

# Kapiti ICT Wireless Initiative (KIWI)

## Briefing Paper

### Aims

1. Provide a Wireless Network and centralised PC to host the Kapiti Collaboration's Learning Management System.
2. Provide direct links to KAREN for all participating schools.
3. Gain access to NEN (National Education Network Trial 2010 to 2011) which may give us access to a free pipe with unlimited width and speed. Uncapped Internet.
4. To distribute Ultra Fast Broad Band to all schools in the Kapiti Collaboration at cost effective price, until such time as the Government Broad Band Initiative provides a better Fibre Optic service.

### Back Ground Information

The Kapiti wireless and infrastructure network spans the entire Kapiti Coast and is used exclusively for educational establishments. The network is designed to allow seamless access for schools.

- There are **existing repeater stations** on two of the back hills in Kapiti, these are fully external driven by deep cycle marine batteries and solar technology.
- The network is currently running 802.11a/b/g and is in the process of being upgraded to 802.9/n and with mimo technology. Mimo technology will allow us to closer knit the channels within a band giving us potentially faster speeds.
- Assuming we get line of sight we will be able to get speeds up to those currently available internally to the vast majority of schools (100mb). This is considerably faster (10 to 15 times) than any Broadband Plan currently available to schools.
- The design of wireless units will utilise low voltage Linux based motherboards (12v 1amp). These will have 1 or 2 mini pci wifi cards. The unit will be centrally managed and will run specific wifi based Linux applications.

## **The Way Forward**

The plan for 2009/early 2010 is to proceed as follows:

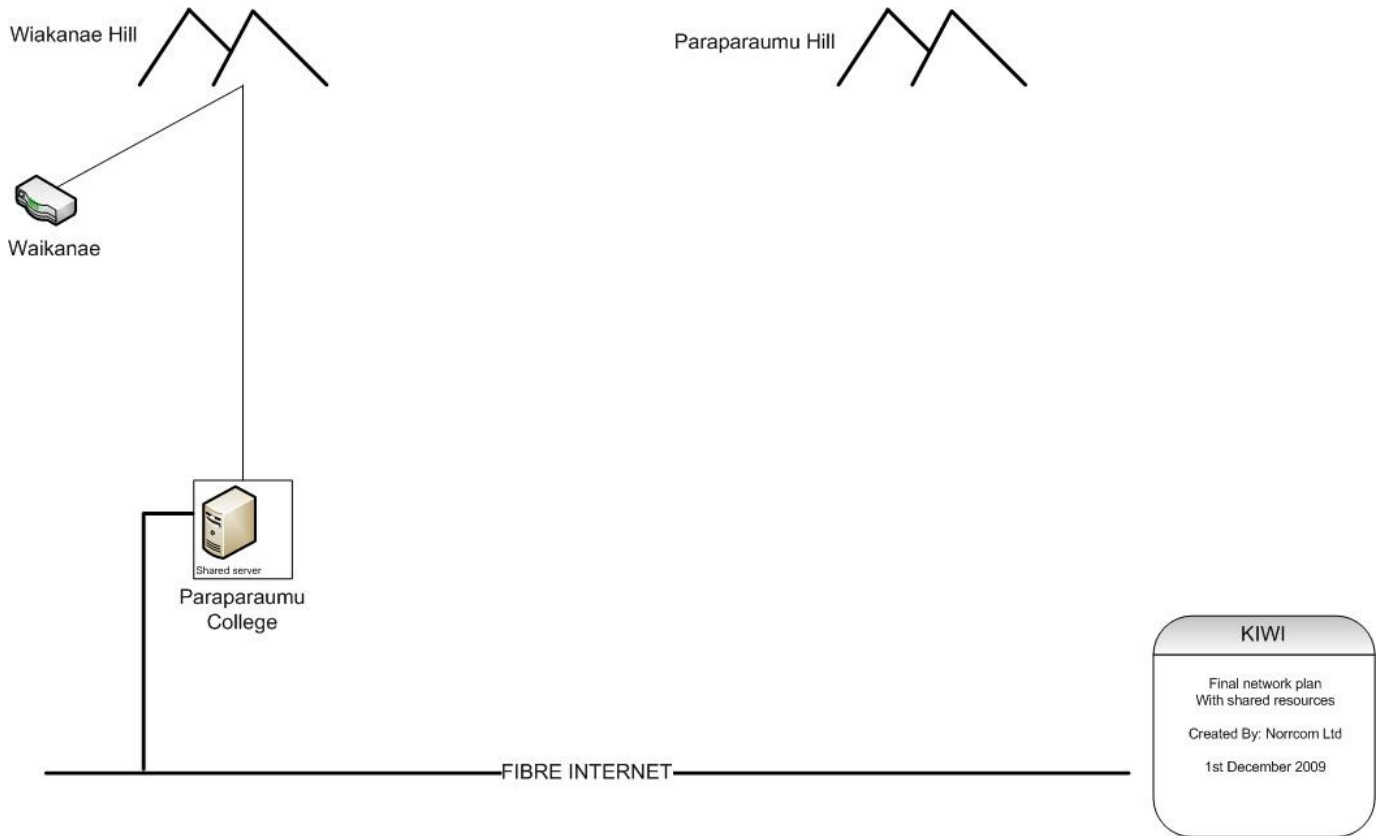
1. Kapiti College and Paraparaumu College obtain High Speed Fibre Connection for distribution to KC via Telecom Deal @ \$1200 per month per school (**Completed November 2010**)
2. HOST School for KIWI identified
3. Acceptance on to NEN (we hope) February 2010
4. All schools to sign Memorandum of Risk with KIWI Host School (December 2009)
5. Proof of concept the sharing of resources for 4-6 schools (December 2009)
6. Upgrade network in one section to test speed and latency (December 2009/February 2010)
7. Design IP network to utilise the exit points to fibre at the two colleges (December 2009)
8. Test this network and its throughput (December 2009)
9. Lay cable from Kapiti College to Raumati Beach (January/February 2010)
10. Development of contracts between individual schools and KIWI host school (March 2010)
11. Roll out to other participating schools (March/April 2010)

