



# Massive **Maintenance** Restructuring Revives Struggling Mill

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**In the recent past,** Carter Holt Harvey had a consistent weak spot in its financial statements. Although overall results for the forest products company were strong, it faced continued losses at its Kinleith facility. Kinleith, a pulp and paper mill in Tokoroa, New Zealand, found itself in a struggle to survive.

Tokoroa's largest employer was not earning back the cost of invested capital (i.e. not making money). With low pulp prices, a rising Kiwi dollar, fluctuating energy costs, and increasing Asian and Australasian competition, the situation was becoming urgent by 2002. The mill could not compete internationally or grow in its current state. Reinvestment and expansion were unlikely without a massive restructuring.

To have a sustainable future, Kinleith needed to drastically reduce maintenance, stores, and operating costs and achieve considerable ongoing efficiency improvements. However, it first had to overcome an industrial relations environment that resisted change. This was a task that could only be accomplished with outside help. Carter Holt Harvey looked for a partner to serve as a catalyst for change and to transform Kinleith's maintenance operation from the ground up.

After a challenging period of union consultations and necessary legal actions, in December 2002 Carter Holt Harvey signed an agreement with ABB Maintenance Services Ltd. to provide all maintenance services at Kinleith. The mill would focus on operating excellence, while ABB would focus on reliability and maintenance excellence. ABB was selected because it had a demonstrated track record of cultural change, an established Australasian base, and was considered a suitable corporate partner and future employer for Kinleith employees.

The five-year, shared-risk, shared-reward Full Service Maintenance Performance Management contract was projected to help Kinleith achieve ongoing annual savings of \$18 million, yielding approximately \$100 million in accumulated savings and cost improvements over a five-year period. Bonus and penalty clauses were negotiated based on jointly-defined key performance indicators (KPIs). ABB would share in profits when targets were exceeded, and would be penalized when targets were missed.

Under the agreement, ABB would take over all electrical maintenance services including power transmission and distribution as well as devices such as motors and drives at the mill. The company would also manage all maintenance-related spare parts and inventory. A brand new organization would be developed and best practice business processes and tools would be implemented.

Upon contract signing, all 270 Kinleith maintenance and maintenance stores personnel received notice that they were being made redundant, or laid off. ABB then rehired only the best—60% of the original Kinleith workforce—and brought in experienced ABB management and fresh talent to round out the team. The new organization was much leaner than before the transition, resulting in an immediate reduction in employee costs.

## Extreme Steps Taken

“Many mill managers are familiar with the intense pressure created when competition, rising costs, decreasing demand, and productivity issues converge to threaten plant viability.

“Because the results were so dramatic, we are now expanding the initiative to include our Tasman Mill.”



— Dave King, Mill Manager, Kinleith Mill



**New Zealand's Carter Holt Harvey is Australasia's leading forest products company. The US \$2.3-billion company is majority owned by International Paper**

All retrenched employees received a generous severance payment per their labor agreement. Those who were nearing retirement or rehired by ABB saw these payments as a considerable added bonus. Although some former Kinleith employees re-hired by ABB earn marginally less base income because they work less overtime, they have the potential to earn bonuses when they meet target performance levels.

The organizational transformation reduced the number of labor unions at Kinleith from seven to three. Under the new labor agreement and administrative policies, employees can no longer take advantage of wasteful practices supported by previous collective agreements. Salaries and promotions are now based on merit rather than a predetermined ladder of seniority. Overtime is no longer rewarded and premiums are no longer paid for events such as change of shift. Employees are now responsible for covering their shifts, resulting in a drop in absenteeism by 50% to acceptable levels. The mill now operates 365 days per year rather than closing over the two-day period of Christmas and Boxing Day.

Eight-hour shifts, six days on and two days off, were replaced by twelve-hour shifts, four days on and four days off. Employees now work fewer total hours and have improved quality of life. And, because ABB is a much larger organization than Carter Holt Harvey, career opportunities are greater for those maintenance specialists willing to relocate to other ABB sites.

Rehired employees were faced with a fresh work culture. In a series of off-site training and team-building events, they met their new peers and adopted streamlined work processes. Methodologies and business processes were standardized based on industry best practices and supported by a computerized maintenance management system (CMMS) selected by ABB. The CMMS replaced an ERP-based preventive maintenance system that was often ignored in favor of manual systems.

