Connecting Airedale
to e-learning services using broadband technology

A study commissioned by the Airedale Partnership

Palmedia
and
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Connecting Airedale
A study commissioned by the Airedale Partnership

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1. Executive Summary

The principal objectives of this study were to identify the current state of connectivity and the current availability of e-learning, and propose options for the future development of e-learning using the broadband technologies available. This would support the objectives of the Airedale Partnership, Bradford Vision, and the Airedale Masterplan currently under development.

Connectivity

Airedale is now well served by broadband, thanks in large part to the recent ‘Broadband Airedale and Wharfedale’ campaign, without which a very different picture would have emerged. The area is well served by BT, and in urban areas by cable providers, ensuring that there is almost total coverage for broadband services. Some small pockets exist, where access is unavailable, due to unresolved technical issues, but with the announcement that distance is no longer a barrier for BT based ADSL almost 100% coverage is available. In the very few instances where ADSL or cable broadband cannot be obtained, other alternatives can be used. Consequently, connectivity is no longer a barrier to
provision. This offers an excellent platform for the development of digital and creative industries and of e-learning provision.

**e-Learning**

e-Learning is a relatively new way of learning, with no single accepted definition. However, in reviewing current provision it is clear that a number of organisations in Airedale have already recognised the advantages of using new technologies in learning, particularly for allowing supported self-study and guided learning, with complete flexibility regarding time, location, and pace of learning for each individual learner.

Of the wide range of providers, the two local Colleges have both taken an innovative approach, with both acting as hubs for community learning venues, and both developing Virtual Learning Environments allowing study over the internet. Shipley College has opened the first link in its ‘Learning Line’ of centres based around the rail network, whilst Keighley College is developing TV, internet and radio based course content.

Other providers in and around Airedale are also leading the way. Several flagship examples have been identified in this report, and the area should be very proud of what has been achieved to date. These projects include SCOL (Shipley Communities Online), the Russell Street Project, Platform 1, and Burley in Wharfedale Queen’s Hall. These demonstrate good practice in different areas and provide excellent examples for future development.

The advantage of e-learning is clear from this report, with benefits to individual learners, whether they are time pressed employees or rural residents with limited access to local learning. The report also identifies the benefits to business, with the majority of businesses surveyed meeting the connectivity requirements for enabling employees to learn at work, and showing a demand for such training.

**Blended Learning**

For e-learning to be successful, it is considered that three key elements of content, learning support and access to facilities are required.
Firstly, the provision of high quality, relevant content is critical to ensuring that courses are valuable to learners and employers. Further content development is required in order to meet the needs of all learners, particularly in subject areas other than ICT.

Secondly, an appropriate level of support is required for each learner, taking into account their individual needs. This needs to reflect the varying needs of learners over the duration of a course.

Thirdly, learners require access to ICT facilities, wherever they feel they can learn most effectively. This may include access to a venue for face to face tuition or access to broadband and a PC for independent learning.

The provision of a combination of supported face to face learning, with independent guided e-learning, known as ‘blended learning’, appears to be the most appropriate approach to meet the needs of most learners.

Blended learning can ensure that the valuable local support of colleges and other providers can be combined with flexible, adaptive learning that can be undertaken at home, at work, on the move, or in libraries, schools and community centres. Blended learning can build on the strengths of local providers in responding to and supporting the needs of different learner groups, while maximising access to learning for all.

**Access to Learning**

Mapping of existing public and private venues for access to learning has identified that, by using and enhancing the network of existing venues, such as libraries, colleges and community centres, and combining these with mobile units and new technologies, access can be provided in almost any community, however isolated or small. In many locations, such as schools and libraries, existing connectivity and infrastructure could be used and developed.

Strong partnerships will be essential in any given community to deliver appropriate content, learning support, and local access to facilities.

There are three emerging technological themes identified in this report which can allow greatly improved access to learning.
Firstly, in locations where there is the capability to house a permanent ICT suite, such as larger community centres or college outreach centres, it is now possible to provide ICT facilities at much lower cost than previously, by using the ‘minimal support network’ model identified in this report. This would make it possible to bring ICT and e-learning opportunities to many communities where previously cost would have been prohibitive.

Secondly, laptops are now affordable and more robust, opening up the possibility of the truly mobile IT suite, carried even in the tutor’s car boot. The low cost of ADSL and cable broadband now means that laptop computers equipped with wireless network cards could be placed on the desktop on arrival, connecting instantly to a wireless router, left permanently connected to an ADSL connection or a school network.

Thirdly, a ‘wireless e-learning gateway’ could be developed using hotspot technology, linked to the new e-learning portal for West Yorkshire currently in development. This would allow easy access to course information and learning materials at a network of locations, allowing access to individual learners with their own laptops and for mobile units run by learning providers, allowing self study and access to support.

**Access to Information**
Currently, access to information about e-learning opportunities is fragmented. A single point for information, perhaps building on the WYTAP website, could be used to make sure that wherever a potential learner goes, information about all opportunities is available to them. Access to this could be enhanced by kiosks, such as those offered by Bradford’s ‘homehunter’ system, and placed in key locations such as college entrances, town halls, libraries or service points such as bdirect in Bradford.

**Strategic Co-ordination and Partnership**
In order to achieve the objectives for Airedale there is a need for greater local strategic co-ordination in e-learning, which could be ensured through the development of an e-learning strategy for the district. There is a need for a single body or person to promote, co-ordinate and champion future development. This could be one of the organisations or partnerships already working for Airedale.

There is a need for improved communication. For example, libraries are a good opportunity to link learning with local communities, yet information available from them is not comprehensive. Many
organisations, such as schools and City Learning Centres, will need information and guidance to help them develop e-learning services.

With a genuine partnership and clear leadership in this area, adopting a single strategy to adapt and develop new learning content and opportunities, Airedale can improve its residents' knowledge and skills and demonstrate continued leadership in community education.

**Next Steps**
Airedale has an opportunity to develop new ways of extending learning to everyone. This report demonstrates that there are no technical barriers to provision that cannot be overcome. Airedale learning providers are already using new methods and new technologies to link in to local communities, and this can be built on to support e-learning provision.

It must be emphasised that this report is only a starting point. The future development of e-learning will be of benefit to Airedale, and good strategic leadership and partnership working will be critical to ensure success. The suggestions in the final section of this report could be used as a foundation for the funding and development of demonstration or pilot projects, which could be delivered locally by some of the many interested providers who are already developing new ideas and finding new ways to attract Airedale residents to learning.

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2. **Introduction**

2.1. **Airedale**

Airedale comprises two major urban centres, Keighley and Shipley, plus the smaller towns of Bingley and Baildon, eight major villages that are clearly distinct from larger urban areas, and a number of smaller settlements. With the exception of the towns, Airedale is predominantly rural and many potential learners live and work on farms or in settlements some distance from urban areas where learning opportunities are offered.

![Rural Airedale, the Leeds Liverpool canal between Baildon and Keighley](image)

The Local Authority, City of Bradford Metropolitan District Council, has classified the settlements in Airedale by their population and impact on rural communities. These classifications are ‘Rural Service Centres’, ‘Dispersed Settlements’, and ‘Rural Villages’.

Airedale has three towns with a population of over 10,000; Shipley, Bingley and Keighley. Shipley is largely urban, surrounded by Bradford and Saltaire. Bingley and Keighley, however, are considered...
‘Rural Service Centres’, being surrounded on three or more sides by countryside and providing a range of services to other, smaller, settlements.

Smaller towns in Airedale with a population of 3,500 to 10,000 are Cottingley, Silsden and Wilsden, which along with Worth Valley towns Haworth and Oakworth are classified as ‘Dispersed Settlements’. Baildon and Saltaire, being predominantly urban, do not meet this classification.

Smaller rural settlements, with a population under 3,500, are considered to be ‘Rural Villages’. These include Cullingworth, Denholme, East Morton, Eldwick, Harden, Steeton, and Utley. In addition there is the nearby village of Oxenhope in the Worth Valley. Airedale villages not meeting this classification include Micklethwaite, Crossflats and Gilstead. We have considered each of the Airedale settlements in this report, as summarised in Appendix IV.
Airedale has a diverse business community, with many urban businesses based on the rural Airedale economy or ‘Rural Service Centres’ such as Shipley, Bingley and Keighley and the urban centre of Bradford city. Businesses in rural parts of Airedale are not limited to traditional agricultural industries. New technologies have opened up rural areas to small businesses of all kinds, and in many rural villages, and even remote farms, you are as likely to find a web designer or business consultant as a farmer. Farmers are beginning to diversify, as identified by the NFU and Askham Bryan College’s Agricultural Survey\(^1\), and many make use of ICT in their businesses.

Airedale has been identified by the Council and the Regional Development Agency, Yorkshire Forward, as the location for a ‘digital cluster’, building on the presence of high-tech firms such as Pace Micro Technology and Filtronic. The valley is also to benefit from a ‘Master Plan’ for the area which is currently being prepared. This Master-planning exercise has identified both connectivity and education as key issues to be overcome for the future economic development of Airedale.

### 2.2. The Airedale Partnership

The Airedale Partnership was established in 2002, with representation from a number of key strategic partners drawn from the public and private sectors. The remit of the Board is to promote the regeneration of Airedale in line with the key priorities established in Yorkshire Forward’s Sub Regional Action Plan. A number of key priorities were identified by the Board:

- Master planning for town centres i.e. Shipley, Bingley and Keighley
- Skills and jobs for the digital industries (a key priority in the SRAP)
- Rural renaissance
- Tourism
- Manufacturing
- Broadband connectivity.

According to the Airedale Partnership, appropriate ICT infrastructure and training are considered vital to connect local people to economic opportunity and develop the skills base to support the regeneration of the local economy. Fast ICT connections can deliver new opportunities to Airedale residents, including those in rural communities; disadvantaged communities at both ends of the valley in Keighley and Shipley wishing to access skills training; businesses wishing to up-skill their workforce.

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\(^1\) ‘Farming in Yorkshire’ (Annual Survey), Askham Bryan College, 2002/03
in ICT skills or to develop an online presence. Only with a sustainable ICT infrastructure can the potential of e-learning to deliver the skills base be fully realised.

2.3. The Bradford District

As part of the Bradford District, development of e-learning and connectivity in Airedale benefits from a number of district-wide initiatives, from Bradford Council and from bodies such as the Bradford Learning Partnership. Bradford’s ‘2020 Vision’, produced by the Local Strategic Partnership (LSP) Bradford Vision², identifies overall objectives for the next 15 years, with a strong emphasis on skills, employment, and economic diversity.

² www.bradfordvision.com
Introduction

Bradford’s 2020 Vision

- A high-wage, high-skill, knowledge-based economy, which will provide appropriate jobs for everyone, creating a wealthier population with greater spending power
- A diversified economy, with particular strengths in:
  - cutting edge e-commerce and communications
  - financial service provision that meets the needs of consumers
  - cultural industries
- An economy which uses resources efficiently and effectively, minimises waste and utilises recycling and renewable energy sources
- An economy, which is fully integrated into the wider economy of the Yorkshire & Humber region
- A place where people will be well educated, skilled, healthy and capable of providing business with the human resource to compete in highly competitive global markets
- A connected district, using e-commerce and digital technology to improve people’s lifestyles and create business opportunities
- A District with a modern transport infrastructure, which makes every part of it easily accessible to those who live within it and those who want to visit
- A district whose people respect and celebrate differences in sex, race, culture, and religion
- A place which ensures people with disabilities can fully participate in a better future for the district
- A district that is a great place to live and is universally accepted as a major destination for tourists
- A district which is clean, healthy, safe and has excellent public services
- A place where people are justifiably proud of where they live, learn, work.

The 2020 Vision is supported by Bradford Council’s Community Strategy\(^3\). The Community Strategy describes the journey that the District has to take towards achieving the 2020 Vision over the five years between 2002 & 2007 and outlines seven key priorities. Two of these priorities require both good connectivity and access to e-learning opportunities. These are:

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\(^3\) Bradford Council’s ‘Community Strategy’ 2002 - 2007
• An economically Prosperous District
• A District of Excellence in Learning.

The Community Strategy identifies objectives which aim to achieve a ‘district of excellence in e-learning’. These include objectives:

• To develop a comprehensive range of out-of-school learning, childcare facilities and opportunities, which support children’s learning and adult participation in the workforce
• To improve participation and qualification rates in post-16 learning and increase participation in higher education
• To increase the basic skills levels of adults in the District
• To expand provision of community and workplace based family learning opportunities
• To give all residents skills and access to free or low cost ICT facilities.

In order to achieve these objectives, Bradford will need to ensure excellent connectivity for both residents and learning providers, and to develop the role of e-learning.

2.4. What is e-Learning?

There is no single definition of e-learning. For the purposes of this project, we have considered information and definitions from a range of sources, including past studies and reports.

According to the DfES e-learning strategy[^4], ‘If someone is learning in a way that uses information and communication technologies (ICTs), they are doing e-learning.’ However, e-learning is not that simple.

This study has considered all types of structured e-learning. By this, we mean that this learning has been undertaken with guidance from an appropriate tutor, and the manner in which the learning has taken place has involved the use of Information and Communications Technology. This would, for example, include informal learning without a specific qualification aim, under the supervision of a tutor. It would exclude traditional classroom based learning, even when using computers in the classroom.

We recognise that much unstructured learning takes place, for example learning to use the internet at home, without any support. This is specifically excluded from this study.

[^4]: [www.dfes.gov.uk/elearningstrategy/](http://www.dfes.gov.uk/elearningstrategy/)
There are a number of other qualities which indicate that provision is e-learning. These include flexibility over time, location and speed of progress, access to ongoing tutor support by telephone, email, post or in person, and access to learning facilities. The content of the course will be accessible remotely over a network.

e-Learning varies considerably in how it is delivered. Pure e-learning takes place entirely remotely, without the learner being required to attend any specific location. It is delivered without any direct personal contact with a tutor, or enrolment in person. Traditional classroom based learning, on the other hand, does not involve remotely delivered content and requires the learner to attend a course at a specified time and location. Between these two extremes is ‘Blended Learning’. This combines the advantages of e-learning with the use of the provider’s ICT facilities and possibly some classroom based provision, particularly in the early stages of study.

This wide range of options for e-learning has been presented as an ‘e-Learning Continuum’. This continuum shows the full range of possibilities from pure, classroom-based traditional learning to pure e-learning. Pure classroom based learning is not considered in this study.
Overall we feel that the most appropriate definition, for the purposes of this study, is the definition below, proposed by the British Association for Open Learning:\(^5\):

**e-Learning**

*E-Learning is the effective learning process created by combining digitally delivered content with (learning) support and services.*

“There are some important words in this definition.

Effective - there are many types of learning process but, in some cases, they are ineffective.

Combining – it is the combination that makes the difference, not the individual parts themselves - although each part is perfectly valid on its own.

Digitally delivered content – this excludes, for instance, paper based materials that, although still a perfectly valid medium for learning, are not e-learning.

Support - theoretically, a CD-ROM based programme can be done anywhere and anytime, but it is often not supported by tutors although, of course, it could be.”

It is important to stress that e-learning is not about learning ICT. It includes all subjects and course types. e-Learning is not yet well developed, and current providers of e-learning tend to provide ICT tuition. There is some e-learning provision that is not ICT related, particularly in Basic Skills, but most provision remains ICT related.

There remains a need for wider debate on the nature and definition of e-Learning beyond the context of this study. Identifying what is meant by e-learning is critical to the production of an e-Learning strategy for the Bradford District.

### 2.5. What is Broadband?

By ‘Broadband’, we mean a fast connection to the internet.

For the purpose of this report, this means that the speed at which data can be downloaded from the internet to a desktop computer must be at least 512Kbps (Kilobits per second). This is roughly ten times faster than a standard analogue modem, which would work at just 56Kbps or less.

\(^5\) ‘A definition for e-Learning’, British Association for Open Learning, 10/2003
Some types of Broadband, such as ADSL, transfer data from the computer to the internet at a different, lower speed. This is still considered to be broadband.

Most types of broadband also share a connection to the internet between a number of subscribers. This is known as contention.

It is important to note that as technology improves, what is considered to be ‘Broadband’ is also expected to change. It is expected that speeds will increase and contention will reduce over time.

2.6. **Objectives of this Study**

The objectives of this study into connectivity and e-learning in Airedale are to:

- Identify the current state and availability of broadband in Airedale
- Provide a physical map plotting connected sites relating to major providers e.g. colleges, schools, libraries, UK Online Centres and identifying gaps
- Identify relevant target groups for accessing e-learning opportunities e.g. rural businesses in agriculture and tourism; disadvantaged communities in urban areas e.g. Keighley and Shipley East; other small and large businesses in a range of sectors
- Identify access to ICT and where possible and appropriate, training needs of these groups
- Identify and analyse appropriate, sustainable connectivity solutions, considering all reasonable options such as fixed connections, wireless, satellite
- Develop a series of cost benefit models based on a range of current supplier prices
- Make recommendations as to the solution or series of options for connectivity which could contribute to a wider master plan for Airedale
- Examine how current government initiatives and funding streams could assist the recommended infrastructure developments.

A Project Steering Group was established to assist with this study. We would like to thank this group for their help throughout the project:

- Margaret Robson  
  Shipley College
- John Ellis  
  City of Bradford Metropolitan District Council
- Robert Brough  
  The Airedale Partnership
- Dave Broadhead  
  Broadband Airedale & Wharfedale
3. Methodology

This study consisted of extensive research over a three month period. This included investigation into the current provision or broadband and e-Learning, and the opportunities for future provision.

Evidence obtained during this project was identified using the following research methods:

3.1. Web based research

This was used primarily to identify community groups and contacts, review existing research and information, identify some potential sources of funding or funding providers, and also to build up a better picture of current provision.

3.2. Telephone & Email

We contacted all identified current learning providers, all local schools, community groups and other stakeholders by email and telephone. Where necessary these discussions were followed up by meetings and site visits.

3.3. Meetings

We met with key providers, including community centres, schools, colleges and libraries, in order to hold more in-depth discussions about current capabilities and future plans. We met with other key organisations to obtain and exchange information, including broadband providers and government agencies. We held meetings with individuals and groups representing target groups, such as agriculture and urban communities, to identify their requirements.

3.4. Visits

We visited a range of current and potential providers in order to see first hand the nature of their provision, and what options may exist to enhance e-learning provision and connectivity.

3.5. Survey

In addition to these activities, we conducted a survey of 500 local businesses, from farms to offices, located within the project area. This survey asked for information on their current use of e-learning, their learning needs, any facilities available for staff e-learning, and willingness to travel to or use different locations.
3.6. **Other Methods**

We also employed other methods in order to obtain information for this study. This included visiting local libraries as a ‘mystery shopper’ exercise, in order to identify their current capability to deliver e-learning, and the current use of e-learning facilities.

Conclusions contained within this report have been reached based on a wide body of evidence obtained through the research process outlined, and statements made reflect the predominant situation or views, based on the evidence obtained. There are exceptions where conclusions are based on a single example, often of good practice, and where this is the case we have specifically referred to this example in our report.
4. Availability of Broadband

The area is served by two primary telecoms providers, Telewest and British Telecom (BT). Detailed information of coverage in specific areas is deemed by the providers to be commercially sensitive. However, we have been able to build up an accurate picture of broadband coverage based on information provided by BT and Telewest, plus manual mapping of ADSL availability in specific locations.

4.1. BT ADSL Coverage

The area is covered by 5 BT telephone exchanges (at Keighley, Steeton and Silsden, Denholme, Bingley, Shipley, and Baildon), all of which have been ADSL enabled, following the recent Broadband Airedale and Wharfedale\(^6\) (BBAW) campaign. This ensured that five exchanges were enabled, using funding from Bradford Council and Yorkshire Forward to provide grants to small businesses signing up for broadband for the first time. This increased take-up, allowing BT to upgrade the exchanges. The fact that half the local businesses surveyed in this report had ADSL broadband reflects the success of this campaign.

Michael from Silsden obtained a £300 grant to cover half the cost of a new ADSL connection, equipment and installation from BBAW, allowing him to upgrade his connection and get a wireless home network. This allowed him to set up a new business from home, selling tools for classic and vintage cars over the internet, and learning new skills in the process.

