

WOODSIDE PRIMARY SCHOOL  
NETCOM ICT SOLUTION

# Netcom92 ICT Suite solutions Woodside School case study



Before

## **The requirement:**

In May 2009 Woodside primary took the decision in completely re-designing the schools ICT suite. They found Netcom's website and contacted our sales team. The enquiry was passed to our sales manager Brad Bulgen and a pre sales consultation meeting was arranged and booked for that same week.

In respect of the recent ICT curriculum change relating to the teaching of ICT Woodside needed to upgrade their current ICT suite to accommodate an additional 16 workstations. The school needed to provide a workstation for each pupil and the teacher. This meant the room would be increasing from 15 workstations to 31 which brought about several problems.

To accommodate these extra machines the room needed a re-designed floor plan which would make the room functional but safe for all visitors and users of the room. This meant new furniture would be needed as the room currently had benching which was very old and didn't make full usage of the rooms teaching space.

Woodside was looking for a company who could take care of the entire project including product supply, installation and design.

The full requirements were:

- Cat5e structured cabling
- Electrical installation to meet up to date regulations
- New data comms cabinet with active switches
- Secure ICT desks for 30x Students and 1x Teacher
- Bespoke work bench for storage and printers
- 30x Pupil PC 's and 1x Teachers PC
- Projector and Projector Screen
- AV Audio pack
- Air conditioning
- Fibre Link installation

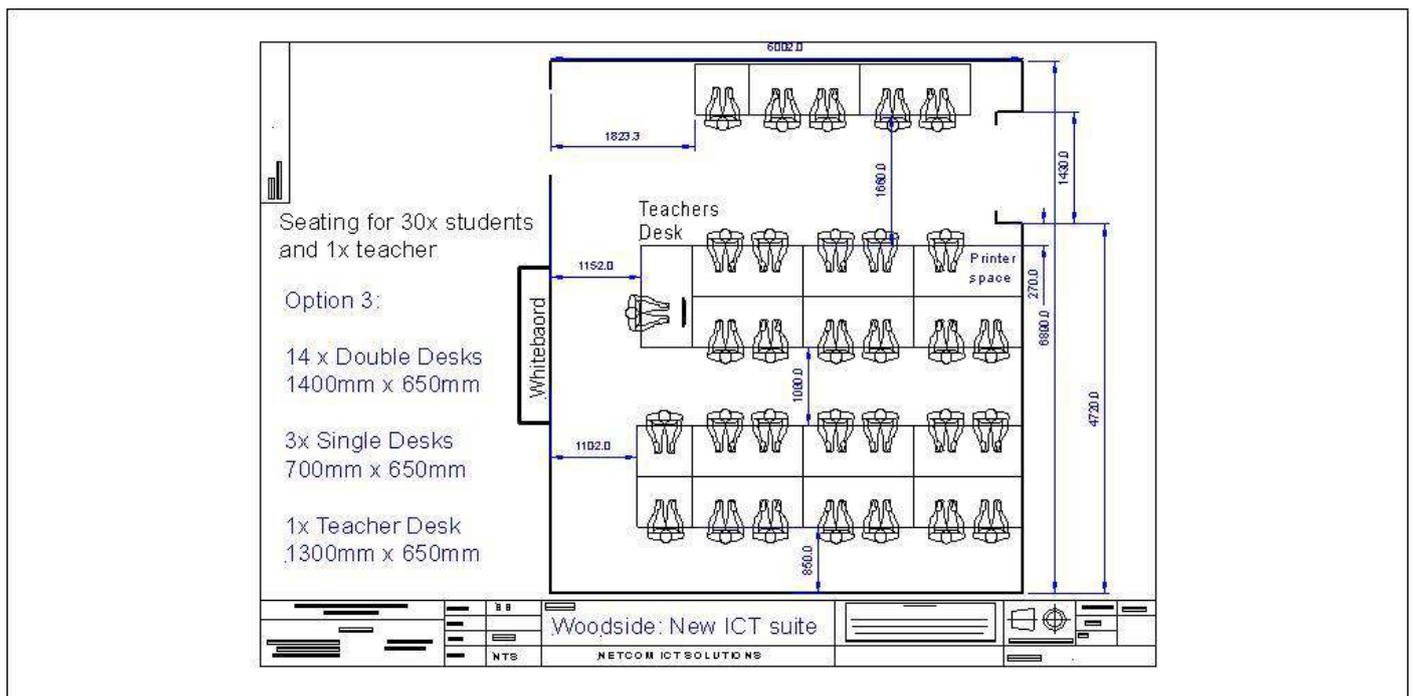
- Student headphones
- 2x New remote data cabinets
- Cat5e data outlets for 22x Classrooms
- Secure desking with enclosed PC's for 22x classrooms

