means of Section 185 agreements with Southern Water.
- 9.1.9 There are no surface water sewers, highway drains or other highway assets affected.

- 9.1.10 Points of connection for proposed electricity, water, gas and telecoms services are anticipated to be taken from the west at the Woodgate Road entrance. Applications for budget costings need to be submitted to understand any network reinforcements that may be necessary.
- 9.1.11 The development proposals will require a diversion of the foul water sewer in the western half of the development. This diversion will be within the proposed spine road and would require a Section 185 approval in principle from Southern Water. This diversion would then be used to serve as an outfall for the western half of the development.
- 9.1.12 The remaining eastern section of foul water sewer will remain in place and provide an outfall for the eastern half of the development.
- 9.1.13 A minor diversion will also be required for the 100mm VC foul water sewer entering the site from Ryefield Farmhouse to the north. This will involve connecting into the new foul water drainage for the development being offered for S104 adoption. The diversion could be included within the S185 for the main sewer diversion or submitted as a separate S185 application.

9.2 Recommendations

- 9.2.1 This Preliminary Services Appraisal demonstrates that none of the existing services are a constraint to development. It identifies the anticipated points of connection and the next stages required to apply for budget costings and the potential for network reinforcements.
- 9.2.2 Applications will need to be made to the various services providers for them to review the development loading on their existing infrastructure and confirm whether network reinforcements will be required. These applications should provide contestable and non-contestable costs along with details and layout plans for any network improvements.
- 9.2.3 There is a possibility that not all of the 180 dwellings could be served by the existing services infrastructure without some degree of network reinforcement. Development phasing may need to be aligned with the junctures at which one or more of the various providers are unable to provide a supply from their existing infrastructure.
- 9.2.4 With the security and reassurance of a planning permission, the developer will then be able to make the various applications to the services providers. Once designs and costs are reviewed, any network reinforcement or additional infrastructure can be incorporated into their project costs and proposals for phasing and delivery.

- 9.2.5 We recommend that existing services are not considered a constraint to the planning application.