Some locations, where the distance of the cable run from the exchange is greater than currently supported for ADSL, may still not be able to benefit from ADSL broadband. At the time this study commenced, the maximum distance from an enabled exchange at which ADSL could be supported by BT was 5.5km. BT announced in August 2004 that they should be able to deliver ADSL broadband

\(^6\) www.bbaw.com
over an almost unlimited distance from the exchange with effect from 6th September 2004. This will extend coverage to the whole area, with the possible exception of very isolated rural dwellings and areas supported by use of shared lines.

However, ADSL coverage is not always predictable, and we have identified small urban areas which appear to be within the boundaries of ADSL coverage, but are unable to get ADSL. One example of this is in Thwaites, Keighley, where a road less than a mile from the town centre and easily within the normal radius of ADSL coverage, is unable to obtain ADSL. This may be due to aluminium cabling, shared lines, or indirect cable runs. However, these areas do have Telewest coverage, and are able to access cable broadband.

It should be noted that these areas have been identified through manual mapping of availability for specific locations, and it is not possible to identify all such small pockets without more detailed information from the broadband providers. This information is, however, deemed to be commercially sensitive.

This strong ADSL coverage provides an excellent basis for delivery of e-learning in the area, with access to broadband opening up new business opportunities and informal learning opportunities, as well as access to formal e-learning.

4.2. Telewest Cable Coverage

Telewest currently reach the majority of the high density urban areas, i.e. Keighley and Shipley, and some additional areas, where these were on the route to larger towns. The fibre-optic network has been laid in areas where it was expected to commercially viable, and therefore some outlying areas in Keighley and Shipley may not be covered. However, because of the Telewest contract with Education Bradford, all schools within the Aire Valley have high speed connections, no matter how remote they may be.

Telewest currently have no plans to extend cable coverage.

4.3. Other Providers

There is an informal wireless service which extends from the east of Leeds through Shipley and as far as Steeton and Silsden. This network is contributed to, and extended by, local enthusiasts. Currently
this network is not capable of providing a commercial service. It is likely that, in its current form, it could not provide a commercial service in the future.

Satellite services are also available from a range of providers, in two different ways, two-way satellite, or one-way satellite which relies on a standard modem connection as well. The value of satellite is limited, as costs are generally higher than for ADSL or cable, and so this option is best suited only to areas with no other broadband services.
5. e-Learning Providers

We have investigated the current availability of e-learning, identifying examples of best practice, and also considered the potential of different providers and locations to offer e-learning or access to e-learning. All e-learning requires three elements to be in place: the provision of content, learning support, and a venue providing access to ICT. Provision is often delivered by way of a partnership between different organisations, each providing one or more of these elements. Some provide everything from content through to support and a venue. Others provide only part of this, with a partner providing the rest.

Organisations can be classified by their role in this provision:

- **Content Providers**
  Content providers enable the provision of course content for e-learning. This content can be provided directly, as with the local colleges who have access to customised local content, or developed by a third party, as with learndirect.

- **Support Providers**
  Support providers are those organisations that actually support learners. These will be the organisations providing tutor support, whether on site or remotely by telephone and email.

- **Location Providers**
  Many providers simply offer a suitable location, arranging for a partner such as a college to run the course and provide both the content and the tutor support.

5.1. FE Colleges

The two major providers of education and skills training in Airedale are the two Further Education (FE) colleges – Shipley and Keighley. Both are general FE colleges serving their own geographical area within the Aire Valley. In addition, there are other colleges with a presence in Airedale, or with a strong e-learning focus. These are Bradford College, based in Bradford city centre, Craven College in Skipton, and Park Lane College, based in Leeds.
Both Shipley and Keighley Colleges have strong employer links and play a key role in developing the skills base of the local economy, from the provision of entry level community based provision to Level four vocational training, as well as customised workforce development and work-based learning. Keighley College is the lead partner of the regional Centre of Vocational Excellence (COVE) in Gas Installation, and the lead partner of the national Centre of Vocational Excellence for Fabrication and Welding. Shipley is the sub-regional COVE in Health and Care of the Elder Person.

Shipley and Keighley also prepared a joint COVE (Centre of Vocational Excellence) submission in ICT. This demonstrated the commitment of the Colleges to developing e-learning opportunities in Airedale, with key features of their submission including:

- support for agricultural renewal, alongside support for the tourism industry throughout the Aire Valley through the targeting of rural SMEs, identification and meeting of their IT needs using the latest technologies and delivery methods
- tailored training to support the digital industries
- developing progression pathways from community based ICT through FE onto HE and into employment in order to ensure that the benefits of new IT jobs, particularly in the digital industries, are equally accessible to local people
- development of e-learning to support workforce development.

Both colleges are the major learndirect centres in the area and have invested in virtual learning environments. These secure web sites providing course content and communications are discussed in section 6.3.

Both Shipley and Keighley Colleges are partners in Higher Level Skills for Industry (HLSI), a sub-regional partnership project designed to pool materials in order to develop a central repository of e-learning materials. The project is gaining support and likely to increase in significance in the future.

Shipley and Keighley Colleges are the main providers of e-learning in Airedale, and are by far the largest providers of learndirect courses, in addition to internal course content provision.
5.1.1. Shipley College

Shipley College\(^7\) has a successful and innovative approach to developing learning opportunities in its catchment area. In 1998 Shipley College pioneered e-learning in disadvantaged communities through the establishment of Shipley Communities Online (SCOL), a strategic partnership of 16 organisations in the private, public and voluntary sector. Through SCOL, a number of community based ICT centres were established in existing community venues in Shipley East, and linked to the College for the provision of learning opportunities.

In 2002 the college received funding to develop wireless networking through a NIACE\(^8\) funded Wireless Outreach Network project, which now services the provision of basic skills through a wireless network and enables wireless access for staff. Broadband and wireless technology will be used to underpin blended learning, with high levels of support.

More recently, the first phase of development as the sub-regional COVE in Health and Care of the Elder Person has enabled significant growth. This growth was particularly evident in the development of e-learning to support workforce development in registered care homes, and the development of e-portfolios for NVQ recording and assessment, with Personal Digital Assistants (PDAs) used for tracking.

Shipley College has already begun to implement their Virtual Learning Environment (VLE), allowing students to access course content for some courses from remote locations. The College has trained Champions who have developed online materials and courses, piloted them with students and led the development of additional college staff. The team has integrated many web-based resources already

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\(^7\) [www.shipley.ac.uk](http://www.shipley.ac.uk)

\(^8\) [www.niace.org.uk](http://www.niace.org.uk)
available, including those from the National Learning Network (NLN). The VLE is now accessible by students and staff from home.

Following the success of SCOL and the development of the VLE, the College has developed a new concept of the ‘Learning Line’.

**Shipley College**

“Shipley College’s Learning Line will be based on virtual and real connectivity, combining the power of broadband, good rail links and well-appointed and equipped buildings, aiming over a phased 3 - 5 year period to create a high quality, high speed and customer focused “Learning Line” in the heart of the District, acting as a hub for the development of ‘distributed’ e-learning.

Shipley College’s Learning Line is unique in linking to a public transport strategy, supported by the Airedale Metro Railway Line and sections of the Wharfedale line and having, as its major junction, the College’s Saltaire Campus. This campus will probably be enhanced by the establishment of an additional building as close as possible to the rest of the campus.

The College’s two other junctions on the Learning Line will link the College’s village campus, by rail, to the centre of Shipley and the centre of Bingley, thus joining the College’s traditional ‘Shipley, Bingley, Baildon’ adult catchment area into a broadband community enhanced by excellent, easy access facilities for face to face contact.”

*Shipley College*

The first ‘connection’ on the Learning Line opened in the centre of Bingley in July 04, with LSC and Yorkshire Forward support. The college’s ‘Bingley Connection’ provides an educational information and advice point, and a venue for workforce development and short courses for adults.

Further feasibility work is now being undertaken on the next phase of the Learning Line prior to the possible submission by the College of an application for capital support. Plans are under discussion as part of the Airedale master-planning exercise to consider appropriate sites for further connections as
the college is considering the possibility of establishing a connection in central Shipley or Shipley Railway Station.

5.1.2. **Keighley College**

Keighley College\(^9\) has a campus based in Keighley town centre, where they have a range of ICT facilities, including a learndirect centre. The College is in the process of arranging a move to a new location in the town centre, with enhanced ICT facilities. Keighley College has a number of initiatives that offer considerable potential to develop e-learning opportunities not just in Keighley, but in Airedale, Bradford, and even worldwide.

The College first set up a mobile unit with five laptop computers in a converted minibus, connecting centres such as local Scout huts to the internet via two-way satellite. They now have an additional 24 laptops, in two sets of 12, on mobile trolleys which have been used to deliver e-learning at regional scout and guide camps to some 400 young people. The College is looking to use these mobile facilities plus satellite to deliver to more community centres in the Keighley area. They are also considering fixed satellites for mobile provision in centres without a telephone connection, though the low cost and better performance of ADSL may now offer a better option.

To support this work with the Scouts, the College have produced content to support their learning, which is now available on a website for use by scouts and guides around the world.

Keighley currently produces both radio and satellite television programmes as part of course delivery. They intend to develop this into the provision of digital content for e-learning through radio and satellite television, broadcast over the internet. To achieve this they are looking for venues such as other colleges, schools, community centres or universities to trial satellite, internet and radio content provision.

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\(^9\) [www.keighley.ac.uk](http://www.keighley.ac.uk)
The College has also obtained funding from Yorkshire Forward and the European Social Fund for the development of a ‘STAR’ (Science, Technology and Aeronautical Research) centre, which will aim to engage young people in science, technology, engineering and maths. The College plans to take this opportunity to use e-learning methods to deliver learning in these areas.

Like Shipley College, Keighley have purchased ‘Blackboard’ software for a VLE, and are currently in the process of planning a phased roll out of this system during the rest of 2004. 18 Staff have been trained to ensure its support and utilisation.

Keighley College

“The college views [the new site] as an opportunity both to radically reshape the manner in which it delivers its curriculum and services but also to optimise the benefits for operating efficiency. ICT, ILT and e-learning will be critical to these objectives providing value for money solutions to the organization and enhanced, flexible opportunities to its learners and service users.

The new campus and building will provide the catalyst to develop the interrelations of several existing projects but in particular the connectivity of the STAR centre, the Satellite Digital TV and the KAFnet radio. Learning opportunities relating to the STEM curriculum will be broadcasted to the dispersed campus developed through the Constructive Partnership.

Through digital radio and TV links young people will have the opportunity to interact virtually with the STAR, supporting and extending their mainstream, locally delivered curriculum activity. Additionally links developed with the Centre for Learning Excellence will establish the STAR as a regional centre for Science and Technology based continuous professional development for teachers and other education based staff. This provision again will be made available through blended and e-learning opportunities.”

Keighley College
5.1.3. Other Colleges

5.1.3.1. Bradford College
Bradford College provides a range of adult and community education courses in Airedale and Wharfedale. This includes a mixture of tutor-led and supported IT learning, and delivered through a number of community based locations. In the Aire valley, these locations are Salt's Grammar School, the Kirkgate Community Centre in Shipley, Wrose Community Centre, and the Greenfield Centre in Baildon. However, these courses are largely classroom based provision and the e-learning element is limited.

5.1.3.2. Park Lane College
Park Lane College also provides e-learning opportunities in Airedale, as they have a number of initiatives to provide learning opportunities across West Yorkshire, based on a concept of distance learning with telephone support. Park Lane College operates a service known as 'the learningline', offering a range of basic 'quickskills' courses in IT, such as ECDL (European Computer Driving Licence), again in the Leeds area. Whist these do not attract many Airedale learners, there is the opportunity to extend the marketing of this and similar provision to Airedale, or for local colleges to consider similar projects. They also work with private learning content provider Vision2Learn, who account for around half Park Lane's distance learners.

However, these e-learning initiatives from Park Lane are supported only by telephone and email help. Face to face tutor support is not an option. As a result, the market for these courses is, according to Park Lane, limited to more motivated students with no basic skills or basic IT needs, who do not wish for or require on site support. This is a relatively 'pure' form of e-learning that is not considered to be appropriate for the range of learners that 'blended learning', delivered by more local providers, can reach.

5.2. ACL Providers
Some learning in Airedale is provided by Adult and Community Learning (ACL) providers, funded by the LSC. The LSC has not awarded the ACL contract to a single party in Bradford, but to three separate organisations. The Family Learning contract was awarded to Education Bradford, the Voluntary Sector ACL contract went to Bradford Cathedral Centre, and Bradford Council's Community Development Service was awarded the Local Authority ACL Contract.
Nationally the LSC is funding a three year programme to bring the National Learning Network (NLN) to the ACL sector, this should deliver:

- Greater access to the Joint Academic Network - JANET / SuperJanet (an ACL Point of Presence is being established in Bradford)
- High-speed broadband network
- A staff development programme
- Access to electronic learning materials

The ACL Providers in the Aire valley include:

**Local Authority Contract**
- Bradford Libraries
- CALTEC
- Shipley New Start

**Voluntary Sector Contract**
- Baildon Community Link
- Keighley Local Enterprise Agency
- Keighley Disabled People’s Centre
- St Hughes Centre, Baildon

The e-learning options provided by these providers are discussed in the appropriate sections of this report. Connectivity available to ACL providers varies significantly. The majority of ACL providers in the district do have internet connectivity, however the bandwidth available varies significantly and the method of accessing the internet differs depending on the contract.

Connectivity for local authority ACL providers is via the relevant connection from either Bradford Council's or Bradford Libraries’ network.

The connectivity available to voluntary sector ACL providers varies depending on the ACL provider, from 2Mbps leased lines to no connection.

Connectivity for Education Bradford, the family learning ACL provider, is provided via the ‘ICT in Schools Investment Programme’, which provides a high speed broadband connection to the Internet via the contracts with Telewest.
5.3. Community Based Learning

In addition to formal providers such as schools and colleges, there are a number of other learning providers or initiatives which can be defined as community based. These include some which are centred on specific ethnic or community groups, and others which reach a wider and more diverse audience. Both approaches were seen to be successful at reaching disenfranchised learners, who had not been attracted to more formal learning environments.

5.3.1. Shipley Communities Online

SCOL\textsuperscript{10} is the major community-based ICT initiative in Shipley, involving a partnership between Shipley College, Shipley East Regeneration, other public and voluntary sector agencies and four community venues. The college provides the learning content, learning support and technical support and procurement. The centres provide outreach support and the venue. It re-engages residents who would not otherwise participate in college-based learning and thus provides a first step for those communities back into education and training and into the new economic opportunities arising from the regeneration of Airedale, and in particular the growth of the digital industries.

The four SCOL Centres in Airedale are at Shipley New Start Centre, Windhill Community Centre, Bolton Woods Community Centre and Wrose UK Online Centre.

Both Windhill Community Centre and Bolton Woods Community Centre are home to independent community organisations in the voluntary sector - North East Windhill Community Association and Bolton Woods Community Association.

Shipley New Start Centre is a local authority-funded Adult and Community Learning centre.

Wrose UK Online Centre is a purpose-built ICT centre, set up with capital funding secured by Shipley College as part of the UKOnline Centre initiative and located in Highcroft Youth Centre, a building managed by Bradford Youth Service.

\textsuperscript{10} www.shipleyonline.org.uk
SCOL

Jane has been dropping in to the SCOL Wrose UK Online and other centres since January 2002. She was interested in using the resources to develop a business idea that she had in order to regain employment.

Jane is currently developing her own web site to promote her own business. She is hoping to establish herself as a company offering to teach English to Italians who will stay with families in the Bradford area. The web site will be the main point of contact and way of promoting her business in Italy.

SCOL was described in research carried out for Local Internet Futures project (assessing potential for Information Society development in 4 local authorities) as ‘an example of smart labour practice’ and that ‘Shipley Online is regarded as an example of best practice in community-based use of ICTs both locally and nationally’ (LIF report June 2000). It was mentioned in the 2020 Vision Summary document as ‘an innovative new community ICT project’ marking ‘progress towards a connected District’.

The provision was very popular increasing the college’s widening participation figures in 2002 by 27%. Subsequently three centres became UK Online Centres and learndirect access points, with capital funding from DfES, and broadband connectivity supplied through a college LAN (Local Area Network) connection. The centres have consistently exceeded their targets for numbers of people accessing ICT, those undertaking ICT training and progressing into employment and furnished numerous case studies both of success for individuals and capacity building through ICT for groups.

5.3.2. Keighley Community Learning Club

Keighley Community Learning Club (KCLC) builds on existing successful projects in Keighley, and reflects the successful SCOL in Shipley. KCLC includes two pre-existing community projects, the Russell Street Project and the Sangat Centre, as well as Keighley On-line and Keighley Disabled People’s Centre. Whilst SCOL have a more centralised approach, KCLC centres are more autonomous, with many initiatives driven by individual centres.

11 Local Internet Futures’, The Local Futures Group, 09/1999
5.3.2.1. The Russell Street Project

The Russell Street Project is a voluntary organisation providing education and training for people who, for a variety of reasons, need help to gain qualifications so that they can enter full time employment or further education. Training offered is directly related to skill shortages that have been identified by local companies, which means that the project can provide students with a ‘fast track’ to employment.

Based in Keighley, it offers a more informal learning environment, targeting learners primarily in urban Keighley who are not attracted to learning in the local college. These learners vary from pre-16 children through to adults with basic skills needs, or wishing to re-train to improve their employability. Most courses are provided in house, in conjunction with Keighley College, but they also provide learning opportunities on an outreach basis. This allows the project to reach rural villages, such as Denholme, which otherwise would not have local learning provision.

There is an opportunity to extend this type of outreach work with mobile units, to offer the opportunity for learners to begin learning in a supported local environment and continue through e-learning. This type of provision would support the Project’s observation that students require much greater support at the beginning of a course, and if they have not participated in informal learning for some time, whilst allowing students to progress to supported e-learning.

Sava-Comp

The Russell Street Project also has an innovative project to recycle used computers, called ‘Sava-Comp’. Used units are received from public sector and commercial organisations, and Russell Street learners refurbish the systems, which are then made available ‘as new’ to community groups, charities and low income families. This provides IT training for learners, improves their links with the community, provides an additional revenue stream, and also provides home PCs, enabling access to IT and e-learning for low income households.

5.3.2.2. Sangat Community Centre

The Sangat Community Centre in Keighley provides a range of IT basic skills courses to their predominantly Asian local community in and around central Keighley. They provide a drop in centre and courses with a 20 PC IT suite. The courses are popular with traditionally hard to reach groups, such as ethnic minorities and the long term economically inactive, who are not used to study. They attract learners by being part of the local community, with around a thousand people passing through
the centre each week. Most learners have basic skills needs. When learners are ready to progress to higher level courses they are referred to Keighley College, or centres such as Russell Street. Despite being able to reach an audience that the College had been unable to reach directly, Sangat have difficulties attracting ongoing funding.

Sangat is not the only community-focused learning centre in Keighley. The Emily Street Mosque also provides a range of courses in subjects such as IT, with its own dedicated IT suite.

5.3.3. Rural Community Centres

Rural areas do not benefit from the range of community based provision available in urban areas such as Shipley and Keighley. This is largely because funding, such as the European Objective 2 or UKOnline funding used for SCOL and KCLC, has targeted areas of urban disadvantage, and because rural areas are by their nature more remote and have access to limited services. However, there is a wide range of potential venues for learning, which could enable local access to learning. e-Learning would allow the best possible benefit from any additional provision in rural areas by allowing learners to continue their studies when on-site support or facilities are unavailable.

As part of this study we have identified a range of potential venues for learning, including village halls, churches, schools, community centres and libraries. Details of these centres are provided in Appendix IV.

Rural centres often have limited facilities, and tend not to have any existing ICT facilities. However, they have potential to provide a strong link between learning and the local community, possibly through a mobile unit provided by an existing provider.

