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## **Telecommunications Connectivity**

Combined Fixed Network and  
Mobile Coverage Assessment

**The Heights**  
Brooklands  
Weybridge  
Surrey KT13 0XP

# Fixed Network Connectivity - Desk Top Study

## The Heights, Brooklands, Weybridge, Surrey KT13 OXP

July 2009

STRUCTURE

The Heights Business Park is located to the south of Weybridge town centre adjacent to the Brooklands Industrial Park. The Heights is a modern park consisting of five low level buildings up to three floors affording Grade A office accommodation over open plan floor plates totaling approximately 353,460 sq ft. All buildings are constructed of concrete, steel and glass with floor to ceiling glass facades throughout.

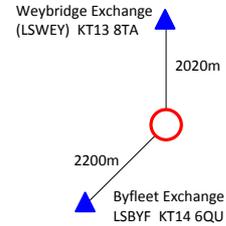
TOPOGRAPHY



The Heights  
Brooklands  
Weybridge, Surrey KT13 OXP



### BT Exchange locations



Note: All distances are straight line and cable routes will be greater. All distances and orientations are approximate only

BT SUMMARY

The Heights is currently served from Weybridge Exchange, located to the north of the business park. This exchange provides broadband services including ADSL, ADSL+ and SDSL, plus the availability of LLU services via a number of suppliers including AOL, O2/Be, Cable & Wireless/Bulldog, Orange, Pipex, Sky/Easynet, Talk Talk and Tiscali. Byfleet Exchange is located to the south west of the business park and can provide similar services in order to deliver diversity and resilience. LLU enabled service providers are as Weybridge Exchange with the exception of Pipex. The coverage areas of both exchanges overlap in the area of the site indicating good penetration of services from either exchange.

TELECOMS CARRIERS

The level of telecommunications carriers with owned infrastructure within approximately 5km of the building is minimal and are detailed below for information. The location has limited infrastructure due to its location in respect of carrier trunk routes. However, it is noted that an on site presence of legacy infrastructure from Cable & Wireless (Mercury) is recorded offering an alternative to BT services. Also, the areas around Weybridge and Byfleet are served in parts by a legacy cable TV network owned by NTL/Telewest Business/Virgin Media. In addition to these, there are a number of additional carriers that can provide service, albeit over a third party network such as BT. It must be noted that the presence of infrastructure within the search area does not constitute availability of service at the building location. To determine actual presence and connectivity viability further investigation will be required to determine infrastructure location and requirements.

**British Telecom** Tel: 0800 800 152 www.bt.com

**NTL/Telewest Business (Virgin Media)** Tel: 0800 953 0180 www.ntltelewestbusiness.co.uk

**Cable & Wireless** Tel: 0800 092 5825 www.cw.com

SUMMARY

The services available at Weybridge Exchange, and added resilience of a second exchange afford The Heights a good level of services to meet today's business needs. The presence of an alternative carrier to BT offers additional choice of services and resilience, albeit some will be restricted by location and the cost of providing service over owned infrastructure. However, the ability to provide such services over the BT network must not be overlooked as a more cost effective solution. The potential of service provision from NTL/Telewest Business/Virgin Media is one to be considered but would be dependant on the ability to access the site over third party infrastructure or by extension of existing infrastructure which would be subject cost considerations by the carrier.

### RATING

BT / LLU **4**

CARRIERS **3**

- BT / LLU**
- 1** Limited services available from BT only
  - 2** Good BT services, limited by LLU Operators
  - 3** Good BT/LLU services now, or planned
  - 4** Excellent BT/LLU services now, with diversity

- CARRIERS**
- 1** Limited infrastructure available
  - 2** Good level of infrastructure but with access issues
  - 3** Good level of infrastructure with limited access issues
  - 4** Excellent level of infrastructure with no access issues

GLOSSARY OF TERMS

**ADSL (Asymmetric Digital Subscriber Line)** Asymmetric line speed, the speed from the internet to the user, and the user to the internet are different. Feed over copper cable, governed by distance from exchange to user. (co-exists with voice services)

**ADSL+ (Asymmetric Digital Subscriber Line+)** Asymmetric line speed as above, but with faster connections both downstream and upstream over similar distance following roll-out of BT's 21CN Wholesale Broadband Connect (WBC).