Estimate of Maximum costs for KIWI by School and Component

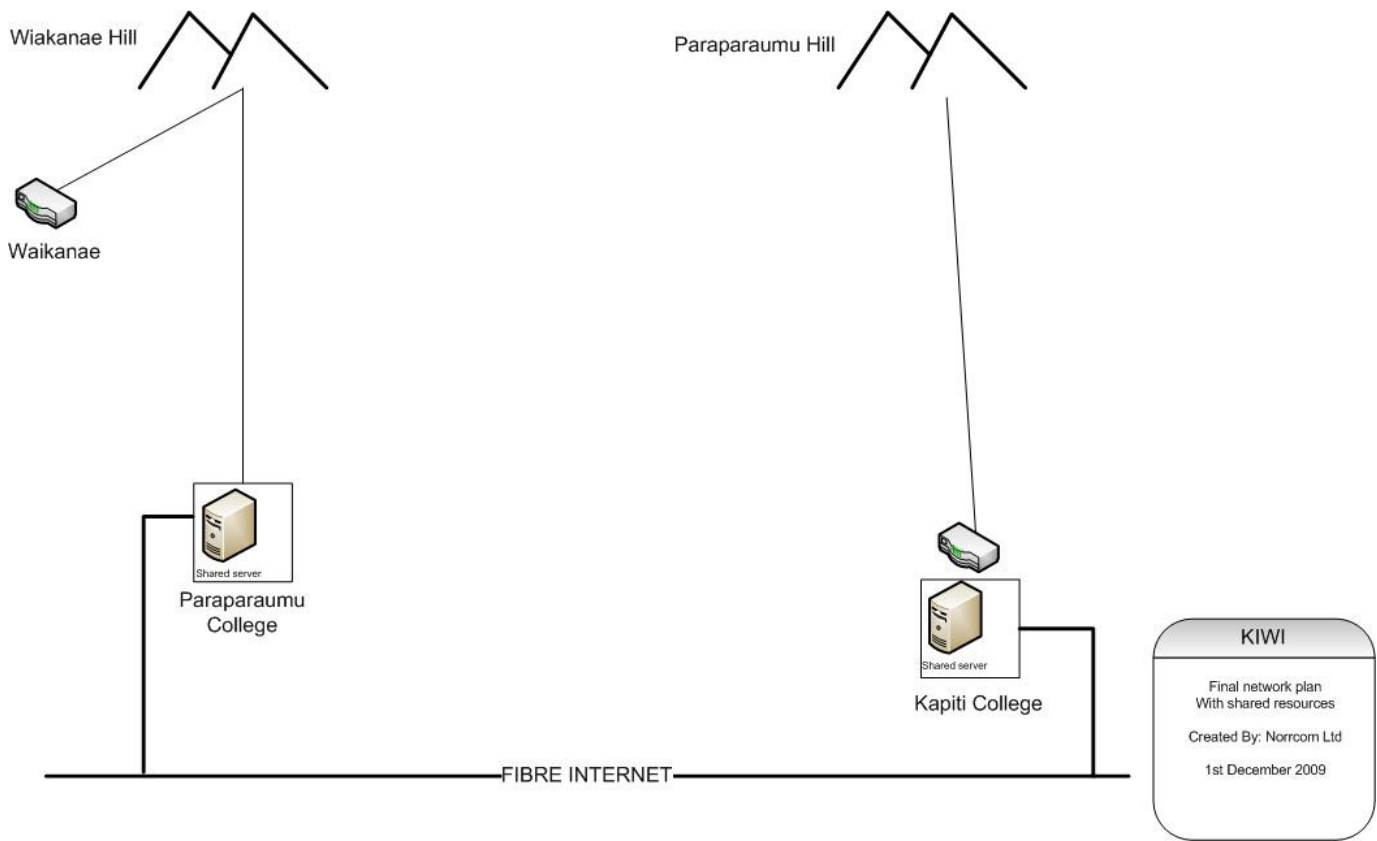
	Roll	Risk Factor	Internet Usage	Hardware	Maintenance of KIWI and KC LMS	Total for 1st Year includes hardware purchases	Total for subsequent Years
Paekakariki	172	\$451	\$832	\$836	\$516	\$2,184	\$1,348
Raumati South	378	\$991		\$1,838	\$1,134	\$2,972	\$1,134
Raumati Beach	613	\$1,607	\$2,965	\$2,980	\$1,839	\$7,785	\$4,804
Kenakena	481	\$1,261	\$2,327	\$2,339	\$1,443	\$6,109	\$3,770
Paraparaumu Beach	628	\$1,646		\$3,053	\$1,884	\$4,937	\$1,884
Paraparaumu Town	215	\$564		\$1,045	\$645	\$1,690	\$645
Paraparaumu College	1409	\$3,694		\$6,851	\$4,227	\$11,078	\$4,227
Kapiti College	1002	\$2,627		\$4,872	\$3,006	\$7,878	\$3,006
Kapiti	321	\$842		\$1,561	\$963	\$2,524	\$963
St Patricks	134	\$351		\$652	\$402	\$1,054	\$402
Waikanae	520	\$1,363	\$2,516	\$2,528	\$1,560	\$6,604	\$4,076
Kapanui	510	\$1,337		\$2,480	\$1,530	\$4,010	\$1,530
<b>Total Roll</b>	<b>6383</b>	<b>\$16,734</b>	<b>\$8,640</b>	<b>\$31,034</b>	<b>\$19,149</b>	<b>\$58,823</b>	<b>\$27,789</b>
First Four Primaries Roll	1786						
Internet Roll	4197						
Risk Factor	\$16,734						
Internet Use	\$8,640						
Hardware	\$31,034						
Maintenance charge per head	\$3.00						