5.4. Libraries

Airedale has a network of public libraries, extending to most towns and villages that have developed over an extended period of time to meet specific requests and local demand. The library network coverage is stronger in some areas than others, with local libraries in Baildon, Bingley, Denholme, Keighley, Shipley, Silsden, Wilsden and Wrose. Other villages, such as Harden, Cullingworth, Cottingley, East and West Morton, Steeton and Riddlesden are not directly served by static libraries but are served by mobile libraries. Libraries tend to be conveniently located in or near town centres, with good access by car, public transport and by foot for many local residents.
Libraries offer a good environment for learning, being quiet and having some facilities to sit and study. Facilities are however limited, though larger libraries, such as Keighley and Shipley have reference areas with additional study space. Wilsden library is operated from a community centre and stored away while not in use, offering very limited facilities.

All libraries in the Bradford District have benefited from the Council’s policy to provide a broadband Internet connection to every library, funded through the New Opportunities Fund (NOF). All the libraries in the Aire valley except Wilsden, which is connected via ADSL, are networked to Bradford Central Library using a minimum 2Mbps Telewest connection.

They offer access to ICT facilities via the ‘People’s Network’, ranging from a minimum of two computers at smaller libraries up to 18 computers at Keighley. These PCs offer access to the internet and standard office applications, as well as library information. There is a learndirect access point at Shipley Library, comprising two computers, connected to the internet, that are only available for learndirect students. However current usage, according to library staff, is very limited.

Currently visitors have to book a computer when they visit the library, meaning that learners cannot be certain that a computer will be available for them when they want it. However, the Libraries, Archives and Information Service (Libraries Service) are implementing a computerised system (Netloan) that will make booking information available via the internet so that users can pre-book a PC. This system is already operational in the larger libraries and will be rolled out to all libraries by March 2005.

Traditionally library staff are not used to dealing with IT or online learning, as libraries until recently only focused on the printed materials. The opportunity to use the internet for research has rapidly increased the relevance of ICT to libraries, leading to a need for new skills for library staff. The Libraries Service has begun to address this issue by working with Shipley College to provide ECDL and additional training in ‘the role of libraries and ICT’. To date 70% of all libraries staff have completed this training.

However, visits to libraries undertaken as part of this study revealed that staff knowledge of ICT and confidence to handle questions was limited. Library staff did not know whether computers could be used for learning, or help with basic IT questions about the software on the systems. Assistance was limited to help logging on to the internet and the library information system.
Libraries were also unable to provide information about learning opportunities provided by other providers, other than by offering a printed copy of the local college prospectus. With the exception of Shipley, they did not know how to sign up for learndirect or whether the library computer could be used for study. At Shipley, the provision of two dedicated but under-utilised computers for learndirect has created a separation between learning and other use of ICT facilities that is not necessary, as learning can be undertaken on any internet connected computer. This limited understanding and knowledge by staff, plus the lack of information on third party provision limited the capacity of libraries to provide access to e-learning.

Opening hours are also limited. Some libraries are open as little as one or two days a week, with several on 12 hours a week opening. In Airedale, only Keighley, Bingley and Shipley libraries are now open six days a week. Library opening times have improved over the last year with the provision of additional funding by the Council, but the limited hours in smaller rural libraries limit their usefulness as key access points for e-learning.

The Bradford Libraries, Archives and Information Service is currently preparing a strategy covering ICT and e-learning, which should take these factors into account. Accordingly, although current access is limited, libraries do offer great potential to be a key provider of access to e-learning in the future, without the security concerns present in, for example, primary schools.

The disadvantage of libraries is that, with the possible exception of Keighley, Bingley and Shipley, they do not have sufficient space to offer classrooms for external providers to run courses. Instead, their strength is in being able to allow learners independent access to study at their own pace.

5.5. **Schools**

Schools offer a good opportunity to become e-learning venues, most being already connected to the local schools broadband network and having existing ICT infrastructure. Schools such as Denholme Primary have proved that obstacles normally associated with the use of schools by members of the public can be overcome.

Most schools do not offer e-learning opportunities to the public. For the purposes of this project, we have looked at publicly available provision. From discussion with local schools, it is apparent that most schools have not considered the opportunities to open their doors to the public for out of hours
learning. There are exceptions but it is considered by most that there are likely to be too many barriers to extending provision beyond their existing pupils and hours.

5.6. City Learning Centres

City Learning Centres are intended to offer IT training open to the public as well as students. They allow access to IT for the community out of school hours. They try to attract students with up to date facilities such as a cybercafé and IT suite at Greenhead High School, and courses such as ECDL at Carlton Bolling College in Bradford. However, information on the extent of the course provision is limited, with no information in the local library and no course information on college websites. Consequently, their impact on e-learning provision and community education across the valley appears to be limited.

Caltec, at Challenge College, has a wireless community learning centre in Silsden – at the moment there is no fixed venue. The plan is to use the library’s 2mb leased line to wirelessly connect the laptops to the internet for e-learning training using Caltec content which is provided in limited volume from UK Online. They are looking for their tutors to develop their own content in the future and also to receiving content from the NLN £2.4m project.

Silsden Parish Council want to establish a model of good practice by establishing a permanent site for the project in the police station’s community contact point. This is unlikely to happen as the police station is being sold. The laptops, which were purchased with support using funding from NIACE, are currently being stored in a local pub without a network connection. Haworth has a similar Caltec backed project, also without a fixed site.

5.7. Additional Learning Providers and Centres

In addition to the colleges and other major learning providers, there is a range of other providers, some private sector and others linked to organisations such as the local council.

5.7.1. Moorside Training

Moorside Training is a private training provider in Cottingley. They have an ICT suite with eight PCs, and provide a range of basic skills IT courses, along with ECDL and some ‘Skills for Life’ training and business management.
5.7.2. **KADTAL**

KADTAL are a another private training provider, owned by their 31 member companies and based in Keighley, with a strong focus on business, and particularly the construction and engineering industries. KADTAL has an online learning centre in the town centre, offering a range of courses from modern apprenticeships to short ICT courses. Private providers like these have strong links to the business community and appear well placed to deliver e-learning for employees.

5.7.3. **Cyber Cafes**

Cyber cafes are another type of private provider. Cyberdine in Keighley has been a private provider of e-learning based in Keighley. They operated a cybercafé, until recently providing a range of learndirect courses. However, the changing focus of learndirect towards SME provision and away from smaller centres is likely to increase difficulties for such centres. Greenhead CLC also operates a cybercafé as part of their facility, to attract additional learners.

**Platform One, Menston**

Platform One is a private provider offering a café and IT suite at a railway station in the Wharfedale village of Menston. They have become one of learndirect’s most successful small centres, attracting a range of learners throughout the valley, providing a service to nearby villages as well.

5.7.4. **Keighley Training Group**

Keighley Training Group is one of a number of training providers linked to the local authority. They provide a wide range of classroom based courses, including IT, from the ir centre in Keighley. They receive many referrals from the Keighley Job Centre, and consequently run a range of basic IT courses. However, this is currently classroom-based provision only.
6. e-Learning Enablers

There are a significant number of learning providers, but there are relatively few public producers or commissioners of learning content, the most notable being NLN and learndirect. The availability of Virtual Learning Environments and the impetus towards e-learning through NLN initiatives in the FE sector has meant an increased emphasis on development and delivery of customised e-learning content by college lecturers.

6.1. learndirect

learndirect\textsuperscript{12} are probably the largest national provider of e-learning content. Commissioning content from many e-learning suppliers enables learndirect to offer a wide range of courses which can be accessed through a network of local centres, of which three ongoing centres are in Airedale. These are Shipley College, Keighley College, and Moorside Training in Cottingley.

learndirect is organised and funded on a regional level. Discussions with learndirect indicate that limited funding means that learndirect are not currently looking to increase the number of centres, due to funding limitations.

Until recently, learndirect has focused on individual learners who wish to improve their skills for any reason, whether they have key skills needs or wish to enhance their employability through more intermediate level courses. More recently Government policy and funding has dictated a change in focus towards supporting SMEs in offering training opportunities to staff. Individual learners are still classed as a priority in relation to Skills for Life (basic skills) and pre-level two.

As a consequence of the shift in focus to SME delivery, the existing network of centres is being reviewed to ensure that these priorities are achieved. Some centres have a strong focus on workforce development and are likely to benefit from this move, but other centres which have concentrated on individual learners are having to adapt their provision and learner base to ensure other key priorities are met. This changing focus offers an improved opportunity to use learndirect for workforce development.

\textsuperscript{12} www.learndirect.co.uk
learndirect has been supported by large national advertising campaigns and a large network of local providers, designed to bring access to local communities. learndirect is probably the most heavily advertised of any e-learning providers, with large scale television and print media advertising, targeted at individual learners, often with basic skills needs. As a result learndirect consider that awareness of learndirect is high, although most people do not actually know what it is. However, editorial style advertising has been very successful on a local level, with one advertisement in a local paper attracting 500 new learners in Shipley. This demonstrates the extent of the demand for e-learning opportunities which is not currently addressed.

Discussions with learndirect and individual centres have indicated that the most successful learntdirect centres are those with highly skilled and motivated staff who drive the centre’s progress. This has favoured the colleges, which are able to provide a high level of support, but limited opportunities for centres where staff have not pushed learntdirect as a learning option, where staff have changed, or where staff are unable to provide a high level of skilled assistance where it is required by learners.

learndirect use a number of different methods to enable the delivery of courses to students:

6.1.1. **learndirect Centres and Access Points**

learndirect centres allow students to sign up with a third party provider, such as a college or private provider, who then support the students on their chosen course. Rather than hosting their centres themselves, learntdirect provide significant support to their centres allowing them to appear to be learntdirect locations.

There are currently three learntdirect centres in Airedale. These are Moorside Training (a private provider in Cottingley), Shipley College and Keighley College. The number of centres has reduced in the last couple of years. Past centres include the Russell Street Project and Cyberdine. The Russell Street project concluded that courses by other providers such as UKOnline were preferable because they offered the opportunity to modify the content to better match the needs of local learners. Cyberdine was a successful learntdirect centre, at one time with more learntdirect students than Keighley College. However, due to the limited funding available they felt they did not have the resources needed to ensure retention and course completion. As a consequence they relocated elsewhere, where they were able to obtain additional funding. In addition, Bradford Central Library is a learntdirect centre, but out of the area covered in this report.
Access Points are linked to a main centre, and students wishing to enrol on a course must go through the main centre. There is a learndirect Access Point at Shipley Library. This consists of two computers with an internet connection which are reserved for learndirect learners only.

learndirect also award ‘Premier Business Centre’ status to some of their leading centres. These provide support to SMEs who wish to set up and deliver training to their own staff. There are currently 2 such centres based in Bradford and Calderdale.

learndirect are currently restructuring their provision, based on three levels to learndirect centres, Premier Business centres, full learndirect Centres and link venues. This classification replaces the current split of centres and access points. It will also allow the possibility of integrating continuing UKOnline centres into the learndirect network.

Centres will be those learndirect centres able to accept enrolments, and provide on site training and support for students. These will be the focus of the learndirect network, but due to funding restrictions they are likely to continue to be limited in number. Link venues will be other, smaller centres with more limited resources. These will draw on the staff skills and support of the main centres.

Under this structure, the Access Point at Shipley Library would be a link venue. According to learndirect, this structure should provide more opportunities for new link venues. One possibility would be for smaller libraries, such as those in the Airedale villages, to act as link venues for the learndirect centre at Bradford Central Library, as Shipley Library does at present. The same would apply to the network of college supported community centres in the valley.

6.1.2. Direct Enrolments

Some courses are available to buy online on the learndirect website. Students can sign up and pay by credit card without going through a third party provider.

6.1.3. Virtual Learning Centre

This has allowed students to enrol for and study learndirect courses without attending a learning centre. Until recently this has been operated for West Yorkshire by Park Lane College, who were contracted by learndirect. However, this has not been actively marketed except within Park Lane College’s main catchment area, and according to Park Lane about 80% of students are Leeds based, with take up from other nearby areas, such as Airedale, being quite limited.
However, from 1st August 2004 learndirect have contracted with a new VLC operator who are looking to expand their reach to all areas of West Yorkshire, providing further scope for provision in Airedale.

6.2. UK Online

UK Online Centre funding was an important source of revenue and capital for the establishment of community based ICT centres such as those forming part of SCOL and KCLC. KCLC obtained one of the largest grants available, at £0.5m. However, this source of funding is no longer available and so centres are being forced to identify alternative sources of funding. For many, this may involve becoming learndirect link venues. Learndirect expect many existing UK Online Centres to become link venues for learndirect centres, such as the local colleges. It is unlikely that they could become learndirect centres in their own right due to funding restrictions within learndirect. UK Online centres also tend to offer a more restricted range of courses at a more basic level, often catering for basic skills needs in ICT. As such, the overlap with learndirect, with its new focus on SMEs, is likely to be limited as they are increasingly addressing different audiences.

6.3. Virtual Learning Environments

Virtual Learning Environments (VLEs) are an important development, with the potential to support the work of learning providers including colleges, ACL providers and others.

Both Shipley and Keighley Colleges have purchased VLE software. Virtual Learning Environments are secure websites, containing course content and allowing secure communication between learners and tutors. Both Shipley and Keighley have selected the same proprietary software, called ‘Blackboard’. Shipley College has begun the process of populating its VLE and making it accessible to students. Keighley College are in the process of planning the roll out of their VLE. When implemented, VLEs will offer colleges the opportunity to provide:

- Controlled, secure access to learning programmes, from any computer, anywhere
- tracking of student online activity
- access to learning materials and online assessment
- email communication between tutors and learners, and peer to peer communication.

13 www.ukonline.gov.uk
The provision of VLEs by the two Colleges is critical to ensuring the provision of relevant and local content for e-learning.

6.4. National Learning Network

Both colleges have benefited from the initiatives developed for the FE sector through the National Learning Network\(^{14}\) (NLN). The NLN is a national partnership set up to transform the post-16 learning environment, a package of measures designed to increase the uptake of Information and Communications Technology (ICT) and e-learning across the sector. It has allowed the development of infrastructure, staff development and online materials for all colleges.

Thus all colleges now have the infrastructure necessary to support the sustainable use of technology in teaching and learning, including high speed (minimum 2 Mb, to be shortly upgraded to 4 or 8 Mb) internet connections; staff competence in the application of Information and Learning Technology (ILT) has increased significantly through targeted initiatives for staff development; and high quality, web-based, e-learning resources have been commissioned in most vocational areas to support the delivery of N/SVQs. The NLN is now being rolled out to the ACL sector, and a further series of materials to support ESOL, Basic and Key Skills and Family Learning is in development. It is intended that these web based materials will be delivered through VLEs, funding for which was made available to colleges in line with the NLN initiative and is to be extended to ACL provision.

6.5. Other Content Providers

In addition to the public sector content providers such as the colleges, the NLN and learndirect, a large number of private companies also offer course content. Companies such as local company Virtual College in Ilkley provide a range of course material, often commissioned by organisations such as learndirect or the NLN (below). Virtual College has recently won a contract to deliver an e-learning portal which is currently under development as part of the ESF Round 4 Commissioning process, building on the existing WYTAP website (see section 10.5.3).

Another example is ‘vision2learn’, a private course provider who will work with any college and are currently working with Park Lane College in Leeds to offer a range of free and low cost online training courses in areas of information technology, personal development, business development and sports and leisure, accredited by NCFE. Park Lane has students from a wide area, including the Aire Valley,

\(^{14}\) [www.nln.ac.uk](http://www.nln.ac.uk)
on these courses. The College attribute this success partly to ‘buying in’ not just course content but also marketing from vision2learn. The courses are marketed by vision2learn across West Yorkshire, primarily to SMEs.
7. Existing ICT Infrastructure

There are a number of different infrastructure solutions in use at the moment: these can be defined as centrally supported, distributed supported, minimal support and mobile.

7.1. Centrally Supported

A centrally supported network can be extended to locations other than the main site. This is the approach usually followed by colleges seeking to establish outreach centres. These Wide Area Networks (WANs) are supported by remote management software so that significant local expertise is not required.

This is a relatively high cost approach, as it requires a leased line to each location, connecting it to the central site. The administration of a network of locations is time consuming and the software required can be expensive. However, the approach does offer a reliable infrastructure, with uniform security standards and maximum interoperability between locations. This offers some practical advantages for learning, for example making it easy for learners to store files centrally and access them from any supported location.

SCOL is a good example of the supported network approach. Supported by Shipley College, each site (apart from Shipley New Start) is connected to the College’s WAN. Whist this approach offers SCOL additional functionality and central control, the annual cost of maintaining high speed connections to the College network can make the provision of additional centres uneconomic, and requires continuing revenue income to support existing centres.

7.2. Distributed Supported Networks

This approach is based on a series of independently supported networks, which have been linked together to allow added functionality, whist at the same time requiring independent support at each location.

This strategy has been followed by KCLC, in connecting the main College site with providers such as the Russell Street Project, which already benefited from their own Local Area Network (LAN) with connectivity and support.
This is also a relatively high cost solution, with some duplication of supports costs. It still has significant line charges, except where centres are linked using more recent ADSL broadband technology. It is also dependent on each site to ensure security at a local level. However, it does allow a number of locations to work closely together.

### 7.3. Minimal Support LANs

A new approach to providing small community ICT centres, such as those in the SCOL network, would be to have an independent local infrastructure requiring minimal support. Until recently, independent local networks would have resulted in very high support costs as it would be hard to support centrally. However, new technologies allow this approach through complete control over individual PCs.

Software such as Deep Freeze™, which is used by Bradford Libraries and the Queen’s Hall IT Centre in Burley in Wharfedale, allows the setup of individual computers to be ‘frozen’ and reset every time the computer is restarted. This prevents any damage to the PC setup from users, or from threats such as viruses which are eliminated when the computer is restarted. It also prevents users from storing their work on individual computers. This ensures that support required is minimal, as only hardware problems would require much support. Software support could be limited to occasional visits for software upgrades and maintenance.

**Queen’s Hall ICT Suite, Burley in Wharfedale**

The Queen’s Hall uses a very low cost solution, proving a modern six computer network for the local community. The broadband circuit is low cost ADSL and the support is minimised by the use of self maintaining PC software (Deep Freeze). As soon as PCs are rebooted any virus or user changes are lost and the PC is restored to its standard supported configuration. The total annual cost of maintenance is less than £500 per year, plus any hardware replacement costs. The 512k 50:1 ADSL Broadband Connection would cost £300 per year, and is more than sufficient for all users.

Connectivity can be provided via a low cost ADSL solution, with a LAN connected directly to the internet through a standard ADSL router with built in firewall. This solution offers a much lower cost alternative for smaller centres. However, it does have some drawbacks. For example, it can be more difficult to upgrade computers remotely than over a centrally supported WAN, and students would not be able to store work on the local computers. This is easily overcome by allowing students to store

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15 www.queenshall.wharfedaleforums.com
work on removable media such as CD-ROM, which also allows them to work at home. Access to the VLEs provided by learning providers such as local Colleges is still available as these can and should be made accessible over the internet to allow e-learning. Because the support required is so low, this could easily be outsourced to a private provider at very low cost, probably under £1,500 a year for a network of around 10 PCs.

7.4. **Mobile Units**

Mobile Units are designed to provide ICT facilities at locations where these are not usually available. There are a number of different ways of providing a mobile unit, from a fully equipped van with a network of PCs and a satellite connection, to a number of laptop PCs carried in a tutor’s car and linked on-site to an existing connection, or even using a mobile phone.

<table>
<thead>
<tr>
<th>Mobile Units</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobile Bus</strong></td>
<td>‘All in one’ ICT centre</td>
<td>high capital cost</td>
</tr>
<tr>
<td></td>
<td>ready on arrival</td>
<td>high revenue cost</td>
</tr>
<tr>
<td></td>
<td>no room required</td>
<td>high staffing cost</td>
</tr>
<tr>
<td></td>
<td></td>
<td>vehicle maintenance</td>
</tr>
<tr>
<td><strong>Portable laptops</strong></td>
<td>low capital cost</td>
<td>requires a room</td>
</tr>
<tr>
<td></td>
<td>low revenue cost</td>
<td>setup at location – may be once only</td>
</tr>
<tr>
<td></td>
<td>easy to transport</td>
<td></td>
</tr>
</tbody>
</table>

The two existing mobile units in Airedale, run by Keighley College and Russell Street, use laptop computers connected via a satellite or a ‘narrowband’ 56k analogue modem. Some colleges elsewhere in the country have operated vans, with varying degrees of success, and The National Institute of Adult Continuing Education (NIACE) have worked with Age Concern, using a bus equipped with an ICT suite connected to the internet using GPRS.
The Russell Street Project

Russell Street operate a mobile unit, which comprises six laptop computers. This is used to undertake outreach work in more rural areas. A partnership with Denholme Primary School had resulted in around 50 parents of primary school pupils undertaking IT courses after school hours. Research undertaken by the Russell Street Project with these learners confirmed that they would not wish to travel to a nearby town or village to undertake their course.

