

Norris Green Online

Wiring up a new build estate to provide cheap telephony, Internet and Intranet access

1 Overview

Norris Green Village

Norris Green Village is a joint venture between the City Council, Liverpool Housing Trust, Bishop Loch Homes and the local community. Over the next 5 – 7 years it will replace 1,500 defective dwellings with a 1,700 dwelling mixed use, mixed tenure urban village. The site is in a location popular with house buyers and covers a total of around 45 hectares. The development is supported by English Partnerships and the Neighbourhood Renewal Fund.

Norris Green Online – the concept

The development of Norris Green Village necessitates the provision of new infrastructure throughout the area. In line with the Office of the Deputy Prime Minister's Millennium Communities Aims and Targets, it was intended from the outset to incorporate hardwiring of dwellings. It was also planned that all low income households would have access to the Internet. This would be achieved by supplying social housing with an Internet ready PC or equivalent device as standard.

It is intended that the Norris Green Village Company¹ will act as a telecommunications supplier and Intranet provider offering low cost phone billing and either free or cheap Intranet/Internet access to low-income households. Discussions have taken place with Liverpool Direct/One Stop Shop service to provide e-government portal services. A range of other services/features would be offered including online discussion, opinion polling and consultation, repairs ordering, online billing and a range of 'channels' to be developed in conjunction with residents, the local school and the community/early years' centre.

Norris Green Online will benefit disadvantaged households in the community by:

- Broadening and increasing ICT literacy
- Providing excluded households with state-of-the-art technologies and skills
- Giving training and support
- Increasing the capacity of local residents to benefit from the use of ICT

¹ Norris Green Village Company has been set up to provide ongoing management and development of the estate for the benefit of residents. All residents, whether owner occupiers or tenants, will become members of the Village Company and will elect a management committee from among their number to run it.

- Encouraging residents to become ICT producers
- Improving local residents' employability in the ICT sector
- Creating greater potential for new-start community/small businesses.

The benefits of the Intranet system will be incorporated into displays and exhibitions within the Norris Green Village Information Centre.

2 What we were asked to do

IS Communications was asked to:

- Undertake a feasibility study on how best to develop the telecommunications infrastructure needed within the Norris Green Village to enable the above requirements to be met
- Provide a detailed analysis of the likely costs and revenues
- Advise on the best way of spending £145,000 from the Neighbourhood Renewal Fund to kick start the project
- Assist with the procurement of equipment and services recommended.

A pilot Intranet

We recommended using the Neighbourhood Renewal money to develop a pilot Intranet on the outskirts of the area to be rebuilt. We worked with Liverpool Housing Trust to use wireless to connect 45 homes into a local network, and to provide access out onto the Internet through ADSL.

The plan was to work with residents to build the first stage of the Intranet website so that as new residents move in, they would find comprehensive information about the local area and an active online community ready to welcome them. We also put together a programme of training and support to enable participants in the Pilot to gain the necessary skills to help design the intranet site and participate in its ongoing development.

Feasibility study

We were asked to recommend a best option for telecom supply to the urban village that provides low cost telephony and Internet access to residents, free access to a local Intranet and revenue streams to Norris Green Village Company to help support its ongoing role in the management and further development of the urban village.

Telephony

The requirement was for a system that would enable the Village Company to offer cheaper than average call bills for residents, free calls within the new build development and individual customer billing. At the same time it was hoped that there should be a profit margin to provide a revenue stream for the Village Company. We were asked to consider the lessons learned from the telephony system installed in 'The

Heys', a sheltered accommodation scheme run by Liverpool Housing Trust.

Internet access

The brief identified the need to provide free or cheap Internet access to low income households. It was also implied that residents and local businesses should be able to pay for high bandwidth Internet access. This could be one of the revenue streams that would ensure long term sustainability. The system therefore needed to allow the Village Company to offer customers a variety of levels of both contended and dedicated bandwidths², as well as the opportunity to pay for short term dedicated high bandwidth use, for instance for video conferencing sessions.

Intranet

We were asked to put together a detailed specification to programme and provide the 'Norris Green Online' community Intranet service. This Intranet site was envisaged as a fully interactive site, offering comprehensive local information, access to local services, such as the ability to report housing repair needs etc, and online debate and discussion.

Revenue for Norris Green Village Company

We were also asked to take into consideration the need for the telecommunications system chosen to provide ongoing revenue streams for the Norris Green Village Company. Clearly the telephony and Internet provision were two areas for potential income generation, but we understood our brief to include reviewing some of the other revenue generating services that could be provided over the network. We investigated the potential revenue opportunities of video on demand, multi channel television and online games. We also decided to provide an overview of some other possible services that could be provided over the network.

3 What we did

Worked with the client and technology specialists to understand the issues

We ran two brainstorming sessions with representatives from a range of telecommunications companies to outline the issues involved and the options available. We then brought over an expert who is involved in the development of the broadband residential market from Cisco's

² Contended bandwidth is where a number of users share a fixed bandwidth. This is cost effective for most purposes, as normally people require bandwidth only in short bursts and are prepared for lower quality of service for short periods. However for some purposes, such as high quality video conferencing, it is important that a user can rely on dedicated bandwidth for a specific period of time.

European office. She presented an overview of the technology and some of the business models of the service providers they are working with to key people involved in the Norris Green development. This enabled us to identify the interests, issues and concerns of those responsible for various aspects of the development of the Urban Village.

Recommended the technical solution

We then worked with two different technology providers to look at the design of the infrastructure needed and the costs involved. We decided to recommend the design and costings proposed by Damovo, an infrastructure integrator working with Cisco, as we felt confident in their ability to deliver a comprehensive solution. Based on their figures, we developed a spreadsheet that outlined the costs involved in each of the six years of the development of the Norris Green Village.

Set out the business case

Given the pioneering nature of the concept, it was difficult to provide detailed, evidence-based projections as to revenues and costs for each of these services. We were able to provide fairly reliable estimates as to the likely revenues from telephony and broadband Internet access. We were also able to make some educated guesses as to the potential revenue from television and online games. We linked these calculations to the costings spreadsheet to provide a picture of the likely income to be gained, both during development of the project and once the Norris Green Village was complete. On the basis of our calculations we feel confident of the soundness of the business case for the village company to build and manage its own telecommunications network.

Identified other services that could be run over the network

We also outlined a range of other services that could be offered over the network:

- closed circuit television
- remote monitoring of elderly and disabled people to ensure their safety
- remote meter reading, and a number of other ideas.

Some of these would be services that could be provided to the community as a whole. Others are services that might gain funding from health or social services providers. We felt that the income or benefit from these was too uncertain to be used as part of the justification for the investment needed to build a telecommunications infrastructure for the estate. However, they are likely to provide other revenue streams and significant added value once the infrastructure is in place.

4 What the client said