# Technical detail

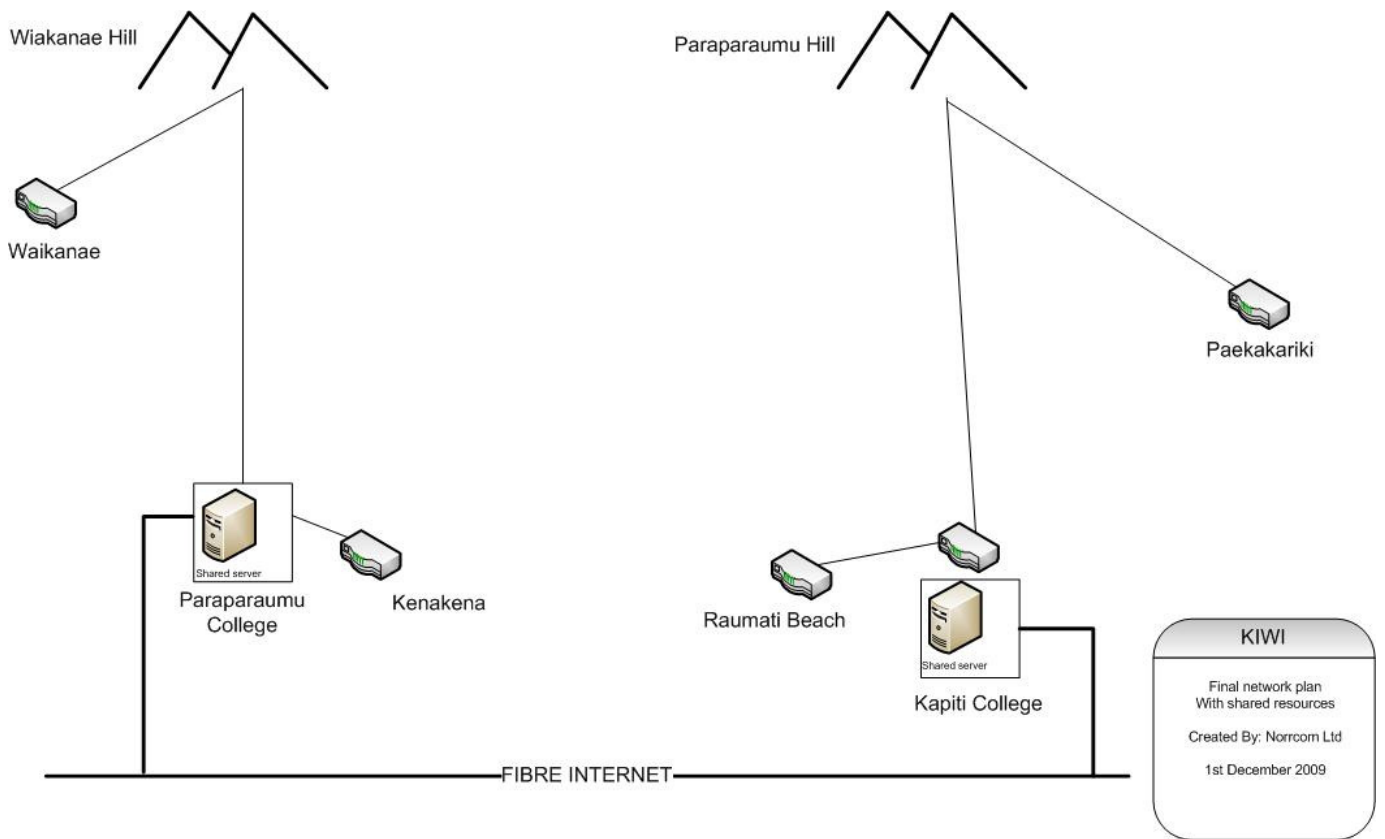
## Stage 1



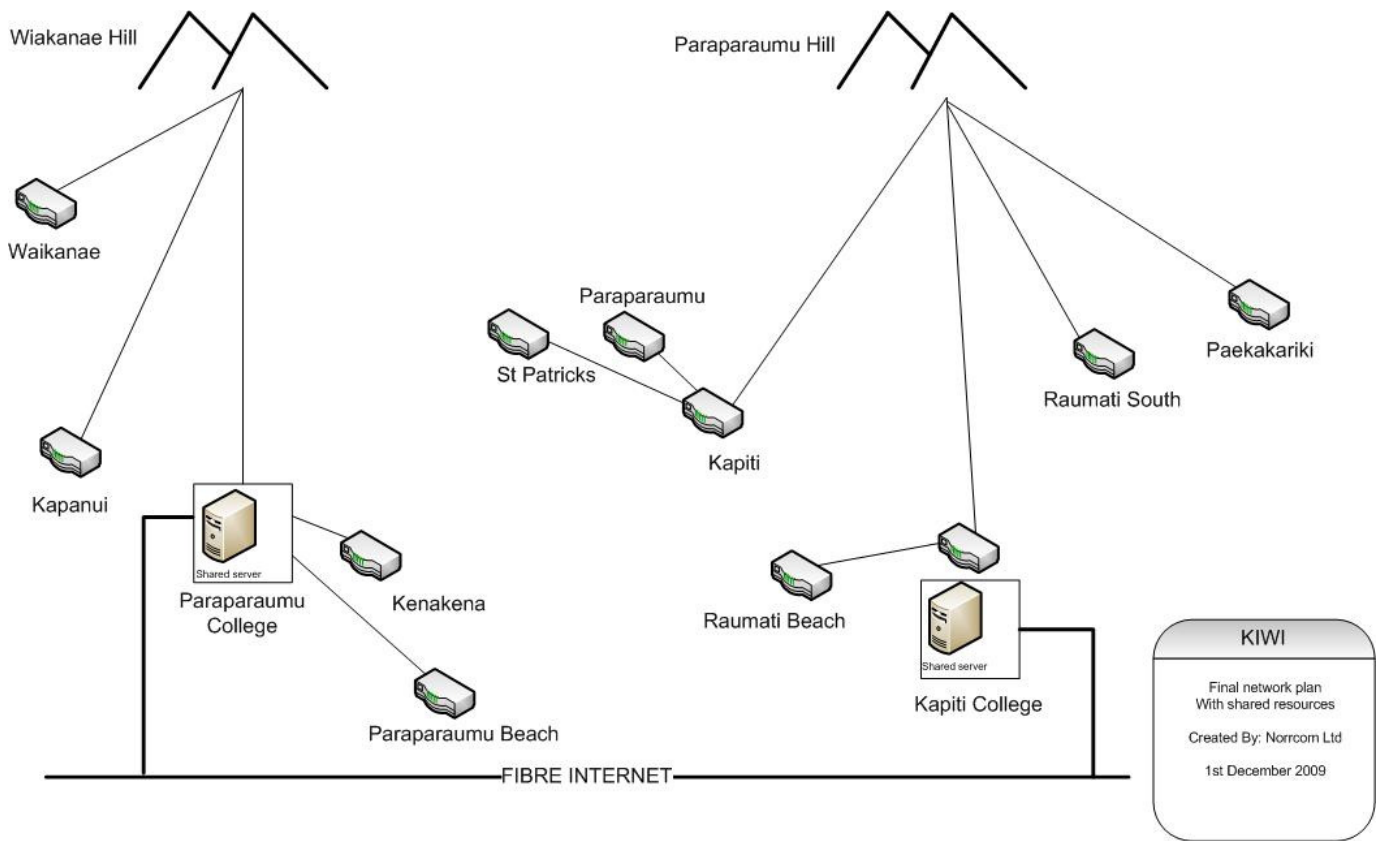
Stage2



Stage 3



Stage 4



# **Kapiti ICT Wireless Initiative (KIWI) Memorandum of Risk**

## **Between Schools of the Kapiti Collaboration and Waikanae School**

**The Schools listed agree to share the financial risk as detailed for the establishment of the Kapiti ICT Wireless Initiative (KIWI)**