The advantages and disadvantages of mobile units depend on the technology used and the nature of the unit. A large mobile bus offers a ‘ready to use’ ICT suite but is expensive to provide, run and maintain. A ‘laptop’ unit can be carried in the back of a car, operated by a tutor, and quickly set up at different locations. However, each location visited needs to have appropriate connectivity, along with appropriate access and furniture.

<table>
<thead>
<tr>
<th>Existing Infrastructure Options</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centrally Supported</td>
<td>single point of control</td>
<td>high capital cost</td>
</tr>
<tr>
<td></td>
<td>high speed, security</td>
<td>high revenue costs</td>
</tr>
<tr>
<td></td>
<td>document management</td>
<td></td>
</tr>
<tr>
<td>Distributed Supported</td>
<td>high speed</td>
<td>high capital cost</td>
</tr>
<tr>
<td></td>
<td>document management</td>
<td>high revenue costs</td>
</tr>
<tr>
<td></td>
<td>on site support</td>
<td>duplicated support costs variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>security / control</td>
</tr>
<tr>
<td>Minimal Support LAN</td>
<td>low capital costs</td>
<td>document management</td>
</tr>
<tr>
<td></td>
<td>low revenue costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>security</td>
<td></td>
</tr>
<tr>
<td></td>
<td>low maintenance / support</td>
<td></td>
</tr>
<tr>
<td>Mobile Unit</td>
<td>take anywhere</td>
<td>variable connection speeds</td>
</tr>
<tr>
<td></td>
<td>cheaper than multiple units</td>
<td>small groups only</td>
</tr>
<tr>
<td></td>
<td>central control</td>
<td>transporting equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reliability and security</td>
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</tbody>
</table>
8. **The e-Learning Needs of Local Learners**

In order to identify the needs and requirements of learners in Airedale, we have looked firstly to existing research undertaken recently by a range of organisations, as detailed in Appendix I. Most research relevant to this study undertaken into learner needs has focused on two areas, the rural economy, and deprived urban areas. This matches the focus of this study. This research, supported by our findings from direct research, has allowed us to identify the basic needs and requirements for different groups of learners, in order for e-learning to be successful. These needs are clearly identifiable and successfully addressed by some providers, most notably in Shipley by SCOL.

- Access to ICT in an informal, familiar environment, often a community venue such as a community centre, school or library
- Local provision, close to home
- Blended Learning: The opportunity to work at one's own pace but with support as required, including peer support
- Learning at flexible times, including daytime, evenings and weekends
- Tutor and technical support as required, provided by an appropriate provider such as a local college. This is particularly important with new learners and at the start of a course
- Childcare support
- Strong, relevant content to meet the learner's needs, skills and interests
- Informal but structured learning opportunities, for people who do not feel ready or willing to participate in a formal course
- Educational advice and guidance on site – and progression pathways into mainstream provision
- Effective partnership working: the community-led and multi-agency partnership enables the agencies to deliver their services more effectively in the community while enabling residents to access services more effectively through single points of access.

8.1. **Differences between Learner Groups**

These requirements do, however, differ for different learner groups, depending on their circumstances and aims. Accordingly, in order for e-learning provision to meet the needs of the target audience, it must meet their requirements. The requirements in different places will vary depending on the target
groups present. The DfEE, in the NOP\textsuperscript{16} report on content for UK Online centres, has identified a number of different learner groups with different motivations for learning and different needs. This is also supported by other research. The differences between the needs of each group in terms of access to e-learning are largely logistical. This third party research is supported by the results of our research with learning providers. These are Youth, Mature, Unemployed, Parents and Employed.

\subsection*{8.1.1. Youth}

The main difference for younger users, as identified in the DfEE report, was the emphasis on youth culture. Young people are interested in the opportunities for homework clubs or revision evenings, and will be focused on locations with which they are familiar, such as schools, youth clubs and community centres. Young people are also less able to travel as they are more reliant on public transport.

\subsection*{8.1.2. Mature}

The interests of older users are very varied, but it is clear from discussions with local learning providers that many do not see the need to engage in formal or accredited training. Despite this, improving IT skills of older people is a key consideration as many will be early retirees capable of returning to the workforce. They may also be able to assist others, such as the local community, children and grandchildren, and share their skills. However, despite the Government’s focus on ‘life long learning’ they are not seen as a target group by funding bodies and providers such as the LSC or learndirect. As a result of this and their predominantly informal learning, funding available is limited.

\begin{quote}
In one SCOL centre, one mature learner had accrued 670 hours in a community IT centre over the last 12 months, learning skills such as word processing, publishing and image manipulation through a personal project with a clear goal. However, as he did not wish to pursue an accredited course, funding to support his learning is difficult to access, and the provider cannot obtain sufficient compensation for the costs of provision.
\end{quote}

Mature learners are often regular users of community centres and libraries, and are also often restricted as to how far they can travel.

\textsuperscript{16} ‘UK Online Centres - Content Research, NOP Research Group, for the DfEE, 10/2000
8.1.3. Unemployed

According to the DfEE report, most unemployed people use IT centres to find new employment, but also to gain new skills. According to local learning providers, many unemployed users are referred by other organisations such as Job Centre Plus. Some centres, such as Keighley Training Group, get a high proportion of users in this way. Unemployed learners may require greater support, particularly if they have been economically inactive for an extended period and not engaged in training or education. They are likely to have limited financial resources, restricting their ability to travel, and also the connectivity and IT resources available to them at home. However, providers note that unemployed learners are flexible in terms of time and location, as long as the location is local.

8.1.4. Parents

The motivations of parents are well established; primarily parents wish to learn to improve their skills in order to help their children. Parents returning to work will be interested in gaining skills for employment, and parents are interested as current or potential employees in improving their future job prospects.

However, parents do often have some distinct requirements. Shipley Communities Online operates centres where crèche facilities are available. At Wrose UKOnline Centre, a crèche facility is available two afternoons per week, and these are by far the busiest times for the centre. A lack of funding prevents the extension of this facility to other times.

Parents also have strong links with local schools, as was noted with the Russell Street Project’s outreach work at Denholme Primary School. A key restriction with parents is time, as many have to fit learning around both family and employment. This makes e-Learning particularly valuable for this user group.

8.1.5. Employed

The main motivations of employed people are ‘upskilling’, to perform their job better or to aid their progression. People with full time jobs have little flexibility around timing, and often use existing learning centres in the evenings. The key requirement appears to be a need for learning to fit around busy schedules, and they may look for provision at home or at work.
8.2. Cultural Differences

Airedale is a culturally diverse area, with a wide range of ethnic and multi-ethnic communities. There are a number of community centres, such as Sangat in Keighley, which clearly understand the needs and requirements of their community. As a result, these centres are able to connect to these learners more effectively than other centres, such as the colleges. However, it should be noted that they by no means restrict the use of other venues, with many learners choosing other centres based on the previous experiences of friends and relatives. As a result, the centres with a specific focus share this audience with centres such as the Russell Street Project which have a wider audience. Consequently it can be seen that ethnic differences do not indicate different learning or access requirements. The benefit of centres with a specific ethnic focus is their close link with local communities.

8.3. Urban and Rural Differences

Whilst the learning needs of people in rural and urban areas have been shown to be similar, access to services varies, with greater access in urban areas. This is partly due to the structure of funding regimes targeting more deprived urban wards only. Additionally, geography and settlement sizes dictate that more providers will locate in urban areas which have a large local audience.

8.3.1. Urban Learners

Urban learners usually have good access to services, and are often close to a college, in Shipley or Keighley. Alternatively, they are likely to be near a college community learning centre or a community centre with IT courses, such as those provided by SCOL or KCLC. Despite the normally good access to provision, urban areas are very diverse and a range of different locations are often needed to encourage learning. For example, the Sangat Centre and the Russell Street Project in Keighley reach a very different audience to Keighley College, despite their geographical proximity.

8.3.2. Rural Learners

Learners in rural areas are less likely to have good local provision. Most villages do not have college community learning centres, or any other form of adult learning provision. However, most villages have a range of buildings that could be used to provide learning opportunities, as with the successful project at the Primary School in Denholme (Pop. 2,638), which with one IT class, reached 50 learners who would not otherwise have access to local provision.
8.3.3. **Transport Considerations**

Transport to learning venues is not a major difficulty for most residents, as five principal bus companies serve the area, with First West Yorkshire as the primary provider at the Shipley end and Keighley and District at the Keighley end. All of the major villages identified in the introduction to this report are served by regular bus services, typically with an hourly frequency. There are more frequent services linking the two urban centres. Due to the rural nature of Airedale, many of these services are supported by WYPTA. The rail network in Airedale is also good, with stations at Shipley, Saltaire, Crossflatts, Bingley, Steeton and Silsden, and Keighley on the Airedale line, and Baildon on the Wharfedale line. Consequently residents in most villages are not prevented from accessing urban e-learning opportunities by public transport restrictions; instead the issue is the willingness or time to travel.

However, transport remains a critical issue for Airedale, identified in the master-planning exercise as the single most important limiting factor to Airedale’s future economic success. Despite the availability of public transport, the road infrastructure is in need of improvement at Shipley, and buses do not reach all areas or run at all times. For many people in very rural areas, driving is the only option. As a result of transport limitations, whilst most people can access learning venues they cannot always do so easily.

8.4. **Motivation**

Discussions with a wide range of learning providers have shown that some learners are more motivated than others, and that this impacts on how learners can be encouraged to e-learning, or whether e-learning is appropriate.

8.4.1. **Motivated Learners**

Some learners are highly motivated to learn. They seek out learning opportunities and seem willing to travel some distance to learn, and are happy to learn in a formal learning environment. These learners find e-learning very appropriate, as they are able to pace themselves, work around a busy life, and yet access support where they need it. Often they have a driving force behind their need to learn, for example to assist their children or grandchildren, to get a better job, or to return to work after a break for children. However, local provision still allows more people to attend, as evidenced by the Russell Street Project’s success with parents at a village school. e-Learning allows busy people who do not have a few hours at the same time each week to engage in learning.
8.4.2. **Less Motivated Learners**

Not all learners are self-motivated to learn. Some learners are less able to drive their own studies, and benefit more from greater support and structure. Many current learners referred from partners such as Job Centres are seen to have a lower rate of course completion. They will also be less inclined to travel, and if they are not enthusiastic about learning, less willing to learn in a College environment. However, providers indicate that less motivated learners require greater support to continue learning, often a greater level of support than e-learning on its own allows. There is therefore a need for a high level of support for these learners.

8.4.3. **Disenfranchised Learners**

Many of the community centres, such as the Sangat Centre in Keighley, are able to reach out to learners who feel they are disenfranchised from the education system. These learners are the hardest to reach and will not be willing to learn in a formal environment. The Russell Street Project attracts these learners by appealing to people who have given up on secondary education, but who would like to gain some practical skills.
9. The e-Learning Needs of Local Businesses

As part of this study we investigated the needs of local businesses in Airedale, through a questionnaire to 500 businesses in the area. This survey generated a response rate of over 10%, with a wide range of comments in additional to quantitative data. The questions asked are presented in Appendix V.

There is a clear opportunity for e-learning to address many of the barriers identified by businesses. According to the FSB\textsuperscript{17}, 35% of businesses have identified the timing of courses as a barrier to provision. 37% identified the loss of staff time, and 26% identified the distance from the place of work as a barrier – rising from 25% of urban businesses to 30% of rural businesses, demonstrating the impact that e-learning could have in rural areas of Airedale.

e-Learning can allow learning to take place at any time, in any location, and in company or personal time, or a combination of both. e-Learning courses can begin at or near work, and continue through self study at work or at home, with support when required.

There were some businesses that were not connected by any method, were not interested in training, or were not interested in connecting to the internet. This does support the case for education in the business and personal benefits of learning and connectivity.

The results would appear to support the case for e-learning for businesses, and reflect both national and local trends and circumstances. However, it should be noted that with 50 respondents these conclusions are indicative of the wider situation in Airedale, but a more comprehensive survey would be required to confirm these needs.

9.1. Existing Connectivity

The vast majority of businesses indicated that they used ICT to help them with their business. 84% of businesses have email, and 82% use the internet. Approximately a quarter of respondents use the internet to transfer data electronically, for example with the Inland Revenue.

\textsuperscript{17} ‘An Entrepreneurial Countryside’, Federation of Small Businesses, 07/2004
45% of businesses indicated that they were connected to some form of broadband internet connection already; however a further 41% are currently using slower analogue modems. 80% of those businesses who were not connected to broadband expressed an interest having it.

**Connectivity in Airedale Businesses**

The FSB, in their survey, identified a difference between urban and rural businesses. Urban businesses benefit from significantly better connectivity than their rural counterparts, with 30% connected to broadband, as opposed to just over 10% of rural businesses. Rural businesses were more likely to have no connection, or be connected using a standard modem. Consequently accessing e-learning is more difficult for rural businesses.

This difference may partly reflect the fact that ADSL coverage is less extensive in rural areas. This offers an advantage in Airedale, where most rural businesses can now get ADSL. It would be wrong to conclude that lower take up of broadband amongst rural businesses reflects less need for the service. Askham Bryan College’s survey of Agriculture identified a wide...
range of uses for ICT even in traditional rural industries like farming. This is shown in section 9.4 below.

Despite improving connectivity, use of the internet as a marketing or sales medium remains low. 41% of survey respondents indicated that they had a website of some kind, and according to the survey undertaken by Askham Bryan College\textsuperscript{18}, just 6% of farms have their own website. One of the reasons for this may be the lack of IT skills identified below.

\subsection*{9.2. Training Needs}

Whilst only 20% of respondents to our survey had used computers to train their staff, 84% of respondents indicated that they would like to offer some training to their staff, of which over 40% were primarily interested in IT training. The remainder were more interested in business, customer or industry specific skills. Businesses did not appear to have non-IT basic skills needs, with only one respondent expressing an interest.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{training_needs_bar_chart}
\caption{Training Needs of Airedale Businesses}
\end{figure}

The FSB survey also identified a need for training, with similar results. They asked how many employers were not satisfied with their employees’ basic and intermediate IT skills. The results demonstrate a clear

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fsb_training_needs_bar_chart}
\caption{FSB Training Needs}
\end{figure}

\textsuperscript{18} ‘Farming in Yorkshire’ (Annual Survey), Askham Bryan College, 2002/03
difference between urban and rural companies, with urban companies less likely to say they were not satisfied. This shows the extent of need amongst rural enterprises for IT training, and may reflect the reduced access available in rural areas which can be overcome through e-learning.

9.3. Preferred Locations

As expected, Airedale businesses had a preference for training at home or in the office, with 50% choosing home or the office as their preferred location. The least popular choice was a local community centre. However, this reflects the nature of the audience, and possibly a limited knowledge about nearby centres.

![Preferred Locations for Learning](image)

9.4. Agricultural Businesses

Agriculture is still an important industry in Airedale, with the industry holding considerable responsibility for tourism, land and the local environment. Many businesses in towns such as Bingley and Keighley rely in whole or part on the agricultural economy around them. Farms themselves are coming under increasing pressure to improve efficiency and to diversify into industries such as tourism.

Our survey does not identify needs of specific industries, but the annual survey conducted by Askham Bryan College, looking at agriculture in Yorkshire, asked farmers about their use of ICT in 2002/2003. This survey identified that almost 30% of farms did not even have access to a computer. In addition
to demonstrating a training need, this clearly indicates that home or work based e-learning is not always appropriate in this industry. Combined with the FSB conclusion that distance to learning was a barrier to take up, this shows a need for access to learning in local communities, no matter how rural.

Farmers who did have access to IT, and used computers in their business, did find a wide range of uses for the technology. Farmers need both access to computing and the ability to use the technology in order to benefit from these applications, which range from general office management to very specific uses, requiring specific skills. This supports the need for good quality local content which meets the specific needs of local businesses.

Farmers who had access to the internet were able to use their connectivity to undertake a wide range of business critical tasks, demonstrating not just the need for connectivity, but showing that there are clear benefits to technologies such as broadband, which can then also be used to deliver e-learning provision. This would support any move to assist farmers in establishing broadband connections.
10. Options for Future Development

We have considered a full range of options identified during our study. It is interesting to note that learning providers in Airedale have already been innovative in how they deliver services and use technology. As a result, almost all technologies and options we have considered for future development have already been used or tested in a similar environment, either in Airedale or elsewhere. This main issue to be addressed, therefore, is which of these technologies are most appropriate for specific locations and circumstances, and which offer the greatest potential to help achieve the aims and objectives expressed for Airedale.

10.1. Broadband Connectivity Options

Existing sites and new locations can benefit from a much wider range of connectivity options than was available a few years ago. They include the traditional leased line, ADSL broadband, existing schools managed infrastructure, Two-way and one-way satellite connections, traditional 56kb modems, GPRS and G3 mobile telephony solutions. The costs of these options have been identified where possible and are detailed in Appendix VII.

10.1.1. Leased Lines

The main method for providing connectivity to community learning venues has so far been to extend the existing WAN managed by the learning provider, usually a local college. Traditionally this has been done through the use of a point to point leased line, though now this could also be done wirelessly.

Extending a WAN using a leased line involved installing a circuit at a high capital cost, often around £5,000. It also requires high ongoing rental charges in the region of £3,000 per year.

10.1.2. Point to Point Wireless Connections

Where the venue to be connected has a direct line of sight to the existing WAN, wireless technologies can be used to connect the two sites without using an ISP. This has an advantage over the use of a leased line, in that there are no installation or rental charges, although there is still a cost for the equipment needed to establish the link. This solution may however be less reliable, for example in poor weather conditions.
10.1.3. ADSL Broadband

This is the connection of choice for smaller networks such as community centres. Various speeds and contention ratios are available so that a network of 10 or more PCs can be supported. Now that BT have removed distance constraints, almost the whole of the Aire valley can be connected to ADSL broadband. This can be used with a ‘minimal support’ infrastructure, as an alternative to WAN extensions using point to point leased lines or wireless connections.

10.1.4. Existing School Network

Schools benefit from a high speed and centrally supported network, and there are large periods of time where the whole network is under-utilised, particularly outside of school hours. By using school networks, e-learning in Airedale could be extended to the whole of the valley with very small additional costs.

All schools have a high bandwidth broadband connection, provided by Telewest under a rolling contract managed by Education Bradford. Schools not able to access the Telewest infrastructure directly are served by Telewest acquired and managed BT leased lines.

However, there are a number of barriers to using the existing schools’ network.

Individual contracts exist between Telewest and each school and making an adjustment to these contracts would be more difficult than a single umbrella contract. The contract would appear to prohibit schools from sharing their bandwidth with other organisations or community centres. As a result, underutilised bandwidth could not be used to enable a nearby community centre or other building such as a church or library, even though the bandwidth available to schools in most cases exceeds their current requirements.

The Telewest network infrastructure has a central firewall that protects it from the general Internet. However, this does not provide full protection within the network and as a consequence network security on school level can be limited. Potentially, viruses or other problems introduced at one school with insufficient comprehensive security arrangements may affect other schools.

Secondary schools have access to more comprehensive on-site support, with their own security setup including firewalls. Primary schools, which have no on-site or full time technical or network support,
are more vulnerable. The arrangement at different schools varies making it difficult to draw overall conclusions about the network that will apply to every school.

Schools are not restricted as to how the connectivity available to them is utilised within their premises. Therefore schools would be able to make their IT facilities available to external organisations on the premises, when not used by the school. As all schools have an IT suite which is usually only used during the school day, there is considerable potential to allow access to these facilities to others. For example, a local college could use the facilities to provide community based IT classes, without any of the normal costs of establishing a centre.

10.1.5. **Satellite**

Where ADSL broadband is not available, a satellite service provides a passable alternative, but with BT announcing wider coverage from their ADSL circuits it is likely that this service will continue to decline. Two forms of satellite connection are available to even the remotest parts of Airedale: two-way, and one-way.