**SDSL (Symmetric Digital Subscriber Line)** Symmetric line speed, the speed between the user and the internet are the same in both directions but cannot co-exist with voice services over the same line.

**LLU (Local Loop Unbundling)** Is the process by which third party network operators are able to install equipment into BT exchanges in order to deliver their own services without having to utilise BT's network. Only the copper cable from the exchange to the premises is used, which remains the property of BT.

# Mobile Voice / Data Appraisal - Coverage Predictions

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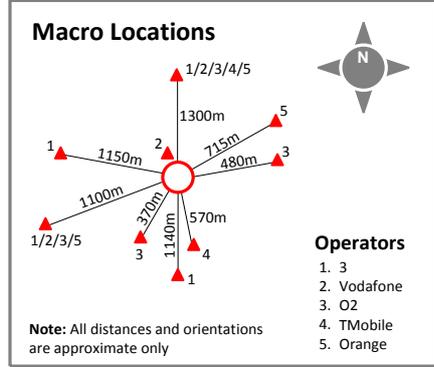
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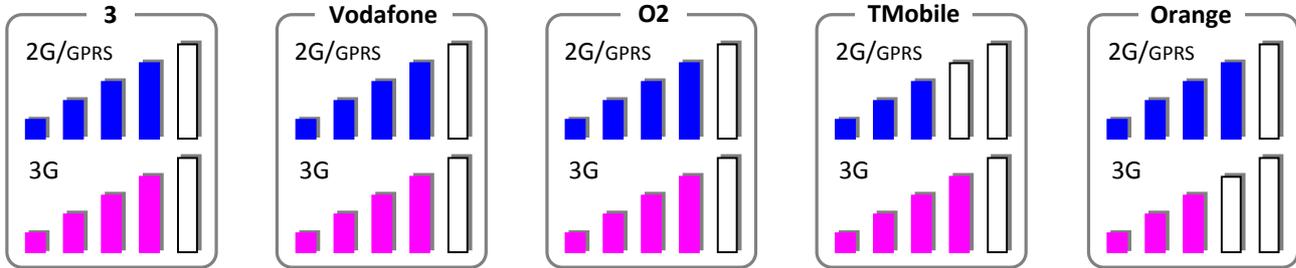
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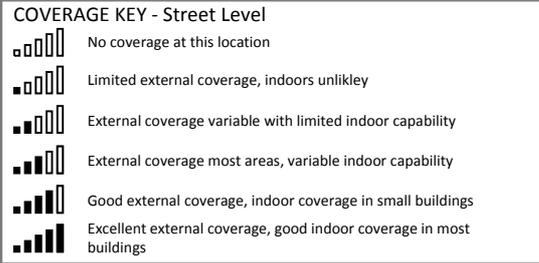


STREET LEVEL COVERAGE



OBSERVATIONS

The Heights has good general level of macro coverage from by all of the five mobile operators as shown in the plan above. The closest serving cells are detailed in respect of 2G and 3G services and can be seen vary in location and distance. A large cluster of cells exists for the all operators to the north and the majority to the west located within the Brooklands Industrial area. A good level of street level coverage is therefore afforded by all operators.



PREDICTIONS

Based on the location of the building and serving cells, it is envisaged that a good but variable level of coverage will be present within the buildings throughout the park. However, a degree of masking will be present to the lower floors from the adjacent buildings in some areas which may impact on services. These issues may see coverage and quality of service deteriorating within the buildings on the lower floors. In addition, the introduction of partitioning within the building especially if constructed of metal framing can impact on penetration of signal causing quality of services issues across all operators services becoming more pronounced as you move closer to the centre of the building. Further to the coverage levels, the availability of service is dependant on capacity. This is the volume of data and simultaneous voice calls the macro cell can accommodate at any one time. Capacity issues result in 'network busy' messages or dropped calls. The level of capacity can be addressed by the operators should the building be populated with a high number of users which will impact on both them and others using the same cell.

INDOOR SUMMARY

OPERATOR	2G / GPRS	3G
3	4	4
Vodafone	4	4
O2	4	4
T-Mobile	3	4
Orange	4	3