**Paraparaumu College, Kapiti College, St Patrick's School, Kapiti School, Paraparaumu School, Raumati Beach School, Raumati South School, Paraparaumu Beach School, Kenakena School, Kapanui School, Paekakariki School and Waikanae School**

### **Key Points:**

- The total risk will be spread between all those schools who become signatory schools (Appendix 1) to the KIWI.
- The risk will be on a pro rata basis.
- It is assumed that all 12 schools will agree to become signatory schools to KIWI. If this is not the case then the individual signatory school risk will increase from that currently stated.
- Pro rata calculated by dividing the total estimated set up cost of the Hills and Chimneys Repeater Sites of \$16739.00 by each signatory school's roll figures (as provided in the Kapiti Collaborations Regional ICT PD Application).
- The maximum total risk is \$16739.00.
- The maximum calculated risk is shown in the attached appendix.
- Waikanae School agrees to make all payments to Norrcom to a maximum of \$16739.00 for the purchase and installation of the necessary hardware until such time as a formal contract is agreed between Waikanae School (KIWI Host School and individual KC Schools for the provision of the Kapiti ICT Wireless Initiative (KIWI).
- All signatory schools agree to pay the amounts detailed if requested by Waikanae School.
- KIWI (itemised per signatory school to the value of \$16739) will show as a debtor in Waikanae School's accounts for the purposes of 2009 Annual Financial Reporting.
- Each individual signatory school will show Waikanae School / KIWI as a creditor to the value listed for the purposes of the 2009 Annual Financial Reporting.
- It is envisaged a formal contract will be drawn up, agreed to and signed by the end of Term One 2010 between individual KC Schools and Waikanae School for the provision of the Kapiti ICT Wireless Initiative (KIWI). The contract will contain three components, these being:
  - Hardware

- Internet
- Maintenance of KIWI and Moodle
- Each individual signatory school's commitment to the payment of the risk factor will cease when the hardware component payment is made by each participating school.

	<b>Roll</b>	<b>Risk Factor</b>
Paekakariki	172	\$451
Raumati South	378	\$991
Raumati Beach	613	\$1,607
Kenakena	481	\$1,261
Paraparaumu Beach	628	\$1,646
Paraparaumu Town	215	\$564
Paraparaumu College	1409	\$3,694
Kapiti College	1002	\$2,627
Kapiti	321	\$842
St Patrick's	134	\$351
Waikanae	520	\$1,363
Kapanui	510	\$1,337

## **Appendix 1**

**The undersigned schools are signatories to the KIWI Risk Factor as detailed in  
the  
Kapiti ICT Wireless Initiative (KIWI) Memorandum of Risk**

Bevan Campbell  
Principal  
Waikanae School  
Date

Des Hedley  
Principal  
Kapanui School  
Date

Alan Marsden  
Principal  
Paekakariki School  
Date

Graham MacDonald  
Principal  
Raumati South School  
Date

Mike Farrelly  
Principal  
Raumati Beach School  
Date

Bruce McDonald  
Principal  
Kenakena School  
Date

Keith Lambert  
Principal  
Paraparaumu Beach School  
Date

Graham Conner  
Principal  
Kapiti School  
Date

Laura Snowden  
Principal  
Paraparaumu School  
Date

Martin Elms  
Principal  
St Patrick's School  
Date

Richard Campbell  
Principal  
Paraparaumu College  
Date

Tony Kane  
Principal  
Kapiti College  
Date