The two-way satellite, because of its high first year costs (which include the purchase of a two-way satellite dish) and ongoing access costs, is only really suitable to rural businesses with a high connectivity requirement, but which cannot receive a broadband service by any other means.

The second satellite solution, offers a one-way down link with a traditional modem return path. This provides a service at broadband speeds but requires a telephone modem connection to initiate every transaction. The costs associated with this are more in line with the traditional ADSL costs but because of the modem connection, this service cannot be considered to be an ‘always on’ service. This service is best suited to low volume rural businesses and individuals.

10.1.6. **Analogue Modem**

An analogue modem, as used by the Russell Street wireless team, uses a standard 56kb modem service charged back to the community centre’s internet contract. This provides a low cost solution but at very low speeds and with a very low limit on the number of active PCs that can be connected. Analogue modems do not present a good option for future delivery as they are considered impractical for the delivery of e-learning.
10.1.7. Mobile Phone Technologies

Current mobile phone technologies include GPRS (Global Packet Radio System), also known as 2.5G, and 3G technology.

### Connectivity Options

<table>
<thead>
<tr>
<th>Options</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Leased Line</td>
<td>speed</td>
<td>installation cost</td>
</tr>
<tr>
<td></td>
<td>reliability</td>
<td>high annual cost</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td></td>
</tr>
<tr>
<td>Point to Point</td>
<td>speed</td>
<td>installation required</td>
</tr>
<tr>
<td>Wireless</td>
<td>low capital cost</td>
<td>distance, location and weather dependent</td>
</tr>
<tr>
<td></td>
<td>minimal revenue costs</td>
<td></td>
</tr>
<tr>
<td>ADSL Broadband</td>
<td>low cost</td>
<td>may be contended</td>
</tr>
<tr>
<td></td>
<td>variable speeds</td>
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</tr>
<tr>
<td></td>
<td>wide range of options</td>
<td></td>
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<tr>
<td>School Networks</td>
<td>speed</td>
<td>variable security</td>
</tr>
<tr>
<td></td>
<td>existing network</td>
<td>willingness of schools to share</td>
</tr>
<tr>
<td></td>
<td>no extra cost</td>
<td>contractual restrictions</td>
</tr>
<tr>
<td>Satellite</td>
<td>use anywhere</td>
<td>may be contended</td>
</tr>
<tr>
<td></td>
<td>variable speeds</td>
<td>may require telephone line</td>
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<tr>
<td></td>
<td>higher cost than ADSL</td>
<td></td>
</tr>
<tr>
<td>Analogue Modem</td>
<td>cheap for low use</td>
<td>very slow speed</td>
</tr>
<tr>
<td></td>
<td>not appropriate for sharing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>not broadband speed</td>
<td></td>
</tr>
<tr>
<td>Mobile (GPRS, 3G)</td>
<td>Use anywhere where</td>
<td>high cost</td>
</tr>
<tr>
<td></td>
<td>coverage available</td>
<td>not broadband speed</td>
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<td></td>
<td></td>
<td>GPRS slower than 56k modem</td>
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<tr>
<td></td>
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<td>Not appropriate for sharing</td>
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</tbody>
</table>
Mobile phone technologies do offer an alternative in areas where broadband is not available, but are not as flexible as satellite as mobile network coverage is required. In addition, the costs are usually relatively high and the speeds achievable relatively low, as compared with ADSL or Satellite. GRPS in particular is slower than a standard analogue modem. 3G may offer potential in the future, with speeds expected of up to 2Mbps. However, the cost of 3G is currently very high, at up to £80 per computer per month. These technologies are used to provide a service to remote areas in some parts of the country, but are rapidly being overtaken by ever widening ADSL availability. However they continue to be useful in enabling the use of personal digital assistants (PDAs), palmtop computers or notepad PCs for learning.

**Highlights**

**Connectivity**
- Point to Point Wireless connections can be used as a lower cost alternative to a point to point leased line
- Existing Connectivity in Schools and Libraries can be used for e-learning
- ADSL Broadband is available throughout Airedale, and offers a low cost solution to meet most requirements

**10.2. Infrastructure Options**

The variety of locations and solutions results in some complexity. The best solution will vary from location to location, and it is clear that there is no ‘one size fits all’ solution. However, technical solutions can be identified to make best use of all the available facilities in Airedale.

Existing facilities, such as school ICT suites or mobile equipment installed on an network on a temporary basis, can be used to deliver e-learning. Using an existing ICT suite is the least technically demanding solution. There are considerations around comfort and security but these can be easily addressed.
Once a connection method has been identified, there are two options for providing the ICT infrastructure within a centre. These are infrastructure with fixed IP addressing, and infrastructure with DHCP server IP addressing. It is quite possible for a number of hybrids to exist between these two groups, and in reality every situation will need to be individually considered. There are also practical and support issues to be resolved.

**10.2.1. Fixed IP Address**

Where the location has used fixed IP address ranges for all their internal PCs, the actual number of fixed Class C addresses used will need to be considered. Typically the existing ICT equipment in schools will be installed using one or at most two of the existing 15 Class C IP address ranges. Individual schools will have to provide the detailed allocation used.

In this situation a wireless router using DHCP to allocate IP addresses to clients on the wireless and wired circuits can be installed, using a single Class C range from the schools existing 15 Class C addresses. The wireless router should be permanently installed to facilitate support free connection in the future. Wireless routers to support such activities can be purchased for under £100.

**10.2.2. Dynamic IP Address**

Where the existing location has already made use of dynamic IP addressing, this can be readily extended. A new wireless router, which is set to request IP addresses, can be permanently installed and any wireless clients introduced into the environment can be configured to attach to this network. These wireless clients request and are granted IP addresses from the class C address range of the locations network. The wireless router should be permanently installed to facilitate low support connection in the future. This solution is preferable, in terms of both price and performance, to using a satellite.
The above schematic of a wireless router shows the major components in a modern router. The device is very small and usually only has 4 Network hub ports, but can of course be connected to a larger hub elsewhere. The router provides a single solution in one box, being capable of connecting to an existing network using a network hub connection, a WAN connection, or the inbuilt ADSL modem. A hardware firewall router and DHCP server are all included and the whole device is usually managed by an administrator using a web interface.

10.2.3. Practical Considerations

In order for external providers such as colleges to utilise facilities available in public and community buildings, positive steps must be taken to address concerns such as security, and other practical issues such as the comfort and safety of the learners, secure access to the site and many other issues, many unique to each location. These issues, which are greatest in the case of Primary Schools
and were identified in section 5.5, have been successfully addressed on more than one occasion and there is no reason why they cannot be overcome.

10.2.4. **Support**

One of the issues when opening a community IT centre is the provision of technical support for the network and ICT infrastructure.

The approach usually taken, and seen with networks such as SCOL, is to extend an existing WAN and take advantage of the opportunity to provide centralised support and remote network management from the provider’s main site. This offers the advantage of maintaining a consistent network environment across multiple sites, but requires extensive central support and considerable local support as well. The costs of support are therefore relatively high. The cost of supporting an individual centre is also difficult to identify as costs are effectively shared and hard to apportion.

KCLC has a more localised approach to support, with considerable technical expertise at key outlying centres such as Russell Street, combined with a strong central support function at Keighley College. This flexible approach does mean that sites can be fairly independent and benefit from on site support, but is only appropriate because of the larger networks present at the location.

A different approach to support is the ‘minimal support’ option. The costs of this approach can be more easily identified, as shown in Appendix VII. This new concept allows a small community centre or college community learning centre to provide an ICT infrastructure with minimal support costs. It does not require significant technical support from the provider.

In addition, because the costs of a minimal support infrastructure can be easily identified it is easy to outsource the management and maintenance of the network to a private provider. It would also make it relatively easy to identify the cost if internally provided support by a provider and allocate these costs to an individual centre.

This option, therefore, offers an opportunity to extend the e-learning infrastructure at minimal cost to areas where the expense of a traditional connection to a college WAN cannot be justified. It also reduces the revenue costs of operations, reducing the requirement for ongoing funding.
10.3. Options for e-Learning Provision

Our research has indicated that to be effective, e-learning needs to operate at different places on the e-learning continuum to meet the needs of different learners in Airedale. As demonstrated in the diagram below, learners who have been away from study or who have just started a course of study will require greater support. Later on in a course, learners require less support. Therefore, the nature of the delivery would need to change from the start to the end of a course, rather than, as at present, remaining largely the same for the duration of each course.

A number of options are identified in this report. These are:
- the opportunity to reach smaller communities using mobile units
- reducing the cost of community provision using minimal support networks
• the possibility of a wireless e-learning gateway.

10.3.1. Reaching Smaller Communities with Mobile Units

Mobile units were once a costly and complex way of supplying ICT facilities to remote locations. Colleges invested in buses to take a mobile IT suite to a range of locations, often supported by a satellite link. However, as we have shown in this study, there are other ways to deliver ICT in remote locations. Laptops are now affordable and more robust, opening up the possibility of the truly mobile IT suite, carried even in the tutor’s car boot. The robust nature of modern laptops has been identified and supported by a study undertaken by NIACE.19

In Airedale this has been piloted by the Russell Street Project and Keighley College, but with low bandwidth or expensive satellite connections. The low cost of ADSL and cable broadband now means that laptop computers equipped with wireless network cards could be placed on the desktop on arrival, connecting instantly to a wireless router, left permanently connected to an ADSL connection or a school network.

10.3.2. Community Centres with Minimal Support Networks

In locations where there is the capability to house a permanent ICT suite, such as larger community centres or college outreach centres, it is now possible to provide ICT facilities at much lower cost. Traditionally, such centres would use the learning provider’s network, often with a leased line connection to a college WAN. However, as with the Queen’s Hall ICT Suite in Burley in Wharfedale, it is now possible to connect such centres to a low cost ADSL connection. Using software such as Deep Freeze, it is possible to provide a network of computers that require little or no maintenance. If occasional support visits were outsourced, all the learning provider would need to do is open the doors and provide a tutor.

This solution could make it possible to bring ICT and e-learning opportunities to many communities when previously it would have been too expensive. The total ongoing cost of the ICT infrastructure would almost certainly be under £1,500 per centre per year.

10.3.3. A Wireless ‘e-Learning Gateway’

New technologies now available can be combined to offer a wireless ‘hot spot’, allowing instant broadband access to an e-learning portal. This can allow access to e-learning opportunities at almost

19 Evaluation of DfES Adult and Community Learning Laptop Initiative, Alan Clarke et al, NIACE 2003
any location, offering learners the opportunity to use their own laptops, and offering learning providers the opportunity to run local classes, using a ‘mobile unit’ of laptop computers. This can build on existing learning venues, such as libraries, colleges, Shipley College’s new ‘Learning Line’, and community ICT centres provided on either a traditional or ‘minimal support’ basis.

Wireless ‘e-learning gateways’ in high profile local venues could open the possibilities for e-learning to the widest possible audience.

The e-learning gateway can be used to replace a wireless router in locations such as schools, and allow easy access to learning in other local centres such as libraries, or even different locations such as railway stations or local cafes.

This gateway could be connected to the internet using either an existing internet connection or directly to an ADSL line. Control over the broadband service could be maintained through simple security precautions and authentication of users. Users would be able to sign up instantly at any location, and there are almost limitless options for management of such a service, with the option to, for example, link continued access to the service to enrolment on learning programmes or recover operational costs though access charges.

All users accessing the service could be directed through an ‘e-learning portal’ website, which is already under development, building on the existing WYTAP website (see section 10.5.3). This would ensure that anyone accessing the service would be instantly connected to every learning opportunity in the area.

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20 www.wytap.com
A wireless hotspot contains the components of a wireless router described on page 66 but has additional functionality provided by an access service module. This enables a web interface and local printer to be used for issuing access tickets, which can be time limited. These tickets provide an access code which the client can use to gain access to the internet. The access service can also communicate with an external RADIUS server for very secure, centralised authentication. A further addition is that it can be set to automatically route users to specific web portals. This could be used to ensure that all users go through the enhanced WYTAP website.

The cost of such a setup would be relatively low compared to traditional provision, as detailed in Appendix VII.

### 10.3.4. Television and Radio

Keighley College's emphasis on television and radio for distributing learning opportunities has potential to offer e-learning opportunities to students of other local colleges as well. There is scope for delivery of courses to smaller and remote locations using satellite TV rather than a tutor in a classroom, but in
practice both would be likely to be required. Distribution of pre-recorded or live TV content over the internet also offers scope for delivering customised local content to almost any location, to allow guided self study or to complement existing provision.

**Highlights**

**e-Learning Provision**

- ‘Blended Learning’ allows the right combination of resources and facilities to be made available to students, matching individual needs. The nature of provision and method of delivery does not need to stay the same throughout the course.

- Mobile units can be used in other locations at relatively low cost, leaving a router on the premises for a ‘plug and go’ solution.

- ‘Minimal Support’ networks in local centres offer the opportunity to provide access to e-learning where it would previously have been uneconomic.

- Wireless e-learning gateways (hotspots) in high profile local venues can open the possibilities for e-learning to the widest possible audience.

- Satellite and internet TV and radio offer promising alternatives to assist e-learning and deliver content in remote locations.

### 10.4. Options for e-Learning Venues

This study provides a clear picture of current learning venues, from which it is possible to identify the geographical gaps in provision. It has also identified a wide range of venues, including schools, libraries and community centres in addition to traditional venues such as colleges and home or work-based study.

There is considerable potential to use these existing venues to provide access to e-learning using the range of methods outlined in section 10.2 above.
Options for Future Development

Schools, and primary schools in particular, have a strong link to parents. It would be easy for parents to find out about and participate in classes at a school they visit every day. Because schools have good facilities for children, there could be an opportunity to provide crèche facilities whilst parents learn, for example at the weekend. This could offer an additional source of revenue, with such projects actively being promoted be the DfES.

Libraries and other public and community buildings offer excellent facilities, which are trusted by the community, as safe locations for reference and learning activities.

Whilst some Airedale communities are well served by a wide range of opportunities, as in central Keighley, other areas are lacking in provision. Some smaller communities, including many of the villages, have no provision. Most have buildings such as schools and libraries that could be used to offer either permanent provision or provision via a mobile unit.

Airedale is a very diverse area, and in order to identify the best location in an individual community to operate a community ICT centre or provide courses, it would be advisable to undertake a detailed consultation with the local community, ideally identifying locations where organisations or individuals are enthusiastic and prepared to ‘champion’ new provision or new facilities. In most of the smaller communities, the extensive and diverse provision found in urban centres cannot be justified, resulting in a need to use, where possible, public buildings that are open to all. Some public buildings, such as libraries, offer a ready built network of centres with good connectivity. Other centres, such as schools and community buildings, offer close links with the community or more flexible facilities.

Enabling new provision in these venues raises a number of issues which would need to be addressed. These are issues of staffing, security and safety, suitability, and communications.

The key to overcoming most of these issues is working in partnership, with the venue and the course provider working together to provide these opportunities. Existing examples of good practice show that all these barriers can be overcome.

**10.4.1. Staffing Issues**

The cost of additional staffing is a major issue for all potential venues.
Schools are usually open limited hours, and will incur extra costs in opening out of hours. Primary schools often have a single caretaker, who opens the school during the day only. This can also be overcome if funding can be obtained for out of hours support.

Primary schools often have limited technical support, relying on one technician to serve a number of schools. Again, this can be overcome. In most cases all that would be required is the initial set-up, plus the presence of the tutor to deal with any minor issues. Ongoing support requirements would be likely to be minimal.

Libraries have different issues. Library staff were never envisaged as tutors for students, and could not be expected to fulfil this role. However, in order to make best use of the library network as an important part of e-learning provision in the community, there is a need for library staff to have greater ICT skills than at present. Recently Bradford Libraries arranged for many staff to undertake ECDL training provided by Shipley College, but despite this, skills are limited to providing assistance logging on to the internet or searching for books. Enabling library staff to improve their ICT skills would allow them to provide a basic level of informal support to learners who choose to learn in their local library. Other options might include providing access to telephone support from a course provider, or training library staff in accessing and searching the e-learning portal.

Other locations, such as community centres, will not have any staff other than a caretaker or similar. In order to support learners in these locations, a combination of a mobile tutor, telephone or online support, or even volunteer support could be considered. These locations are ideal candidates for minimal support networks, and part time or temporary provision combined with e-learning at the centre or at home. It is important to note that in most centres, there is a need to ensure that any member of staff should be capable and willing to provide a visitor with sufficient support to access learning.

10.4.2. Security and Safety Issues

Security covers a wide range of issues. Schools networks already have a security issue with individual schools having different policies around the protection of the local network. Firewall standards, virus checking, protection of student data are all issues and will continue to be issues unless the schools agree to adopt a set of common standards. As a consequence of the potential security weaknesses identified, allowing external use of the school IT facilities may impact on the performance of the network, and therefore on the benefit to schools. If a virus or similar threat were introduced to the
network, this could render the network unavailable for the individual school, or in the worst case for all schools.

When public access is being considered, the safety of the school pupils must be paramount. For child protection reasons, schools are unwilling to allow access to their facilities during the school day, or whilst extracurricular activities such as homework clubs are in progress. This issue could be managed in some cases by providing a separate entrance and separating adult learners from the children.

In general, security issues can be overcome with adequate staffing and enhanced ICT security.

**Wrose UKOnline Centre**

At Wrose UKOnline Centre (SCOL), funding for an additional entrance was obtained to create a separate entrance to keep children attending the homework club separate from other centre users.

Security does not appear to be a major issue for libraries. Libraries already have an existing network used by the general public, and are familiar with dealing with public access issues. Other buildings vary considerably in the physical security available and in terms of network security, where relevant. Security issues would need to be investigated for any building considered for provision.

### 10.4.3. Suitability Issues

Schools are equipped with furniture to meet the needs of their pupils, but this furniture is not always suitable for an adult audience. Separate fully equipped rooms are very expensive and often not a solution to overcrowded schools. Even separate empty classrooms with adult sized furniture are an expensive option. Computer desks which are hydraulically adjustable are available and these can prove a very valuable addition to existing ICT suites. These can be adjusted to meet the needs of individual students and if accompanied by suitable adjustable seating, the whole suite can be adjusted to accommodate a class of adults in a few minutes.

**Denholme Primary School**

The school obtained LSC funding for adult chairs and tables, to enable e-learning provision by the Russell Street Project’s mobile unit.
Libraries are highly suited to private study. However, in most cases ICT facilities currently provided do not meet demand at busy periods, and most libraries do not have space for a classroom based element of e-learning provision. Whilst libraries have an atmosphere that is conducive to learning, they have a limited number of PCs and these could be good locations for wireless e-learning hotspots, allowing people to study using their own laptop or library facilities.

Other buildings will vary in their suitability. Many, such as churches, town halls, or some community centres are suitable for some learners but not for others. The facilities available also vary, from centres with a dedicated IT suite to those with only one main room used by many organisations. However, most are flexible and could be used without undue difficulty.

10.4.4. Communicating Opportunities

There is a limited understanding at school level of the opportunity to open the school IT facilities for the benefit of local communities, as limited information is available to them. This could be addressed by informing schools of the opportunity to maximise the use of their facilities, work more closely with the local community, and possibly access an additional revenue stream.

Finally, opening facilities to users other than pupils requires extra work by the school but may be seen as offering no reward or compensation that would allow pupils to benefit, meaning that schools often do not have an incentive to allow access.

Bradford Libraries, Archives and Information Service has clearly acknowledged the benefits of integrating good public ICT facilities at a strategic level. Despite this there appears to be a need to communicate the importance of supporting library visitors’ use of ICT. Library staff are mostly not used to working with computers. Despite some training, it would appear from our visits to local libraries that this has not been accepted as a key part of their role. Hopefully, the production of an ILT/e-learning strategy by Bradford Libraries will help to address this issue. Whilst library staff are not ICT tutors, they do have the capability to assist visitors in accessing learning, and to provide some assistance. Libraries have great potential to be a key access point for learning but this does require greater acceptance of this role by the libraries themselves.

