

CAMBRIDGE NORTH

UTILITIES STATEMENT

JUNE 2022

PREPARED BY

NOVEUS

MINIMISING RISK | MAXIMISING VALUE

Proposed Development at Cambridge North

UTILITY SOLUTIONS

For:

Brookgate Land

Two Station Place
Cambridge
CB1 2FP

Provision of Utilities for the Proposed Development at Cambridge
North

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Utilities Summary

This summary sets out the provision of utility services for the proposed development at Cambridge North. The load demands have been determined by the Mechanical and Electrical design team. Each Statutory Undertaker has been consulted in terms of the most economic provision of their utility for the wider overall requirements of the proposed development.

Client Name: Brookgate Land Limited

Site Name : Land adjacent to Cambridge North Station, Cowley Road, Cambridge

Description of Development: The overall Master Plan includes for the erection of a number of new buildings comprising offices, residential property with potential for ground floor retail floorspace, and the provision of electric vehicle charging.

1. Summary

The delivery of the overall utilities for the current Master Plan is in progress and the level of infrastructure has been completed to extend the water, gas, electricity and communications into the site . The connections of the first phase Novotel Hotel and One Cambridge Square Offices are live, and accordingly adopted by the statutory undertakers.

The infrastructure installed has been sized for the full requirements of the development, including the residential, laboratories, offices and the multi-storey car park. This is all contained within a multi-utility service corridor along the western side of Milton Avenue.

The strategy is to now extend the multi-utility corridor route around the site to accommodate all the incoming services for water, gas, electricity, telephones and communications. The design is such that the future roads and building have been considered to ensure wherever possible future connections can be made with the minimum of disruption to live services.

The strategy caters for the Master Plan capacities and has been agreed with the Statutory Undertakers, being UK Power Networks, Cadent Gas, Openreach and Cambridge Water. Additional spare ducts for other communications providers have also been installed for future use.

The points of connection for each new building will be to the nearest respective utility networks along the multi-utility services corridor, following footways and roads where appropriate to ensure the Statutory Undertakers standards and specifications are adhered to.

There is one additional off-site aspect of utilities to complete, this being the bringing of two new clean cable circuits from the main UK Power Networks substation to site, utilising on site ducts that have already been installed.

The delivery of the Utility Services is through an approved and accredited Multi-Utility Contractor (MUC) who will install all the ducts, pipes and cables for the Master Plan and to each building as they are required. In this way the disruption to the Station and overall development can be kept to a minimum and is cost efficient.

2. Delivery Strategy

The delivery strategy is to extend the Multi-utility corridor through the site within the first phase of the proposed Cambridge North development. In this way the services can be installed and protected to avoid disruptive works during the main construction works. The utilities are also co-ordinated with the new drainage requirements including attenuation.

Each utility will be suitably sized to deliver the capacities required for each building and the design will be approved by the respective statutory undertakers.

3. Diversions

The existing utilities have been designed and installed with the future requirements of the overall site in mind, through an overall Master Plan. This has provided foresight on the requirements to avoid additional works and disruption. There are a few diversions required for the drainage works, and to move existing services owned by Network Rail for their car park, lighting and CCTV. All of these will be co-ordinated with the Train Operator.

4. New Connections

4.1 Water

Consultation has taken place with the Cambridge Water Company (CWC), as the statutory provider of potable water for the area, and the existing point of connection on Cowley Road has been made through the Multi-Utility Contractor and this will provide the sufficient water to the overall Master Plan. CWC has confirmed capacity for the Master Plan, the onsite network being designed with T points for future road crossings, hydrants and building connections. CWC will also provide the water meters for each building and demise as required.

CWC has adopted the water main within the multi-utility corridor and will connect each new building as required. The main infrastructure to the Novotel Hotel and One Cambridge Square Offices are live.

The water truck main will be extended through the residential and commercial areas in readiness for each building being built out.

As each building is brought forward into construction the connections to the onsite network will be installed and adopted.

4.2 Gas

Consultation has taken place with Cadent Gas at the statutory undertaker for gas infrastructure in the local area. The point of connection and capacity has been secured for the Master Plan, through the MUC to provide a gas supply. A new medium pressure gas main has been installed and adopted in the Multi-Utility Corridor with a medium to low pressure gas governor on the edge of the site. The Master Plan site is serviced by a low pressure distribution network to each building, with a suitable gas room for a single or multiple services as determined by the Master Plan requirements.

The gas network is provided as an option and will be subject to the overall environmental and energy strategies, whereby low carbon technology is preferred.

As each building is brought forward the connection to the onsite network can be installed and adopted.

The tenants and landlord within each building will have the opportunity to choose their own energy and meter supplier.

