



## Broadband - Cable, Wireless & Satellite

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The “**Business Benefits of Broadband**” Fact Sheet in this series explains what Broadband could do for your business.

Many Broadband connections are made through the telephone system, but in this Fact Sheet, our E-Business Advisers explain what other Broadband connection types are currently available in some areas:

### 1. Why not just use ADSL or SDSL?

ADSL and SDSL have achieved a high level of service availability across the UK - but there are still likely to be areas, particularly in the more rural parts of the UK, where ADSL will not be available.

It is also likely that SDSL will not be available outside the major towns. The different connection options detailed here may provide the solution for such needs.

Likewise, they are likely to provide other choices for town based firms besides the options of ADSL or SDSL.

### 2. What are the different connection options besides using my telephone line?

There are currently 3 main alternatives, but they are available only in limited areas - with the obvious exception of satellite:

- Cable
- Wireless
- Satellite

There are various trials in place for delivery of broadband utilising other technologies - for

example, using the electrical grid. These technologies are still in the developmental stage.

### 3. Cable

This Broadband connection type requires that the premises are located in a cabled area.

If your business is in an area previously served by NTL or Telewest (both now Virgin Media), you could use cable for broadband provision.

If you have (or could have) cable for your phone system, it is quite likely that you could connect to broadband via cable.

You connect via a piece of equipment called a “cable modem”, which you plug into your IT system in a similar way to the connector used for ADSL – but these systems are not interchangeable.

Virgin offer a range of products which may be suitable for your business. You can check availability at [www.virginmedia.com](http://www.virginmedia.com)

### 4. Wireless

Fixed Wireless is actually a range of technologies, based on differing standards.

The common core of all services is using radio frequencies to transmit back and forwards from a fixed base station – e.g. on a tall building or radio mast, to the end user - business or consumer.

The range of such technologies varies considerably, but a common methodology has a viable radius of about 15km – dependant on



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there being nothing to block the signal in the way – such as hills.

It is also possible for ISP's to "daisy-chain" these base stations together – using one base station to transmit to another before physical connection to the Internet itself. This hence increases the range this technology could penetrate into rural localities.

Other technologies have much larger radii – and some technologies much smaller.

No physical connection to a network is needed by your business, just a receiver/transmitter unit affixed to your building and aligned to your local base station.

With wireless technology a receiver outside of the premises sends the signals through to connection points inside.

These connection points then send data through to the computer. At present there are few wireless service providers throughout the UK and so this is not an option for many areas.

## 5. Satellite

Satellite access may well be the solution for broadband connection in remote areas.

The satellites used are in a stationary orbit, fixed over particular ground locations, about 23,000 miles above Earth; hence their "footprint" – the area covered by their signal – is extremely large. Many satellites cover most of Western Europe.

This distance means that signals have to travel a very long distance both there and back – giving rise to "latency" or slight time delays as signals traverse the distance.

You may have noticed this time delay effect if you have made telephone calls to Australia or other long distance routes.

For normal web browsing and sending emails, this is unimportant. However, some computer applications find this a problem. This is a specialist area of concern.

If you wish to use satellite as your means of getting access to broadband, and wish to use Internet based software other than normal web browsing /email packages, you should discuss this with an IT consultant.

You are almost guaranteed to be able to receive broadband via this means.

However, as building, launching and operating satellites is very expensive, these costs are necessarily passed on to people using bandwidth through them. Hence, this route tends to be more expensive than ground- based technologies

Planning permission is not generally needed for satellite dishes under 90 cm diameters – but if you occupy a listed building, or are in a conservation area, you may well require planning permission.

It would be wise to ask your local authority planning department about any requirements for planning permission irrespective of your business location.

As most satellites used are held in orbits further South than the British Isles, a clear line of sight to the South, unobstructed by trees, buildings etc is usually required.

Likewise, issues about degradation of service in poor weather conditions have also been reported, usually taking the form of a slowing of the service.



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There are numerous companies involved in this service provision – they usually do not own the satellites they use, but lease bandwidth to them, and then to you as your ISP.

Two-way services (“downlink” and “uplink”) are available.

## 6. Useful Links:

<http://www.broadbandchecker.co.uk> - site which covers a range of Broadband provision - including satellite, cable and ADSL

Searching on [www.google.co.uk](http://www.google.co.uk) for satellite providers will bring a wide range of service offerings