The communication needs for utilising other centres and buildings vary. However, an area wide initiative to inform such centres could be very successful in explaining the opportunities to use centres to provide learning opportunities or access to learning.
10.5. Improving the e-Learning Environment

This study has identified a background of diversity and innovation in the provision of both connectivity and of adult and community learning, in Airedale and across the Bradford District as a whole. There is now the opportunity to rebuild this culture of creative and successful innovation in the field of e-Learning, assisting in the delivery of the strategic objectives identified through the Airedale master-planning exercise and Bradford’s 2020 Vision.

10.5.1. Vision and Strategy

The Bradford & District Learning Partnership have identified a vision for Bradford and District which aims for the district to become “a place where a culture of learning exists, where the people of Bradford and District make a full contribution towards the success of the District and improve their personal prosperity. A District where Social Exclusion is eliminated, where people are highly skilled and motivated, where employers recognise the importance of Learning, and see it as an investment, and where the providers of learning are responsive, flexible and cost effective”.

In addition to this the Adult & Community Learning Initial ILT/e-Learning Strategy developed this vision so that it offered clear aims for e-Learning. However, there are a wide range of organisations delivering learning in Airedale, who have wide a variety of aims and offer a wide range of provision. Because of the number of organisations involved in the funding, co-ordination, provision and access to
e-Learning there is a clear need to ensure ‘buy in’ by all partners. The existence of a clear and consistent vision is not evident from this study.

**A Vision for ILT and E-Learning** (from Bradford Council’s ACL NLN Submission)

- Enables all adult learners to have access to ICT as a basic skill and as an entitlement
- Complements existing forms of learning and teaching
- Enables individual learners to engage with and be excited by new, relevant & feature rich learning content
- Allows learners to experience a high quality learning experience irrespective of where it is delivered
- Contributes to a wider range of learning experiences, resources and support which can lead to improved retention and achievement
- Develops tutors that are at ease with the creation of e-learning materials and delivering e-learning to individual learners
- Encourages tutors with different teaching styles to produce learning materials suitable for learners with different learning styles

### 10.5.2. Partnership and Coordination

A body already exists to co-ordinate the delivery of e-learning across the Bradford District. ‘bConnected’, a sub-group of the Bradford and District Learning Partnership, includes representatives from Bradford Council, FE colleges, Education Bradford, Bradford Libraries Peoples Network, Connexions, the voluntary sector and UKOnline Centres.
It aims to put in place initiatives that improve people’s ICT skills, provide public access to ICT, and close the ‘digital divide’. This demonstrates that there is already some degree of co-ordination between the different stakeholders in the provision of e-Learning in Airedale.

However, the complexity of managing a large number of stakeholders requires clear leadership. This is difficult when leadership is fragmented, for example with the three separate contract holders for ACL provision.

This makes co-ordination difficult as well. Some initiatives can overlap, with a large number of small projects accessing a range of funding schemes. As a result, whilst sometimes this will have a positive effect it can also lead to some inconsistency in provision. There is a need to manage the success or failure of schemes within the area to ensure that lessons are learned where necessary, and that examples of best practice are shared as effectively as possible. This should not be a challenge in Airedale, as this and other studies have shown that many organisations are already working together effectively, assisted by Bradford Learning Partnership or similar bodies. However, only a fully co-ordinated vision and approach to e-Learning provision can ensure that everyone in Airedale can benefit, and that provision is available in every local community.

10.5.3. Access to Information

Learners in Airedale have a wide range of opportunities they can take advantage of to learn. Courses are available from a remarkable range and variety of organisations and at many different locations.
There is a central resource offering information on all courses in West Yorkshire online at www.wytap.com. Originally a Bradford initiative, this online database holds details on almost all courses available in the area. It can be searched for local provision in a district, area or individual town. It can be searched easily by type of provision (including e-learning), and by course title.

The WYTAP Website at www.wytap.com offers complete information on local courses, and a simple search box for third party websites

However, this service remains hard to find for the general public. A review of learning providers’ websites indicated that only one referred to WYTAP. The WYTAP site offers a simple to use search box that can be added to any third party website, including those of training providers, in a matter of minutes. It would be very straightforward to local providers to integrate this with their sites, linking potential students to all learning opportunities. All providers should be encouraged to do this. An ‘e-
learning portal’ is currently being developed by local company Virtual College, enhancing the WYTAP website. WYTAP currently offers a good e-learning portal, though investigation of course listing indicated that, in order to meet the needs of learners, the completeness and ease of access to database content would need to be reviewed.

The availability of a single point for information on all local courses offers the opportunity to co-ordinate information available from different sources and locations, to ensure that every potential learner has access to every possible course. Potential learners would be able to go to any library, college, job centre or other venue and have access to the same information.

Adopting such a system does present a risk for learning providers, in that students who come to one particular provider for information may end up studying elsewhere. However, given the diversity of needs within Airedale, no single provider can hope to cater for everyone. In addition many providers, as members of the Bradford Information Advice and Guidance Network, are fully committed to providing independent advice and guidance based on the needs of the learner. Furthermore, any risk of lost students should be outweighed by gains from elsewhere, as students are more likely to sign up if they can easily identify the most appropriate course to meet their needs and circumstances. This may also offer the opportunity to improve retention. There may also be an opportunity to enhance this facility in the future to allow easy enrolment from a range of locations.

Access to this portal could be enhanced by providing kiosks in high profile locations where people are likely to be interested in finding out about or signing up for courses. Bradford has already demonstrated that this technology can be successfully deployed with the ‘Homehunter’ system used by Bradford Community Housing Trust. This allows prospective tenants to walk into centres such as housing offices or their local town hall and search for a home on a connected computer terminal. The system also allows people to register for a particular property.

The same technology could be used to allow people access to the e-learning portal to search for courses, and possibly even enrol. It could be sited at appropriate locations such as college entrances, city and town halls, Job Centres, or the ‘bDirect’ centre in Bradford City Centre, where people have easy access to other local services.

21 [www.bradfordhomehunter.co.uk](http://www.bradfordhomehunter.co.uk)
Highlights

**e-Learning Environment**

- A vision and strategy for the district shared with all stakeholders would make the most of the opportunities available

- A single body promoting e-learning in the district and co-ordinating the various providers would allow the optimum delivery of e-learning services

- A single point for information, building on WYTAP, if properly marketed and easy to use, can maximise take-up of learning opportunities

- Kiosks in high profile locations could provide easy access to the e-learning portal.
11. Appendices

Appendix I   Bibliography
Appendix II  Organisations Consulted
Appendix III Funding Sources
Appendix IV  Potential Locations
Appendix V   Map of Airedale Locations
Appendix VI  Business Survey
Appendix VII Costings
Appendix VIII Definitions
Appendix I. Bibliography

2. ‘UK Online Centres – Content Research, NOP Research Group, for the DfEE, 10/2000
5. ‘Local Internet Futures’, The Local Futures Group, 09/1999
6. ‘Connecting Communities to Jobs’, Shipley Communities Online, 12/2003
7. ‘Report produced by Shipley Communities Online for the Policy Action Team 15 of the Social Exclusion Unit’, Shipley Communities Online, 06/1999
9. West Yorkshire Household Survey
12. ‘Farming in Yorkshire’ (Annual Survey), Askham Bryan College, 2002/03
13. ‘A definition for e-Learning’, British Association for Open Learning, 10/2003
14. ‘The potential of e-learning - A survey of the use of ILT in ACL’
17. Evaluation of DFES Adult and Community Learning Laptop Initiative, Alan Clarke et al, NIACE 2003
Appendix II. Organisations Consulted

The following organisations were approached and/or consulted during this study. In addition to those mentioned here, over 500 local businesses were contacted with a survey or consulted for other reasons.

**City of Bradford Metropolitan District Council**
- Keighley Area Coordinator's Office
- Libraries, Archives and Information Service
- Education Bradford (Serco)

**Community**
- Baildon Community Link
- Bangladesh Community Association Keighley
- Beechcliffe and Utley Development Group
- Bingley Voluntary Action
- Bolton Woods Community Centre
- Cottingley Community Association
- Crossley Wood Community Centre
- Harecroft Methodist Church Hall
- Haworth Community Centre
- Keighley Access To Training
- Keighley Asian Business Forum
- Keighley Asian Women's & Children's Centre

**Connexions**
- Careers Bradford Ltd - Keighley Careers Centre

**learndirect**
- Moorside Training
- Cyber-dine

**Libraries**
- Baildon
- Bingley
- Denholme
- Keighley
- Shipley
- Silsden
- Wilsden
- Keighley College

**Schools**
- Aire View Infant School
- Baildon CE Primary School
- Braithwaite Special School
- Branshaw Special School
- Carlton Bollin
- Cottingley Village Primary School
- Cullingworth Primary School
- Stanbury Village Primary School
- Steeton Primary School
- Strong Close Nursery School
- Thornton Primary School
- Trinity All Saints CE Primary School
- Worth Valley Primary School
- Wycliffe CE Primary School

**Keighley Voluntary Services**
- Kirkgate Community Centre
- Temple Row Centre - Workers Education Association Keighley Branch
- Oxenhope Community Centre
- Russell Street Project
- Shipley College Learner Services
- Shipley New Start
- Skipton Road Day Centre
- Windhill Centre
- Wrose UKOnline Centre
- Airedale Community - Drugs and Alcohol
<table>
<thead>
<tr>
<th>Denholme Primary School</th>
<th>Bingley Grammar</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Morton CE Primary School</td>
<td>Greenhead High</td>
</tr>
<tr>
<td>Eastburn Junior and Infant School</td>
<td>Holy Family Catholic School</td>
</tr>
<tr>
<td>Eastwood Primary School</td>
<td>Low Ash Primary - Site a</td>
</tr>
<tr>
<td>Eldwick Primary School</td>
<td>Low Ash Primary - Site b</td>
</tr>
<tr>
<td>Glenaire Primary School</td>
<td>Nab Wood School</td>
</tr>
<tr>
<td>Guard House Primary School</td>
<td>Oakbank School (Lower Site)</td>
</tr>
<tr>
<td>Hanson</td>
<td>Parkside School</td>
</tr>
<tr>
<td>Harden Primary School</td>
<td>Queensbury School</td>
</tr>
<tr>
<td>Haworth Primary School</td>
<td>St Joseph's Catholic Primary (Bingley)</td>
</tr>
<tr>
<td>Heaton Royds Special School</td>
<td>Thornton Grammar</td>
</tr>
<tr>
<td>High Crags Primary School</td>
<td>Woodlands CE Primary</td>
</tr>
<tr>
<td>Hirst Wood Nursery School</td>
<td>Beckfoot School</td>
</tr>
<tr>
<td>Hoyle Court Primary School</td>
<td>Crossflatts Primary School</td>
</tr>
<tr>
<td>Ingrow Primary School</td>
<td>Hothfield Junior School</td>
</tr>
<tr>
<td>Keelham Primary School</td>
<td>Oakworth Primary School</td>
</tr>
<tr>
<td>Keighley St Andrew's CE Primary School</td>
<td>Our Lady of Victories Catholic Primary School</td>
</tr>
<tr>
<td>Laycock Primary School</td>
<td>Saltaire Primary School</td>
</tr>
<tr>
<td>Lees Primary School</td>
<td>St Anne's Catholic Primary School</td>
</tr>
<tr>
<td>Long Lee Primary School</td>
<td>St Joseph's Catholic Primary School (Bradford)</td>
</tr>
<tr>
<td>Myrtle Park Primary School</td>
<td>Thorn Park School for Deaf Children</td>
</tr>
<tr>
<td>Oldfield Primary School</td>
<td>Victoria Primary School</td>
</tr>
<tr>
<td>Oxenhope CE Primary School</td>
<td>Windhill CE Primary School</td>
</tr>
<tr>
<td>Parkwood Primary School</td>
<td>Holycroft Primary School</td>
</tr>
<tr>
<td>Priestthorpe Primary School</td>
<td>Nessfield Primary School</td>
</tr>
<tr>
<td>Riddlesden St Mary's CE Primary School</td>
<td>Salt Grammar School</td>
</tr>
<tr>
<td>Sandal Primary School and Nursery School</td>
<td>Wilsden Primary School</td>
</tr>
<tr>
<td>Shipley CE Primary School</td>
<td>Greenhead Secondary School</td>
</tr>
<tr>
<td>St Anthony's Catholic Primary School (Shipley)</td>
<td>St Walburga's Catholic Primary School</td>
</tr>
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**Providers**

<table>
<thead>
<tr>
<th>IMS Employ Ltd</th>
<th>Keighley Training Group</th>
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</thead>
<tbody>
<tr>
<td>Keighley &amp; District Training Association Ltd</td>
<td>Shipley College</td>
</tr>
<tr>
<td>Keighley College</td>
<td>Spring Skills</td>
</tr>
<tr>
<td>Keighley Local Enterprise Agency</td>
<td>Park Lane College (the learning line, vision2learn, learndirect)</td>
</tr>
</tbody>
</table>

**Religious Locations**

| Sangat Centre | Emily Street Mosque |
## Appendix III. Funding Sources

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Examples of Current / Recent Utilisation in Airedale</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Social Fund</td>
<td>Keighley College STAR Centre</td>
</tr>
<tr>
<td>European Regional Development Fund</td>
<td>Shipley Communities Online</td>
</tr>
<tr>
<td>Learning &amp; Skills Council</td>
<td>Further Education Founding</td>
</tr>
<tr>
<td>Adult &amp; Community Learning (LSC)</td>
<td>ACL Providers, NLN</td>
</tr>
<tr>
<td>Yorkshire Forward</td>
<td>Keighley STAR Centre</td>
</tr>
<tr>
<td></td>
<td>Broadband Airedale &amp; Wharfedale</td>
</tr>
<tr>
<td></td>
<td>HLSI</td>
</tr>
<tr>
<td>New Opportunities Fund (NOF)</td>
<td>Shipley Communities Online</td>
</tr>
<tr>
<td></td>
<td>Keighley College out of hours school programme</td>
</tr>
<tr>
<td>Single Regeneration Budget (ODPM)</td>
<td>KAFNet Radio</td>
</tr>
<tr>
<td>Bradford Council</td>
<td>Broadband Airedale &amp; Wharfedale</td>
</tr>
<tr>
<td></td>
<td>Support for Community Centres</td>
</tr>
<tr>
<td></td>
<td>Education Bradford</td>
</tr>
<tr>
<td>UKOnline</td>
<td>Formerly for UKOnline Centres, such as SCOL and Russell Street</td>
</tr>
<tr>
<td>learndirect</td>
<td>learndirect centres and access points / link venues</td>
</tr>
<tr>
<td>Customers</td>
<td>Course fees</td>
</tr>
<tr>
<td>Sponsorship</td>
<td>None identified</td>
</tr>
<tr>
<td>Private Partners</td>
<td>KADTAL (funded by 31 companies)</td>
</tr>
</tbody>
</table>
Airedale Settlements

**RURAL VILLAGES**

Population less than 3,500
Surrounded by open countryside

<table>
<thead>
<tr>
<th>Location</th>
<th>Population</th>
<th>Provision</th>
<th>Potential Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cullingworth</td>
<td>2638</td>
<td>None Identified</td>
<td>School, Mobile Unit</td>
</tr>
<tr>
<td>Denholme</td>
<td>2638</td>
<td>Russell Street Project using Denholme Primary School</td>
<td>Library, School, Mobile Unit, Community Groups</td>
</tr>
<tr>
<td>East &amp; West Morton</td>
<td>1256</td>
<td>None Identified</td>
<td>Community Groups, Mobile Unit</td>
</tr>
<tr>
<td>Eastburn</td>
<td>944</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Egypt</td>
<td>20</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Eldwick</td>
<td>2990</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Goose Eye</td>
<td>85</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Hainworth</td>
<td>136</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Place</td>
<td>Code</td>
<td>Identified</td>
<td>Location</td>
</tr>
<tr>
<td>-------------</td>
<td>------</td>
<td>--------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Harden</td>
<td>1714</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Laycock</td>
<td>287</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Newsholme</td>
<td>45</td>
<td>None Identified</td>
<td>Mobile Unit</td>
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<tr>
<td>Oldfield</td>
<td>120</td>
<td>None Identified</td>
<td>Mobile Unit</td>
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<tr>
<td>Oxenhope</td>
<td>2303</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Stanbury</td>
<td>265</td>
<td>None Identified</td>
<td>Mobile Unit</td>
</tr>
<tr>
<td>Steeton</td>
<td>3259</td>
<td>Caltec have equipment stored in local pub</td>
<td>School, Mobile Unit</td>
</tr>
<tr>
<td>Utley</td>
<td>1265</td>
<td>None Identified</td>
<td>School, Community Groups</td>
</tr>
<tr>
<td></td>
<td>19965</td>
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</tr>
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</table>
**DISPERSED SETTLEMENTS**

Historically functional
Population of less than 10,000 but greater than 3,500
Surrounded on at least three sides by open countryside

<table>
<thead>
<tr>
<th>Location</th>
<th>Population</th>
<th>Provider</th>
<th>Potential Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cottingley</td>
<td>4190</td>
<td>Private Provider</td>
<td>Schools, Community Groups, Mobile Unit</td>
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<tr>
<td>Haworth</td>
<td>3854</td>
<td>Non Identified</td>
<td>Schools, Mobile Unit</td>
</tr>
<tr>
<td>Oakworth</td>
<td>5470</td>
<td>Non Identified</td>
<td>Schools, Mobile Unit</td>
</tr>
<tr>
<td>Riddlesden</td>
<td>3857</td>
<td>Non Identified</td>
<td>Schools, Mobile Unit</td>
</tr>
<tr>
<td>Silsden</td>
<td>7456</td>
<td>Non Identified</td>
<td>Schools, Library, Mobile Unit</td>
</tr>
<tr>
<td>Wilsden</td>
<td>3904</td>
<td>Non Identified</td>
<td>Schools, Library, Mobile Unit</td>
</tr>
<tr>
<td></td>
<td>28731</td>
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<td></td>
</tr>
</tbody>
</table>
RURAL SERVICE CENTRES

Population of 10,000 or above
Surrounded on at least three sides by open countryside
Provides the following services to other settlements:

Shopping; Education- children, higher and adult; Banking, finance and other professional services; Leisure services and socialising opportunities; Emergency services; Health services
And acts as transport hub

<table>
<thead>
<tr>
<th>Population</th>
<th>Existing Provision</th>
<th>Potential Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bingley</td>
<td>15,250</td>
<td>the Learning Line (Shipley College)</td>
</tr>
<tr>
<td>Keighley</td>
<td>41,170</td>
<td>College, Community Centres (KLC),</td>
</tr>
<tr>
<td>56420</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Other Settlements

Either Urban or Semi Urban Settlements attached to population centres

<table>
<thead>
<tr>
<th>Population</th>
<th>Provision</th>
<th>Potential Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipley</td>
<td>Library, Community Centres (SCOL), College</td>
<td>Schools</td>
</tr>
<tr>
<td>Baildon</td>
<td>Non Identified</td>
<td>Schools, Library, Community Groups</td>
</tr>
<tr>
<td>Saltaire</td>
<td>Shipley College</td>
<td>Schools, Salts Mill</td>
</tr>
<tr>
<td>Gilstead</td>
<td>Non Identified</td>
<td></td>
</tr>
<tr>
<td>Braithwaite</td>
<td>Non Identified</td>
<td>School</td>
</tr>
<tr>
<td>Crossflatts</td>
<td>Non Identified</td>
<td>Community Groups</td>
</tr>
<tr>
<td>Micklethwaite</td>
<td>Non Identified</td>
<td>Church Hall</td>
</tr>
</tbody>
</table>
## Appendix IV. Potential Locations