4.2 Electricity

Consultation has taken place with UK Power Networks, the statutory provider for electricity network for the area, and the connection and capacity for the Master Plan. The initial first phase is supplied via a point of connection on the site with future phases supplied from an offsite cable route to UK Power Networks primary substation, Arbury Primary in Kings Hedges Road.

UK Power Networks are in the process of carrying out the non-Contestable works at Arbury substation, which includes new equipment in readiness for the cables to be laid to site. The UKPN plan is to have these works completed by end December 2022.

UK Power Networks has confirmed capacity for the Master Plan and have agreed the capacity is available for when is required in a phased manner. The first phase for the Novotel Hotel and One Cambridge Square Offices is already available on the existing network and the final connections will be carried out in May 2022.

The Multi-Utility corridor in the CycleWay has been designed to cater for spare ducts for future electricity network expansion, namely the two new cables from Arbury Primary substation and connections into the local electricity network.

The electricity network will be extended in the multi-utility corridor via high voltage cables that will be extended to each building. The electricity supply to each building will be via an integral substation in each building, suitably sized to reflect the load requirements. Where there is mixed use in a building multiple services can be provided. Where it is efficient to do so there is an option to supply more than one building from a single substation. All of the network will comply with UKPN standards and specifications to be adopted by them

The tenants and landlord within each building will have the opportunity to choose their own energy and meter supplier.

The provision of Electric Vehicles has been considered for the Master Plan parking, in particular parking for each building and the multi-storey car park. The wider electricity network is sensitive to peaks in electrical demand caused by Vehicle Charging and thus we have an agreed protocol with UK Power Networks to ensure control systems are in place to manage the peak demands for each building.

4.3 Telephone and Communications

Consultation has taken place with Openreach, and a full set of ducts provided within the Multi-Utility corridor and the first connections have been provided to the Novotel Hotel and One Cambridge Square Offices. There are spare ducts retained within the Multi-Utility corridor to ensure any future capacity can be provided. This also includes spare ducts for other providers should individual tenants require them.

Openreach as the provider of Life Safe telecommunications for the area, will include services within the overall fibre network. Openreach has confirmed fibre and copper lines capacity can be provided through connections to the local network. New ducts will be laid by the MUC in the Utility Corridor for future cabling to be installed by Openreach to meet the requirements of the Master Plan.

Adjacent to the Openreach ducts is a set of eight private communication ducts will also be installed to provide landlord and tenants with options on their chosen communication providers.

Chambers have been installed as part of the Master Plan development within the multi-utility corridor for both Openreach and private providers to ensure each road crossing and T off to individual buildings can be made with a minimum of disruption. These chambers are all located within the footways or Cycleways to avoid traffic disruption.

Each building will have a communications room from where the broadband and phone services can be distributed internally.

Utilities Constraints Plan

SITE CONTEXT. ANALYSIS & BRIEF EXISTING SITE CONSTRAINTS - UTILITIES

The following plan represents a mapping of existing utility provision within the site. Given the site is a brownfield site, the scheme will need to address several key utilities constraints to enable the site for future developments.

Legend:

Key to Symbols - Existing Utilities (From Survey Solutions GPR Survey - Feb 2018)	
Electric	BT
Electric Overhead	Cable
Gas Main	Street Lighting
Water	CATV
PW Drainage	Security Gate
SW Drainage	Unidentified Trench
Key to Symbols - Existing Utilities (From Atkins - April 2017)	
Electric HV	SW Drainage (First Public Drain)
Electric LV	SW Drainage (Overhead First Public Drain)
Gas Main	MW Drainage
Water	Manholes/First Public Drains
PW (Public) Drainage	SW Drainage (Rising Main)
PW (Private) Drainage	Cable
Wastewater Under Drain	Cable (Rising)
PW Drainage (Rising Main)	Cable (Rising Fibre)
SW (Sewer) Drainage	Street Lighting
SW Drainage (Other Drain)	Fire Main
Key to Symbols - Existing Utilities (From Volker Fitzpatrick - May 2017)	
Electric HV	Drain (DTC)
Electric LV	PW Drainage
Water	PW Rising Main
Cable	SW Drainage
Cable (High Voltage)	SW Public Drain
Street Lighting	SW First Public Drain
Street Lighting Control	SW Rising Main
Key to Symbols - Existing Utilities (From ERM Proposed M&T Drawing 05/05-04034A/T100 - Oct 2016)	
BT Overhead	Gas
Private Overhead	Existing Surface Water Storage
HT	Temporary Water Connection
PW Rising Main	Temporary LV Connection
Private Water	
Key to Symbols - Existing Utilities (Surface Water Rising Main Overhead)	
SW Drainage (Rising Main)	