### The room design and desking:



Netcom visited the school to carry out a consultation meeting and to run through the schools project requirements. Netcom then began designing the ICT suite ensuring we did our utmost to meet all the schools requirements. The first thing was to design a seating plan to accommodate the students and teacher.

Netcom designed 2 different floor plans on our CAD software. Both designs included our secure ICT desks with full security features. Each workstation would have a made to measure PC enclosure situated under the desktop and a secure monitor arm mounted to the worktop.



The PC enclosures are designed to house the tower or desktop under the desk. Each enclosure has its own key lock ensuring the unit is completely secure. The monitor arms are designed to be installed to the top of the worktop. They contain a lockable device which ensures the monitor is secure at all times. The arms have tilt and swivel movements for optimal student viewing.

Netcom used double desks designed to seat two students per desk. The desks measured 1600mm wide x 600mm deep x 730mm high. We also included a teachers desk which had all the security features plus a set of draws mounted on the under side of the desk top.

The desks also included our under desk cable containment design. This means that you can have a power and data outlet at each student workstation. This was very important to the school as they wanted to keep

the cable routes from the PC's to the data and power provisions short so students would not tamper with any cables. This feature also adds to the health and safety aspect along with the PC enclosures which takes the PC off the floor.

Woodside also required a bespoke workbench. The bench would be used for the storage of computer and printer peripherals and secondly for the ICT team to use as work space. Netcom supplied and installed a 3000mm wide x 600mm deep x 730mm high work bench. The bench included three storage cupboards one of which is lockable.



After

### **Structured cabling and outlet locations:**



Once we had preferred floor plan we created a cabling plan for the Cat5e user outlets. Netcom would install 36 new data outlets situated around the room. We installed an outlet at each work station which was situated in our under desk cable containment. The 5 remaining outlets where placed along our bespoke work bench as they are to be used for printers, scanners and laptops.

These data outlets would be routed back to a brand new 42U data cabinet which was to be situated in the corner of the ICT suite. The cabinet was supplied and installed by ourselves and would become the main comms centre for the entire schools network.

The cables were routed round the classroom through perimeter dado trunking. This trunking prevents any tampering and also adds to the ascetics of the room.

The new Cat5e outlets were terminated at the new cabinet within our patch panels. Netcom then patched all the new outlets into the relevant data switches which we provided and installed.

The data outlets were then performance tested with our Fluke testing equipment. Each workstation would now have its own data outlet ensuring optimum network speed and connection.

## **Student Headphones:**

Woodside explained during their consultation meeting that they required new student headphones at each workstation.

Netcom supplied the school with 30 new HI-TEX Multimedia headsets. The headphones were connected at each workstation and the cables were routed through our cable management.



## **PC Workstations:**



Netcom would be providing and installing 31 new PC's for Woodside's ICT suite. During our consultation meeting we discussed the specification the school required. The school opted for Dell optiplex machines with 19" monitors. These machines included Intel Pentium Dual core processors, 160GD hard drives and 2GB of memory.

The machines would be installed into the security features at each workspace. The monitors were mounted to the secure monitor arms and the towers were situated in the PC enclosures mounted under the desktop.

All the cables were connect to the data and power outlets within the under desk cable containment. Netcom then collected all the serial numbers and passed them to the school for asset tagging.



After

### **Projector and Screen:**

Woodside required a new projector and screen for their ICT suite. The placement of the projector was very important and we designed the floor plan around where it would be situated.