<table>
<thead>
<tr>
<th>Title</th>
<th>Address</th>
<th>Facilities</th>
<th>Connection</th>
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</thead>
<tbody>
<tr>
<td><strong>Community</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baildon Community Link</td>
<td>Greenfield, Baildon Shipley, BD17 6</td>
<td>Some ICT Facilities - Greenfield Baildon -Night School venue for Bradford College</td>
<td>Broadband</td>
</tr>
<tr>
<td>Bangladeshi Community Association Keighley Beechcliffe and Utley Development Group Bingley Voluntary Action Bolton Woods Community Centre Bracken Bank &amp; District Community Association Bradford District Care Trust Community Alcohol And Drugs Team Cottingley Community Association Crossley Wood Community Centre Hainworth Wood Community Centre Harecroft Methodist Church Hall Haworth Community Centre Keighley &amp; District Association for the Blind Keighley Access</td>
<td>Kensington St, Keighley, BD21 1 Springfield Rd, Keighley, BD20 6 Ferncliffe Rd, Ferncliffe Bingley, BD16 4 Woodside Crescent, Cottingley Bingley, BD16 1 Crossley Wood Rd, Ferncliffe Bingley, BD16 4 Farndale Rd, Wilsden Bradford, BD15 0 Butt Lane, Haworth Keighley, BD22 8 68b North Street, Keighley,</td>
<td>ICT Facilities part of SCOL</td>
<td>Broadband</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Harecroft Ladies Group - NO ICT Requirement</td>
<td></td>
</tr>
</tbody>
</table>
To Training BD21 3
Keighley Asian Business Forum Devonshire St, Keighley, BD21 2
Keighley Asian Women's & Children's Centre Eastwood Court, Keighley, BD21 3
Keighley Disabled People's Centre
Keighley Muslim Association
Keighley Scouts

Use Keighley College Mobile unit

Keighley Voluntary Services 135 Skipton Road, Keighley,
Kirkgate Community Centre Kirkgate, Shipley, BD18 4
Temple Row Centre - Workers Education Association Temple St, Keighley, BD21 2

ICT facilities offer CLAIT - Night School venue for Bradford College

Keighley Branch Morton Village Society

Oxenhope Community Centre., The Park, Hebden Bridge Road
Russia St, Keighley, BD21 2

No requirement for ICT

Shipton Road Day Centre

Shipton Road Day Centre

16 Otley Road, SHIPLEY, West Yorkshire
147 Skipton Road, Keighley

Computer IT room - tuck shop to pay for Broadband connection charge - NHS funded - Training through Keighley college stopped due to lack of funding

Windhill Centre

Church Street, Windhill, SHIPLEY

Woodhouse & Springbank Community Centre

Hainworth Wood Rd, Hainworth Keighley, BD21 5

Youth and Community Service

Wrose UKOnline Centre

Highcroft Youth Centre, Snowden Road, Wrose,

Some ICT Facilities - Night School venue for Bradford
Appendices

SHIPLEY
College

Henry St, Keighley, BD21 3

Airedale Community - Drugs and Alcohol

Keighley On-line

ICT Facilities and trainers

Broadband

Connexions

Careers Bradford Ltd - Keighley Careers Centre

learndirect

Moorside Training

ICT Facilities and trainers

Broadband

Cyber-dine

Shipley College

ICT Facilities and trainers

Broadband

Keighley College

ICT Facilities and trainers

Broadband

Libraries

Baildon

Hallcliffe, Charlestown

Shipley, BD17 6

Limited ICT Facilities

Broadband

Bingley

Myrtle Ave, Bingley, BD16 1

Limited ICT Facilities

Broadband

Mechanics Institute,

Denholme, BD13 4

Limited ICT Facilities

Broadband

Denholme

North St, Keighley, BD21 3

Limited ICT Facilities

Broadband

Shipley

Well Croft, Saltaire, Shipley

Limited ICT Facilities

Broadband

Silsden

Memorial Gardens, Shipley,

BD20 0

Limited ICT Facilities

Broadband

Wilsden

Wilsden Rd, Wilsden

Bradford, BD15 0

Limited ICT Facilities

Broadband

Wrose

Limited ICT Facilities

Broadband

Schools NGfI

Carlton Bollin

Hanson

ICT Facilities and nominated staff

Broadband

Aire View Infant School

Aire View, Silsden Keighley,

BD20 0

ICT Facilities and nominated staff

Broadband

Baildon CE Primary School

Coverdale Way, Charlestown

Shipley, BD17 6

ICT Facilities and nominated staff

Broadband

Braithwaite Special School

Braithwaite Rd, Braithwaite

Keighley, BD22 6

ICT Facilities and nominated staff

Broadband

Branshaw Special School

Oakworth Rd, Keighley, BD21 1

ICT Facilities and nominated staff

Broadband

Cottingley Village Primary School

Cottingley Moor Rd,

Cottingley Bingley, BD16 1

ICT Facilities and nominated staff
<table>
<thead>
<tr>
<th>School Name</th>
<th>Address</th>
<th>ICT Facilities and nominated staff</th>
<th>Broadband</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cullingworth Primary School</td>
<td>School St, Cullingworth Bradford, BD13 5</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Denholme Primary School</td>
<td>Minorca Mount, Denholme Bradford, BD13 4</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>East Morton CE Primary School</td>
<td>Street Lane, East Morton Keighley, BD20 5</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Eastburn Junior and Infant School</td>
<td>Green Close, Eastburn Keighley, BD20 8</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Eastwood Primary School</td>
<td>Victoria Ave, Keighley, BD21 3</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Eldwick Primary School</td>
<td>Warren Lane, Gilstead Bingley, BD16 3</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Glenaire Primary School</td>
<td>School Rd, Braithwaite Keighley, BD22 6</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Guard House Primary School</td>
<td>Rawdon Rd, Haworth Keighley, BD22 8</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Haworth Primary School</td>
<td>Redburn Dr, Saltaire Shipley, BD18 3</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Heaton Royds Special School</td>
<td>Crag Rd, Windhill Shipley, BD18 2</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>High Crags Primary School</td>
<td>Clarence Rd, Shipley, BD18 4</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Hirst Wood Nursery School</td>
<td>Fyfe Grove, Charlestown Shipley, BD17 6</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Hoyle Court Primary School</td>
<td>Broomhill Ave, Keighley, BD21 1</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Ingrow Primary School</td>
<td>Thornton Rd, Thornton Bradford, BD13 3</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Keelham Primary School</td>
<td>Lustre St, Keighley, BD21 2</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Keighley St Andrew's CE Primary School</td>
<td>Laycock Lane, Laycock Keighley, BD22 0</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Laycock Primary School</td>
<td>Haworth Rd, Haworth Keighley, BD22 9</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Lees Primary School</td>
<td>Cherry Tree Rise, Thwaites Brow Keighley, BD21 4</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Long Lee Primary School</td>
<td>Ash Terrace, Bingley, BD16 1</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Myrtle Park Primary School</td>
<td>Oldfield Lane, Oldfield Keighley, BD22 0</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Oldfield Primary School</td>
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<td>Broadband</td>
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<tr>
<td>Oxenhope CE Primary School</td>
<td>Parkwood St, Keighley, BD21 4</td>
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<td>Broadband</td>
</tr>
<tr>
<td>Parkwood Primary School</td>
<td>Mornington Rd, Bingley, BD16 4</td>
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</tr>
<tr>
<td>Priesthorpe Primary School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Name</td>
<td>Address</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>----------------------------------</td>
<td></td>
</tr>
<tr>
<td>Riddlesden St Mary's CE Primary School</td>
<td>Grange Rd, Riddlesden Keighley, BD20 5</td>
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<td>Sandal Primary School and Nursery School</td>
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<td></td>
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<tr>
<td>Shipley CE Primary School</td>
<td>Otley Rd, Windhill Shipley, BD18 2</td>
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<td></td>
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<td>St Anthony's Catholic Primary School (Shipley)</td>
<td>High Busy Lane, Shipley, BD18 1</td>
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</tr>
<tr>
<td>St Walburga's Catholic Primary School</td>
<td>Victoria Park, Shipley, BD18 4</td>
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</tr>
<tr>
<td>Stanbury Village Primary School</td>
<td>Main St, Stanbury Keighley, BD22 0</td>
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</tr>
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<td>ICT Facilities and nominated staff</td>
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<tr>
<td>Worth Valley Primary School Bingley Grammar</td>
<td>Church St, Bingley, BD16 2</td>
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</tr>
<tr>
<td>Nab Wood School Oakbank School (Lower Site) Parkside School</td>
<td>Bracken Bank Crescent, BD22 7</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td>Low Ash Primary - Site a</td>
<td>Saltaire Rd, Saltaire Shipley, BD18 3</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
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<tr>
<td>Low Ash Primary - Site b</td>
<td>Green Head Rd, Low Utley Keighley, BD20 6</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td>Holy Family Catholic School</td>
<td>Spring Gardens Lane, Keighley, BD20 6</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td>Low Ash Primary</td>
<td>Wrose Rd, Wrose Shipley, BD18 1</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td>Nab Wood School</td>
<td>Cottingham New Rd, Cottingham Bingley, BD16 1</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td>Oakbank School (Lower Site) Parkside School</td>
<td>Oakworth Rd, Keighley, BD22 7</td>
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<tr>
<td>Queensbury School St Joseph's Catholic Primary School (Bingley)</td>
<td>Parkside Terrace, Cullingworth Bradford, BD13 5</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td>Thornton</td>
<td>Deanstones Lane, Queensbury Bradford, BD13 2</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crownest Rd, Bingley, BD16 4</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leaventhorpe Lane, Bradford,</td>
<td>ICT Facilities and nominated staff</td>
<td></td>
</tr>
<tr>
<td>School Name</td>
<td>Address</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Grammar</td>
<td>BD13 3</td>
<td>Staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Woodlands CE Primary Beckfoot</td>
<td>Wagon Lane, Bingley, BD16 1</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>School Crossflatts Primary</td>
<td>Morton Lane, Crossflatts Bingley, BD16 2</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>School Hothfield Junior School</td>
<td>Hothfield St, Silsden Keighley, BD20 0</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Oakworth Primary School Our</td>
<td>Station Rd, Oakworth Keighley, BD22 1</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Lady of Victories Catholic</td>
<td>Guard House Rd, Braithwaite Keighley, BD22 6</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Primary School Saltaire</td>
<td>Albert Rd, Shipley, BD18 4</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Primary School St Anne's Catholic</td>
<td>North St, Keighley, BD21 3</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Primary School St Joseph's</td>
<td>Queens Rd, Keighley, BD21 1</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Catholic Primary School (Bradford)</td>
<td>Thorn Lane, Daisy Hill Bradford, BD9 6</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>School Thorn Park School for Deaf Children</td>
<td>School St, Steeton Keighley, BD20 6</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>School Windhill CE Primary</td>
<td>Wrose Brow Rd, Windhill Shipley, BD18 2</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>School Holycroft Primary School</td>
<td>Victoria Rd, Keighley, BD21 1</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Nessfield Primary School</td>
<td>Nessfield Dr, Keighley, BD22 6</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Salt Grammar Primary School</td>
<td>Higher Coach Rd, Baildon Shipley, BD17 5</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td>Wilsden Primary School Greenhead Secondary School</td>
<td>Tweedy St, Wilsden Bradford, BD15 0</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
<tr>
<td></td>
<td>Green Head Rd, Low Utley Keighley, BD20</td>
<td>ICT Facilities and nominated staff</td>
<td>Broadband</td>
</tr>
</tbody>
</table>

**Providers**

- IMS Employ Ltd
- Keighley & District Training Association Ltd
- Keighley College

ICT Facilities, Trainers and Support Staff - support outreach centres + Mobile Unit
### Appendices

<table>
<thead>
<tr>
<th>Keighley Local Enterprise Agency</th>
<th>Broadband</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keighley Training Group</td>
<td>ICT Facilities and Trainers Broadband</td>
</tr>
<tr>
<td>Shipley College</td>
<td>ICT Facilities, Trainers and Support Staff - support outreach centres Broadband</td>
</tr>
<tr>
<td>Spring Skills</td>
<td>ICT Facilities and Trainers Broadband</td>
</tr>
<tr>
<td>Workable (Keighley)</td>
<td>Broadband</td>
</tr>
<tr>
<td>Park Lane College (the learning line, vision2learn, learndirect)</td>
<td>Potternewton Mansion, Harehills Lane, Leeds, LS7 4 Virtual College Broadband</td>
</tr>
</tbody>
</table>

#### Religious Locations

<p>| Sangat Centre                  | Marlborough Street Keighley Littlelands, Cottingley Bingley, BD16 1 ICT Facilities and trainers Broadband |
| St Michael &amp; All Angels Church Hall | Emily Street Emily Street ICT Facilities and Trainers Broadband |
| St Peters Church               | Moorhead Lane, Shipley, BD18 4 |
| St Pauls Church                | Kirkgate, Shipley, BD18 3 Leeds Road, Windhill, Shipley Baildon |
| Christ Church                  | Leeds Road, Windhill, Shipley Baildon |
| St John the Evangelist Church  | Leeds Road, Windhill, Shipley Baildon |
| St Aidan's Church              | Bingley |
| Eldwick St Lawrence Church     | Bingley |
| Holy Trinity (Trinity Place) Church | Bingley |
| St Wilfrid Church              | Gilstead Windhill |
| Christ Church (Leeds Road)     | Oakworth |
| Oakworth Christ Church         | Steeton |
| St Stephen Church              | Cullingworth |
| St John the Evangelist Church  | Denholme |
| St Paul Church                 | Denholme |</p>
<table>
<thead>
<tr>
<th>Location</th>
<th>Church Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harden</td>
<td>Harden St Saviour Church</td>
</tr>
<tr>
<td>Wilsden</td>
<td>Wilsden St Matthew Church</td>
</tr>
<tr>
<td>Haworth</td>
<td>St Michael and All Angels Church</td>
</tr>
<tr>
<td>Keighley</td>
<td>All Saints Church</td>
</tr>
<tr>
<td>Keighley</td>
<td>St Andrew Church</td>
</tr>
<tr>
<td>Keighley</td>
<td>Temple Street Methodist Church</td>
</tr>
<tr>
<td>Riddlesden</td>
<td>St Mary the Virgin Church</td>
</tr>
<tr>
<td>Silsden</td>
<td>St James Church</td>
</tr>
<tr>
<td>Thwaites Brow</td>
<td>St Barnabas Church</td>
</tr>
<tr>
<td>Keighley, BD20 6</td>
<td>St Mark Church</td>
</tr>
<tr>
<td>Wrose</td>
<td>St Cuthbert Church</td>
</tr>
</tbody>
</table>
Appendix V. Map of Airedale Locations

**KEY:**
- Community Centre
- City Learning Centre
- Library
- College
- School
Appendix VI. Business Survey

Of 500 surveys sent to Airedale businesses selected at random, 49 responses were received. As expected, some businesses selected multiple options, or none at all.

<table>
<thead>
<tr>
<th>QUESTION ASKED</th>
<th>RESULTS</th>
<th>NUMBER</th>
<th>%AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>How long have you been in business?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less than a year</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 to 3 years</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>more than 3 years</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Have you got a company web site?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>20</td>
<td>41%</td>
</tr>
<tr>
<td>How are you connected?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modem</td>
<td>22</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>ISDN</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Broadband ADSL</td>
<td>22</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>6</td>
<td>12%</td>
</tr>
<tr>
<td>Do you use email?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>42</td>
<td>86%</td>
</tr>
<tr>
<td>Do you use the internet?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>41</td>
<td>84%</td>
</tr>
<tr>
<td>Do you transfer data electronically?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax</td>
<td>12</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>Inland Revenue</td>
<td>12</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>PAYE</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>27</td>
<td>55%</td>
</tr>
<tr>
<td>Do you use computers to train your staff?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Do you conduct any accredited training on the premises?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>What types of courses would you or your staff be interested in?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Basic skills (Maths, English etc.)</td>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Basic IT Skills</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Intermediate IT Skills</td>
<td>21</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>Business Skills</td>
<td>18</td>
<td>37%</td>
</tr>
<tr>
<td></td>
<td>Customer Skills</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Industry specific skills</td>
<td>15</td>
<td>31%</td>
</tr>
<tr>
<td>Where would you and your staff prefer to learn?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Own offices</td>
<td>20</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>At Home</td>
<td>17</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>Local school</td>
<td>8</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>Local college</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Community Centre</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Library</td>
<td>7</td>
<td>14%</td>
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Appendix VII. Costings

- Costs of Broadband

  i. ADSL

<table>
<thead>
<tr>
<th></th>
<th>512Kbps 50:1</th>
<th>512Kbps 20:1</th>
<th>2Mbps 20:1</th>
<th>Un-contended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activation Cost</td>
<td>£50.00</td>
<td>£50.00</td>
<td>£50.00</td>
<td>Variable</td>
</tr>
<tr>
<td>Monthly Cost</td>
<td>£25.00</td>
<td>£35.00</td>
<td>£80.00</td>
<td>£600.00</td>
</tr>
<tr>
<td>Annual Equivalent</td>
<td>£300.00</td>
<td>£420.00</td>
<td>£960.00</td>
<td>£7,200</td>
</tr>
<tr>
<td>Year 1 Total</td>
<td>£350.00</td>
<td>£470.00</td>
<td>£1,010</td>
<td>£7,200</td>
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</table>

Sources: Palmedia (UK) Ltd and Thus Plc

  ii. Cable

<table>
<thead>
<tr>
<th></th>
<th>750Kbps</th>
<th>1.5Mbps</th>
<th>3Mbps</th>
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<tbody>
<tr>
<td>Set up Cost</td>
<td>£50.00</td>
<td>£50.00</td>
<td>£50.00</td>
</tr>
<tr>
<td>Monthly Cost</td>
<td>£25.00</td>
<td>£35.00</td>
<td>£50.00</td>
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<tr>
<td>Annual Equivalent</td>
<td>£300.00</td>
<td>£420.00</td>
<td>£600</td>
</tr>
<tr>
<td>Year 1 Total</td>
<td>£350.00</td>
<td>£470.00</td>
<td>£650</td>
</tr>
</tbody>
</table>

Source: Telewest Plc

  iii. Leased Line

Leased line costs vary by location, depending on the ISP and the distance from the ISPs POP (Point of Presence). Costs average around £14,000 per annum for a 2Mbps uncontended line connected directly to the internet. (Source: Thus Plc, and others), or around £1,300 to £3,000 per year for a point to point connection (Source: Shipley College, Thus Plc). Installation charges vary between £1,000 and £7,500.

  iv. Satellite

<table>
<thead>
<tr>
<th></th>
<th>Satellite 500/1</th>
<th>Satellite 500/4</th>
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</thead>
<tbody>
<tr>
<td>Connections Allowed</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Equipment &amp; installation</td>
<td>£949.00</td>
<td>£1,349.00</td>
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<tr>
<td>Monthly</td>
<td>£59.99</td>
<td>£109.99</td>
</tr>
<tr>
<td>Annual Equivalent</td>
<td>£719.88</td>
<td>£1,209.88</td>
</tr>
<tr>
<td>Year 1 Total</td>
<td>£1,668.88</td>
<td>£2,558.88</td>
</tr>
</tbody>
</table>

Source: BT Plc

  v. Wireless link to second site

Costs vary dependent upon line of site, equipment used and distance between locations. Costs

103
would start from around £500 installation, with no monthly charges.

