



Rivenhall IWMF - Telecommunications

APC Dedicated Wireless Internet & Voice Solution Initial Budgetary Proposal

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14th July 2015: Version 2.0

Document Control

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Document History

14 th July 2015	Version 1.0	Alan Muir	First version authored

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About APC Solutions

APC Solutions is recognised as a leading provider of high performance wireless communications solutions.

Founded in 1996, APC's original focus was on commercial IT equipment. As wireless technology began to mature the company developed specialised expertise in this area and in network infrastructure.

APC Solutions employs qualified staff and undertakes its own program of development alongside business partners and suppliers to ensure knowledge is absolutely up to date. The company is proud of its commitment to customer service and its standards of professionalism.

We specialise in all aspects of wireless and networking technologies including Wireless LAN and Outdoor Wi-Fi, Private Networks – Point to Point and Point to Multi Point, Licensed microwave, high capacity microwave, Mesh technologies, and Dedicated Wireless Internet Services. In addition, as we head towards a one "fat Pipe" world, we also provide Voice and Security services

At APC, our qualified engineers design, supply, install and maintain innovative high performance wireless LAN, WAN, Internet and Voice Solutions for both large and small businesses across the UK and internationally.

Wireless communications are frequently becoming the solution of choice for businesses as they bring cost savings and reliability enhancement.

APC Solutions (UK) Limited

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The Requirement

The site at the former Rivenhall Airfield, Braintree is to be developed into an Integrated Waste Management Facility.

The site will provide a recycling and enclosed composting facility for the treatment of residual waste comprising both municipal and commercial & industrial wastes.

The site will include:

Anaerobic digestion plant treating mixed organic waste, producing biogas converted to electricity through biogas generators;

Materials Recovery Facility for mixed dry recyclable waste to recover materials e.g. paper, plastic, metals;

Mechanical Biological Treatment facility for the treatment of residual municipal and residual commercial and industrial wastes to produce a solid recovered fuel;

Extraction of minerals to enable buildings to be partially sunken below ground level within the resulting void;

Visitor / Education Centre;

Extension to existing access road;

Provision of offices and vehicle parking;

Associated engineering works and storage tanks

This proposal is for the Telecommunications and Data/Internet requirements, at the Proposed Offices and Visitor Education Centre at the Woodhouse Farm complex. It is anticipated that there will be between 20 and 30 staff and visitors who will require voice services and internet access at this site.

The Solution

APC works with data centres, POPs and ISPs across the UK to provide Internet connectivity to otherwise hard to reach sites, using Wireless Radio Point to Point (PTP) Links.

APC already works with a number of major construction companies providing Internet and Voice services, due to the similar challenges they face in getting services into sites for new projects.

Previous projects for construction companies have included links at The O2, Westfield Shopping Centre in Stratford, The Shard and Ferrybridge Power Station to name only a few.

For the site in this project, APC would provide service directly from its own mast from their own offices, which are literally next to the proposed site.

APC has used its sophisticated Desktop Modelling Software to confirm initial feasibility of a solution (Figure 1 shows Google Earth screenshot of Radio Link Path). Final confirmation of connectivity needs to be via the physical site survey proposed within the Pricing Section.

Figure 1: Showing the RF path between the APC Mast and the Woodhouse Farm Offices & Visitor Education Centre



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From here APC can provide the complete solution for the site, this includes the provision of a Dedicated Internet Service, and a Hosted Voice Solution which will connect over the Internet Link. This is all packaged up into one installation and monthly cost. The solution would be presented as an Ethernet cable into an agreed Office on site.

The APC Wireless Dedicated Internet Service

APC offers bespoke wireless internet connectivity solutions specifically to the commercial sector.

If your business relies on the internet for mission critical applications, the APC Wireless Dedicated Internet Service offers a fast, low latency, dedicated connection using high capacity Wireless RF links, with bandwidth options ranging from 10Mbps to 1Gbps, our Wireless connections are uncontended providing a guaranteed level of service, but unlike traditional fibre connections, wireless technology enables low-cost and rapid installation to new, and particularly to remote sites.

Wireless RF is a fantastic option for providing high-speed internet links, and is also a very effective solution in providing Internet Connectivity to remote locations or where cabling isn't easily available.

- **Dedicated Internet Service**
- **Speeds up to 1 Gbps Available**
- **Low Latency**
- **Fast Installation Times**
- **Flexible Pricing**
- **Layer 2 P2P Available**
- **Easily Scaleable to Faster Tiers**
- **99.99% Uptime and Speed SLA**

It is proposed that 50Mb of bandwidth should suffice for 20-30 people. Unless usage is significantly higher than average, in which case we can supply more bandwidth.

The site will be fed directly from the mast at the APC site 400m away. The client end will require an Antenna mounted, probably on the roof of the office, but this will be confirmed at the Survey stage.