Netcom understand that the students need easy access to the screen. With this in mind the position of the projector was decided before we agreed the room's new floor plan.

Netcom provided the school with an Epsom projector and a Nobo screen. The projector needed to be mounted so we decided that the best solution for this would be a boom arm. The ICT suite has a very high ceiling so a boom arm would be the best solution for mounting the projector.

Netcom installed the projector to the boom and also added a Kensington lock attachment to make the projector fully secure at all times. Netcom then connected the projector to the new data and power outlets situated on the wall. The projector was then connected to the teachers PC with the cables being routed through our perimeter and under desk containment.

The screen was mounted directly under the boom arm. The projector and screen is situated just behind the teacher's desk as it is used frequently in lessons.



### **Audio Pack:**

Woodside requested that they would like to have an AV audio pack to match their new projector and screen. Netcom came up with a solution which would deliver perfect classroom sound with easy functionality for the teachers that was low cost but affective. The solution included a dado mounted Ikon amplifier and a pair of 100W wall mounted stereo speakers.

The amplifier was mounted into the dado trunking and situated directly next to the screen. The amplifier gives the teacher complete control over all the sound functions at the touch of a button. The speakers were mounted either side of the screen. These speakers are controlled by the amplifier but also an infra red controller.

### **Air Conditioning:**

Woodside had very specific requirements for their ICT suite and air conditioning all one of them. The school explained that the room became very hot when the class was in use. They were concerned about the room temperature with the addition of 16 new PC's.

To solve this problem the school would require Air conditioning. Netcom supplied and installed a brand new Mitsubishi Hyper inverter wall mounted system. The unit was mounted to the wall at a height which would filter and cool the room but would not cause any discomfort to the students. Netcom installed a wall mounted LCD controller giving full control of the unit to the teacher. The unit includes a 3 year manufacturer's guarantee.

### **Remote Data Cabinets:**

Woodside required 10 new Cat5e data outlets in 22 classrooms situated around the school.

To service these new outlets Netcom needed to provide two new wall mounted cabinets. These remote cabinets would then be linked back to main comms cabinet situated in the ICT suite.

Netcom supplied two 21U wall mounted cabinets. These cabinets were wall mounted at high level and housed our data patch panels and Netgear data switches. The switches were supplied and installed by ourselves and we carried out all the necessary patching to make these data outlets active.

### **Remote Cat5e Outlets:**

Woodside wants to offer ICT provisions to the pupils in every classroom. To offer this they need to have data provisions in every room.

The requirement was to install 10 new Cat5e data outlets into 22 classrooms situated around the school. Netcom would then connect these data outlets to the newly installed remote wall cabinets. The wall cabinets are linked back to the main comms cabinet in the ICT suite.

Netcom installed the new outlets by using internal room trunking and presented the outlets within double gang back boxes.

All the new data outlets and cabinet links were performance tested with our Fluke testing equipment.

### **Secure flip fronted Monitor desks:**

Woodside want to offer ICT provisions to their pupils in every classroom. The school understands that the computers will not be used all the time like the computers in the main ICT suite which means wasted desk space when not in use.

Netcom's solution was to offer our flip screen secure desking. This is a desk which offers all the same security features as the desk they have in their ICT suite but it can also be used for non ICT use.

The desk does this by having a gas operated strut which raises and lowers the monitor, keyboard and mouse. When lowered the monitor is hidden away in a recess housed in the desktop. This makes for a smooth and empty worktop for the students to carry on working.

When the student requires the PC again you pull on a small lever under the desk and the monitor will fold up slowly into position. These desks also include the secure PC enclosures mounted under the desktop and a secure lockable monitor attachment

The desks are designed to seat two students and measure 1600mm wide x 600mm deep x 730mm high. The desks are to be arranged in a cluster of three directly under the new Cat5e data outlets. All the data and computer cables are routed through our under desk cable management system and connected back to the outlets on the wall.

Netcom have also included under desk power extension units. By using the power extension units the school can have four computers running from a single electrical socket. The school has double electrical sockets in each room so with these power units fitted the additional PC's have not required any new electrical sockets which have resulted in a significant cost saving to the school.