**Minimal Support IT Centre Costs (for small networks of around 5 to 10 PCs)**

### i. Capital Costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computers, including standard software</td>
<td>£400 per PC</td>
</tr>
<tr>
<td>On site Warranty</td>
<td>£15 per PC year</td>
</tr>
<tr>
<td>Deep Freeze Software per computer</td>
<td>£30 - £50 per PC</td>
</tr>
<tr>
<td>Content Filtering &amp; Antivirus Software</td>
<td>From £40.00 per PC</td>
</tr>
<tr>
<td>ADSL Router (Wired network)</td>
<td>£80 - £100</td>
</tr>
<tr>
<td>ADSL Router (Wireless network)</td>
<td>£150</td>
</tr>
<tr>
<td>Wireless card for wireless networks</td>
<td>£40 per PC</td>
</tr>
<tr>
<td>Wiring for wired network</td>
<td>£50 to £100 per PC</td>
</tr>
<tr>
<td>ADSL Activation</td>
<td>£50</td>
</tr>
</tbody>
</table>

Source: Palmedia (UK) Ltd and CCL Computers Ltd

### ii. Revenue Costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSL</td>
<td>From £300 per year, as per ADSL (above)</td>
</tr>
<tr>
<td>Content Filtering &amp; Antivirus Software Updates</td>
<td>£30.00 per PC</td>
</tr>
<tr>
<td>Deep Freeze Software Updates</td>
<td>£20.00 per PC</td>
</tr>
<tr>
<td>Support Costs</td>
<td>Around £600 per year, based on outsourced quarterly visits</td>
</tr>
</tbody>
</table>

### ii. Outsourced Support costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network and Software Support (6 Solutions or 1 year - whichever earlier) Inc TTS/8hr/Labour/Remote*</td>
<td>£993.00</td>
</tr>
<tr>
<td>Network and Software Support (12 Solutions or 1 year - whichever earlier) Inc TTS/8hr/Labour/Remote*</td>
<td>£1,390.00</td>
</tr>
<tr>
<td>Network and Software Support (18 Solutions or 1 year - whichever earlier) Inc TTS/8hr/Labour/Remote*</td>
<td>£1,690.00</td>
</tr>
<tr>
<td>Network and Software Support (24 Solutions or 1 year - whichever earlier) Inc TTS/8hr/Labour/Remote*</td>
<td>£2,295.00</td>
</tr>
<tr>
<td>Network and Software Support (50 Solutions or 1 year - whichever earlier) Inc TTS/8hr/Labour/Remote*</td>
<td>£3,690.00</td>
</tr>
<tr>
<td>Guaranteed 4 hour response (1 year) for Server ONLY</td>
<td>£222.00</td>
</tr>
<tr>
<td>No Contract Call Out Charge/Hour next Business Day if Available</td>
<td>£75.00</td>
</tr>
<tr>
<td>Personal Computer Support upgrade to 3 years on-site from standard 1 years on-site</td>
<td>£99.00</td>
</tr>
<tr>
<td>Monthly Site Visit</td>
<td>150/mth</td>
</tr>
</tbody>
</table>

Source: Hollinbay Consultancy Services
### Appendix VIII. Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020 Vision</td>
<td>Bradford Vision's document setting out a strategic view of where Bradford district would like to be in 2020.</td>
</tr>
<tr>
<td>3G</td>
<td>Third Generation Wireless expected to include enhanced multimedia and to make use of telephone e-mail, fax, video conferencing and web browsing all delivered at high speed. Its advocates promise it will &quot;keep people connected at all times in all places&quot;.</td>
</tr>
<tr>
<td>Access Point (1)</td>
<td>A transceiver or radio component in a wireless LAN that acts as the transfer point between wired and wireless signal, and vice versa. The AP is connected to antennas as well as to the wired LAN system.</td>
</tr>
<tr>
<td>Access Point (2)</td>
<td>A location where learndirect courses can be accessed with limited tutor support.</td>
</tr>
<tr>
<td>ACL</td>
<td>Adult and Community Learning</td>
</tr>
<tr>
<td>ACL</td>
<td>ACL is used to describe local authority adult education services, former external institutions, provision by the Workers’ Educational Association and a range of voluntary and community organisations.</td>
</tr>
<tr>
<td>ADSL</td>
<td>Asymmetric Digital Subscriber Line</td>
</tr>
<tr>
<td>ADSL</td>
<td>A method for moving data over regular phone lines. An ADSL circuit is much faster than a regular phone connection, and the wires coming into the subscriber's premises are the same (copper) wires used for regular phone service. An ADSL circuit must be configured to connect two specific locations, similar to a leased line. A commonly discussed configuration of ADSL would allow a subscriber to receive data (download) at speeds of up to 512 kilobits per second, and to send (upload) data at speeds of 128 kilobits per second. Thus the 'Asymmetric' part of the acronym. In theory ADSL allows download speeds of up to 9 megabits per second and upload speeds of up to 640 kilobits per second. ADSL is often discussed as an alternative to ISDN, allowing higher speeds in cases where the connection is always to the same place.</td>
</tr>
<tr>
<td>Aire Valley</td>
<td>The area covered by this study which extends from Shipley to Steeton.</td>
</tr>
</tbody>
</table>
along the Aire Valley and also includes the surrounding valley sides and hill tops.

### Airedale
The same as Aire Valley

### Airedale Master Plan
The ‘Master Plan’ currently being prepared for Airedale, providing a long term strategy for development.

### Asynchronous
A type of transmission in which each character is transmitted independently without reference to a standard clock. Can also mean that there are different capacities for data transfer in each direction, for example the old 90/200 baud modems and the new ADSL.

### bConnected
A sub-group of Bradford Learning Partnership
bConnected is working to provide community based web access to the residents of Bradford, as well as trained staff to help these residents get the information they need using the world wide web.
It works with the Voluntary & Community Sectors that represent the many and varied communities living and working in Bradford, overcoming barriers by taking services out to the communities in Bradford and working in partnership with the people who work and live there.

### bdirect
‘One stop shop’ for council and public services at Forster Square, Bradford

### Bandwidth
The amount of information that can be carried over a communications link within a given period of time (usually a second).

### Basic skills
Essential academic and personal abilities that enable a person to succeed in school and the workplace. Traditional referred to as basic education skills - reading, writing, and arithmetic. In recent years, educators and employers have expanded the definition to include a number of cognitive and interpersonal abilities, including the capability to think and solve problems, communicate information in oral, written, and electronic forms, work effectively alone and in teams, and take personal responsibility for self-development.

### BBAW
Broadband Airedale and Wharfedale
An organisation established to promote broadband services to the SME
sector within the two dales.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackboard</td>
<td>A proprietary computer system providing a ‘VLE’ or Virtual Learning Environment, used by Shipley and Keighley Colleges.</td>
</tr>
<tr>
<td>Blended learning</td>
<td>The practice of integrating traditional learning methods with e-learning.</td>
</tr>
<tr>
<td>Bradford District</td>
<td>The area within the jurisdiction of City of Bradford Metropolitan District Council, including Bradford City, Wharfedale and Airedale.</td>
</tr>
<tr>
<td>Broadband</td>
<td>A telecommunications link with high bandwidth, usually over 512 kbps (10 times the speed of transfer using a standard telephone line)</td>
</tr>
<tr>
<td>Cable</td>
<td>An alternative name for a Fibre Optic network</td>
</tr>
<tr>
<td>CD ROM</td>
<td>Compact disc read-only memory, a 12 cm diameter high-capacity storage and transfer medium shipped with data that cannot be changed</td>
</tr>
<tr>
<td>CLAIT</td>
<td>Computer Literacy and Information Technology An introductory qualification in the use of information technology</td>
</tr>
<tr>
<td>CLC</td>
<td>City Learning Centre Usually located in schools, these are locations where pupils and adults can access computer technology during extended school hours.</td>
</tr>
<tr>
<td>Community centre</td>
<td>A location where groups of like minded people can congregate for activities. A community centre might provide a location to one or more community groups.</td>
</tr>
<tr>
<td>Connectivity</td>
<td>A term referring to the means by which a person or computer is connected to the Internet</td>
</tr>
<tr>
<td>Content provider</td>
<td>A company that provides services to remote users. In this study these services are taken to mean educational content but in a wider definition these services could be shopping, web surfing, chat rooms, playing games, accessing data such as music and books through a server</td>
</tr>
<tr>
<td>Contention</td>
<td>A situation that occurs when several users attempt to access the same resource simultaneously. A typical ADSL line may potentially be shared by up to 50 users. Since only one transmission can occur at a time this has the effect of queuing information to be transmitted. Fortunately transmission is extremely fast and this queuing is barely noticeable on lines with an average number of individual requests.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CoVE</td>
<td>Centre of Vocational Excellence</td>
</tr>
<tr>
<td>Cybercafe</td>
<td>A cafe or bar allowing customers to explore the Internet while having a drink or snack. Allows people without a computer or online access to enjoy the benefits of the Internet. Usually charged per half hour of usage.</td>
</tr>
<tr>
<td>Database</td>
<td>A collection of data: part numbers, product codes, customer information, etc. It usually refers to data organized and stored on a computer that can be searched and retrieved by a computer program.</td>
</tr>
<tr>
<td>Deep Freeze™</td>
<td>Software that will allow a computer to revert to a previously saved configuration every time it is rebooted.</td>
</tr>
<tr>
<td>DfEE</td>
<td>Department for Education and Employment</td>
</tr>
<tr>
<td>DfES</td>
<td>Department for Education and Skills</td>
</tr>
<tr>
<td>DHCP Server</td>
<td>Dynamic Host Configuration Protocol - a server that automatically provides IP addresses for appropriately configured nodes at boot up.</td>
</tr>
<tr>
<td>Dispersed Settlements</td>
<td>Small villages that are physically remote from larger trading centres such as Market Towns</td>
</tr>
<tr>
<td>Distance Learning</td>
<td>Learning whilst being physically separated from the source of learning i.e. content and tutors. Open University is an example of Distance Learning.</td>
</tr>
<tr>
<td>Distributed learning</td>
<td>Provision of learning over a wide area, using resources from different locations or services.</td>
</tr>
<tr>
<td>Download</td>
<td>To transfer information from a remote computer to a local computer using the internet connection.</td>
</tr>
<tr>
<td>DTI</td>
<td>Department of Trade and Industry</td>
</tr>
<tr>
<td>ECDL</td>
<td>Electronic Computer Driving License</td>
</tr>
<tr>
<td>ECDL is the international standard of competence for computer users.</td>
<td></td>
</tr>
<tr>
<td>Education Bradford</td>
<td>The outsourced element of Bradford Local Education Authority, managed by SERCO for Bradford Council</td>
</tr>
<tr>
<td>e-learning</td>
<td>The use of information and communications technology to support, enhance or deliver learning; sometimes called ILT.</td>
</tr>
</tbody>
</table>
European funding  The European Funding schemes, such as ERDF (European Regional Development Fund), and ESF (European Social Fund)

Exchanges  A building where telephone and data lines are distributed to a local community

Fibre optic network  A network of telecommunication, data and TV services which are transmitted using optical fibre instead of traditional copper wire. Large areas of the Aire Valley are provided with a fibre optic network as an alternative for the BT telecoms network

Firewall  A device or software application that prevents or tries to prevent malicious attacks into a computer or network from the internet

FSB  Federation of Small Businesses

GPRS  GPRS is the General Packet Radio Service that is part of the GSM standard and delivers ‘always-on’ wireless packet data services to GSM customers. GPRS can provide packet data speeds of up to 115 kbps

ICT  Information and Communication Technology
Any modern digital method of collecting, processing and communicating information of any kind, for example text, graphics, sound, image or video. The term ICT does not refer to any single technology but encompasses all aspects, such as computer-based technology, telecommunications, digital photography, and broadcasting

ILT  Information and Learning Technology
The application of information and communications technology (ICT) in teaching and learning, often called e-learning

Informal learning  Learning that has a clear aim or aims but does not lead to a qualification.

IP address  Every computer connected to the Internet is assigned a unique number known as an Internet Protocol (IP) address. Since these numbers are usually assigned in country-based blocks, an IP address can often be used to identify the country from which a computer is connecting to the Internet.

The numeric address of a computer on the Internet. An IP address is
written as a set of four numbers separated by periods (each number can range from 0 to 255). An example of an IP address is 123.123.4.5.

**ISDN**
Integrated Services Digital Network, an international communications standard that allows ordinary phone lines to transmit digital instead of analogue signals, allowing data to be transmitted at a much faster rate than with a traditional modem. More expensive and considerably slower than the latest ADSL technology.

**ISP**
Internet Service Provider
A company that sells direct access to the Internet, most often through dialing a local phone number. Unlike some online services, ISPs provide little or no proprietary content or online services.

**IT**
Information Technology
The science of managing and processing information systems. Because computers are the central components in these systems, IT is usually used as shorthand for computer skills in general.

**Kbps**
kilobits per second
Thousands of bits per second – a measure of the speed of data transferal across a communications link.

**KCLC**
Keighley Community Learning Club

**LAN**
Local Area Network
A Local Area Network connects computers in a relatively small area, such as the same floor or building, or a group of buildings like a campus. Users on the same LAN can share devices (such as laser printers) as well as data.

**Learning provider**
A provider of learning services to students, as opposed to content provider which is a provider of course content.

**Leased line**
Also referred to as a private line. A leased line is obtained from a communications company (carrier) to provide a transmission medium between two points. The line consists of a permanent dedicated circuit between two points (one of which can be an ISPs connection to the internet backbone), or to a set of previously arranged points. The cost of the line is usually based on the distance between locations. This is in
contrast to switched or dial-up lines, which can be connected to any point on the network

Link Venues

The term replacing ‘Access Points’ for local learndirect centres linked to a larger venue for support and funding.

LSC

Learning and Skills Council

LSP

Local Strategic Partnership. Locally this is Bradford Vision.

MAN

Managed Area Network. A wide area network managed at a central location.

Mature Learners

Older learners, often retired or semi-retired.

Mbps

megabits per second

Millions of bits per second – a measure of the speed of data transferal across a communications link.

Minimal Support

A local network of computers that are configured in such a way as to require the very minimum in ongoing support from an IT Support professional. A network using “Deep Freeze” or similar software can be easily reset by rebooting, and therefore needs minimal support.

MLE

Managed Learning Environment

A structured, technology-based environment that manages or contributes to the management of information and content systems within an educational institution.

Mobile LAN

A term used to describe a collection of computers that can be transported to a remote location and easily setup to provide a Local Area Network which can be used for e-learning.

Mobile Unit

A van, bus or even a car boot which can be used to transport mobile ICT equipment to and from a remote site.

Modem

Modulator-demodulator - a device or program that enables a computer to transmit data over analogue telephone lines. Computer information is stored digitally, whereas information transmitted over telephone lines is transmitted in the form of analogue waves. A modem converts between these two forms. The term is also frequently used to describe a device which connects a computer or a network of computers to the internet.
using ADSL digital technologies.

**NCFE**
National Certificate of Further Education

**Network**
Any time you connect two or more computers together so that they can share resources, you have a computer network

**NFU**
National Union of Farmers

**NGfL**
National Grid for Learning
The national network linking schools to the internet

**NIACE**
The National Institute of Adult Continuing Education

**N LN**
National Learning Network
A national partnership programme designed to increase the uptake of Information and Learning Technology (*ILT*) across the learning and skills sector in England

**NVQ**
National Vocational Qualifications are mainly for people who are already working, although it is possible to take them whilst at school or college with the relevant work experience. They are valued by employers because they are actually based on standards developed by industry. NVQs are made up of a number of separate units. Each unit sets out what skills candidates must possess and to what standard

**Objective 2**
A category of ERDF funding, for which parts of Airedale are eligible.

**One Way Satellite**
A means of connecting to the internet using satellite technology. A one way satellite connection provides data from the internet to a computer or a LAN at broadband speeds, whilst the transmissions from the LAN or computer to the internet use a traditional analogue modem to communicate over a standard telephone line.

**pat15**
Policy Action Team 15

**Regional Development Agency**
Regional Agency set up by central government. Yorkshire Forward is the RDA covering Airedale.

**Router**
A router is a device for extending a network. It takes its name from its ability to route data from one network to another. Today’s routers are becoming smaller and smaller and very often have additional functionality built in to the device. A common Router used on a small
ADSL network could include and ADSL connection (sometimes incorrectly called a ADSL modem), Firewall, DHCP server, NAT server and VPN provision.

**Satellite**

Satellite communications are becoming increasingly important for conquering distance and enabling location independent working. Digital transmission of data via low-level satellites is set to increase the importance of satellites for remote and mobile ICT.

**SCOL**

Shipley Communities On Line

**SDSL**

Synchronous Digital Subscriber Line

Data service provided by the phone company with both the send and receive speeds the same

**Shared lines**

Some older BT installations made use of a shared line or line-sharing device to enable more than one household to use the same physical telephone line. Older shared lines did not allow both households to use the phone at the same time, whereas more modern telephone sharing devices can enable both parties to use the same line concurrently. These line types are not compatible with ADSL.

**SME**

Small and Medium Enterprises

These are defined by the European Commission as independent enterprises that have fewer than 250 employees, and an annual turnover not exceeding €40/£25 million or a balance-sheet total not exceeding €27/£17 million (extract from the 96/280/EC, Commission Recommendation of 3 April 1996).

**SRAP**

Sub-Regional Action Plan

**Structured learning**

Learning with a clear aim, supported by a tutor.

**SVQ**

Scottish Vocational Qualification, Vocational qualifications developed alongside NVQs, but taking into account differences in Scotland

Or

Teaching Company Scheme - places high quality recent graduates with companies to carry out supervised project to encourage technology transfer
Synchronous
Allowing transmission in both directions at the same time.

two way satellite
A more recent means of connecting to the internet using satellite technology. A two way satellite connection provides data to and from the internet to a computer or a LAN at broadband speeds. It requires a transmitter to be installed at the location to send the traffic back to the satellite.

UKOnline
A brand of IT centre supported until recently by Government funding.

Upload
To send a file from one computer to another via modem, network, or serial cable. With a modem-based communications link, the process generally involves the requesting computer instructing the remote computer to prepare to receive the file on its disc and wait for the transmission to begin.

Virus
A malicious program or piece of code that is loaded onto your computer without your knowledge and runs against your wishes. Most viruses can also replicate themselves and spread to other computers. All computer viruses are man made. Antivirus programs periodically check your computer system for the best-known types of viruses.

Virus Checker
Anti-virus software, like McAfee or Norton AntiVirus, try to keep computers safe from a virus attack.

VLC
Virtual Learning Centre

VLE
Virtual Learning Environment
A website which recreates or supplements the various fundamental elements of a face-to-face learning experience, offering a provider the opportunity to provide controlled secure access to learning programmes from any computer with an Internet connection, tracking of student online activity, access to learning materials and online assessment, e-mail communication between tutors and learners, mapping of the curriculum, and peer to peer communication.

WAN
Wide Area Network
A physical or logical network that provides capabilities for a number of independent devices to communicate with each other over a common transmission-interconnected topology in geographic areas larger than...
those served by local area networks. i.e. any network that covers an area larger than a single building or campus

Website
A virtual location on the web. A URL that serves as the top-level address of a website will be said to point to that website's home page. That page serves as a reference point, containing pointers to additional HTML pages or links to other website. The website would be created from a collection of files supported by the World Wide Web. Usually these files consist of, but are not limited to, HTML files, ASP files, PHP files, graphic files, and others. To view a site, it is required to have a web browser. The two most popular browsers today are Microsoft Internet Explorer and Netscape Navigator. There are a variety of types of websites. Many people have personal sites that give information about themselves, sometimes including resumes for potential employers. Also, most businesses have sites on the WWW in which they can promote their products. Other companies have stores online using shopping cart software to sell products on their site.

Wireless technology
Similar to traditional wired technology but with a wire-free interface that provides high-speed data communication across small distances. For example, the most common form of wireless technology is infra-red, which can be used to network computers together or to allow a computer to ‘speak’ to a mouse or printer in the same way as an infra-red remote control communicates with a television set.

Wireless LAN
A local area network created from wireless technologies

Work Based Learning (WBL)
Learning in the workplace, sported by a college or other provider. This is supported by specific LSC funding.

Workforce Development
Educational development of employees to improve work related skills.

WYTAP

Yorkshire Forward
The Regional Development Agency covering Airedale.
Palmedia and Reid IT Services

Palmedia and Reid IT Services began working together in 2003, when LS29.net was formed to create a wireless internet access service for the Village of Burley in Wharfedale. When the project concluded due to an ADSL service being made available to the village, Matt Palmer of Palmedia and Kevin Reid of Reid IT Services continued to work together to offer services based on the synergy of their respective companies.

**Palmedia**

Palmedia (UK) Ltd provides strategic ICT advice and consultancy to small and medium sized businesses and the public sector, in addition to ADSL broadband, web hosting and web site development services. Palmedia aims to offer a ‘one stop shop’ service for business IT and Internet needs, and also specialises in e-business, e-commerce and web site compliance testing. More details can be found online at www.palmedia.co.uk.

**Reid IT Services**

Reid IT Services Ltd provides high level management services to the SME market sector. In-house ICT Management skills are usually missing from small entrepreneurial start-up companies and without an effective ICT strategy many organisations are at the mercy of their chosen ICT suppliers to advice on what is right for them. Reid IT Services fills the gap by working with the company’s management team to ensure that they have an effective ICT strategy and that it is supported by the ICT service delivery organisations that operate in the SME sector. Reid IT Services provides a low cost alternative to such activities as in-house project management for new ICT projects, systems installations and future upgrades that have been clearly identified as being required and meeting the needs of the companies overall strategy.

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