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The APC Hosted Phone Solution

What is Hosted Phone Solution?

It's a virtual phone system hosted in the cloud, so no more hardware or maintenance is required. All of your calls are then made over the internet.

It has all the features of a traditional phone system but it also lets you work from whatever device you choose. And from any location, in or out of the office, as long as you're online.

- Hosted Phone System
 - A phone system hosted in the cloud
 - Distributed across three UK datacentres
 - Highly resilient architecture
 - Fault tolerant servers in each datacentre
 - Multiple PSTN interconnects
 - Only one datacentre required to maintain service

- On Premise
 - Modern feature rich easy to use handsets
 - Good quality reliable Internet access



The APC Hosted Phone Solution is powered by Broadsoft, which is:

- Used by 19 of the largest 25 carriers globally
- Provides services to over 10 million end-users
- Is a \$0.5bn company
- Is Built on open standards
- Has unrivalled extensibility

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The Broadsoft solution is a world-class, hosted business telephone system that provides phone extensions and advanced call features via a suitable Dedicated Internet connection. With this solution you don't need a physical telephone system in your office or traditional telephone lines anymore.

The benefits of the solution are:

- Fixed monthly rentals per extension
- 100% availability
- Unlimited standard UK mobile and landline calls
- 30-day rolling contract
- Advanced features as standard
- Keep your number ranges
- Work remotely as if you were in the office

Making and Receiving Calls

The solution enables you to make and receive calls using SIP technology, this can be used in conjunction with ISDN services or as a full replacement. It gives you High Definition call quality delivered over your Dedicated Internet service.

The benefits of the solution are:

- Save more than 50% off ISDN rentals
- Big savings off all call tariffs
- Failover included for business continuity
- Can Work alongside an existing phone system
- High Definition calls as standard
- Keep your existing numbers
- 30 day rolling contract
- Fully scalable, scale up or down

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The Handsets



The APC Hosted Phone Solution uses Polycom Handsets.

- Over 10 million telephone handsets sold
- \$1.5bn company
- HD voice



Features available

- Time Profiles
 - Configuration can automatically change based on
 - Day of week
 - Time of day
 - Specific dates (e.g. bank holidays)
- Auto-attendant
 - Press 1 for sales, press 2 for accounts etc.
- Hunt Groups
 - Distribute incoming calls to groups of users
 - Circular, Regular, Simultaneous, Uniform, Weighted

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- Call recording (Optional)
 - Setup call recording for some or all users
 - Listen to recorded messages
- Number management
 - Assign telephone numbers to users, hunt groups, call queues etc.
- Call Centre Queues
 - Setup agents, queues, announcements
 - Setup distribution rules
- Call forwarding
 - Always, Busy, No Answer, Selective
- Do not disturb
- Hot Desking
 - Enable phone to be used by others
 - Use others phones as your own
- Simultaneous Ring
 - Multiple PSTN / mobile devices per user
- Shared Call Appearance
 - Multiple SIP devices / applications per user
- Voicemail
 - Control voicemail greetings
 - No Answer
 - Busy
 - On Holiday
 - Forward voicemail to email
 - Press 0 to speak to my assistant / colleague
- Use any landline / mobile with Hosted Phone
 - Even when you're not in the office
 - Works with your DDI and extension number
 - Seamlessly move calls between mobile and desk phone
- Works on any phone anywhere
 - No WiFi or VOIP app required
- Works with all Hosted Phone features
 - Hunt groups, queues, call recording
- Sends all calls to a backup number
 - Can be configured per user or per company
 - Automatically detects Internet access failure
 - Automatically detects desk phone failure
- Compatible with all Hosted Phone features
 - Hunt groups, queues, call recording

Optional Extras

- Computer Telephony Integration (CTI)
 - Incoming call triggers 'screen popping'
 - Compatible with wide variety of software
 - Outlook, CRM, ODBC, Lync
- Receptionist Console
 - Runs on reception PC
 - Shows status of all users
 - Allows full call control via mouse / keyboard
- Record incoming / outgoing calls
- Includes Hosted Phone Anywhere
- Per user or per company
- On demand recording even mid-call
- Automatic recording of all or some calls
- PCI compliant options available

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Pricing

Pricing will be supplied upon request, nearer to the Ready For Service date.

Benefits of Wireless

- Up to 99.999% Reliability – Better than many other alternatives
- Low Latency (Typically around 1-3 ms on PTP Products. In this case that's between your site and the POP)
- Exceptional Data Throughputs of up to 1Gbps
- Cost effective solution for hard to reach sites
- Ideal for Temporary Services: Festivals, Sporting Events, Construction Sites etc
- Quick to Deploy (Typically 7 – 21 days).
- No need for physical telephone/data lines in to site

Benefits of Hosted Voice

- Fixed per user price for Line, and UK Geographic and Mobile Calls
- No separate telephone lines (or rental) required
- No "system" maintenance required