ABB's contractual focus on results ensures that continuous improvement is actively pursued. KPIs were defined to measure and monitor cost, efficiency, health, safety, environ-

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**The Kinleith Mill is Carter Holt Harvey's largest operating unit, producing approximately 300,000 tons of paper and 270,000 tons of pulp annually, and exporting more than 70%.**



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ment, and risk performance. KPIs allow the mill to readily identify weaknesses so that corrective actions can be taken. The new organization successfully earned the required Health & Safety Certificate AS4801.

An attitude of teamwork has replaced hierarchical and isolated practices. Cross communication now occurs between maintenance, stores, purchasing, and contracts personnel, as well as contract labor used on site. When workload increases in one area of the storeroom, all stores personnel pitch in to help. Supply chain service levels for the maintenance organization have increased, and the feedback is very positive.

Although organizationally ABB and Kinleith are separate and distinct business entities, they actively maintain an open line of communication. ABB staff members attend Kinleith staff meetings, and the ABB business unit manager attends Kinleith site management meetings.

In its first year of the five-year contract, ABB exceeded its cost savings, equipment efficiency, and cultural change objectives, and is ahead of schedule in delivering the anticipated five-year results.

Site productivity today is unprecedented in the 50-year history of the mill. The mill increased productivity and reduced costs by streamlining maintenance functions and improving overall plant operations. Annual efficiency improvements are substantially higher than originally targeted, and Kinleith has achieved record-setting performance levels.

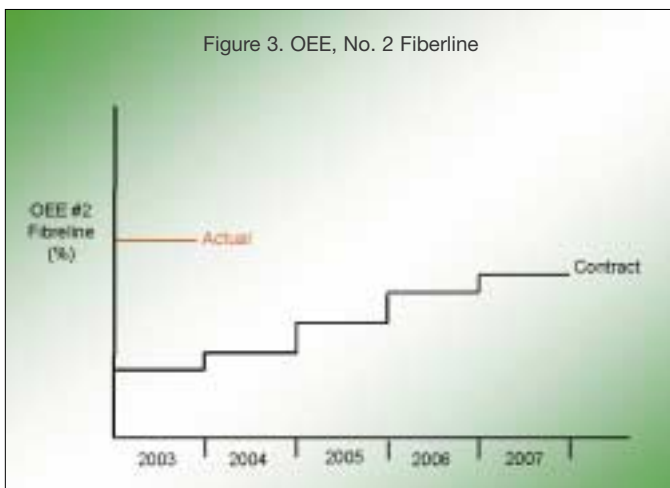
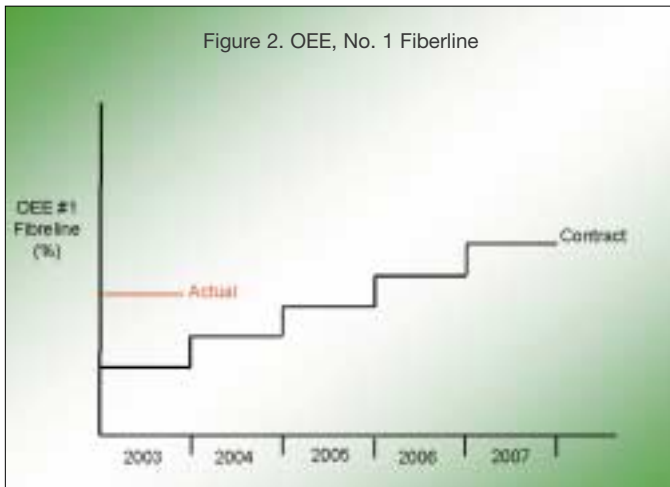
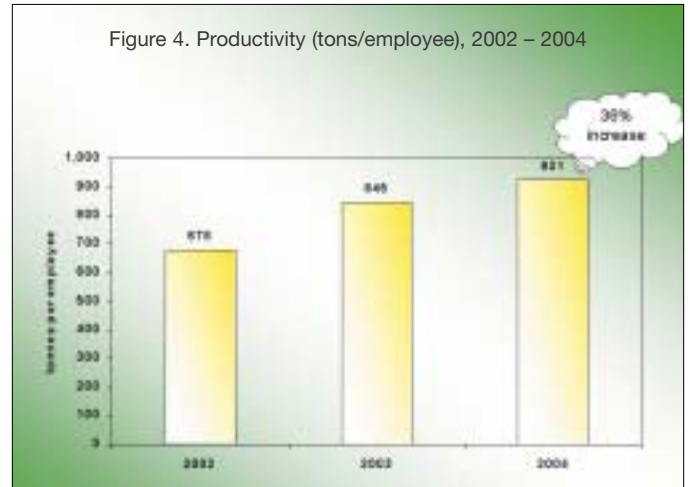
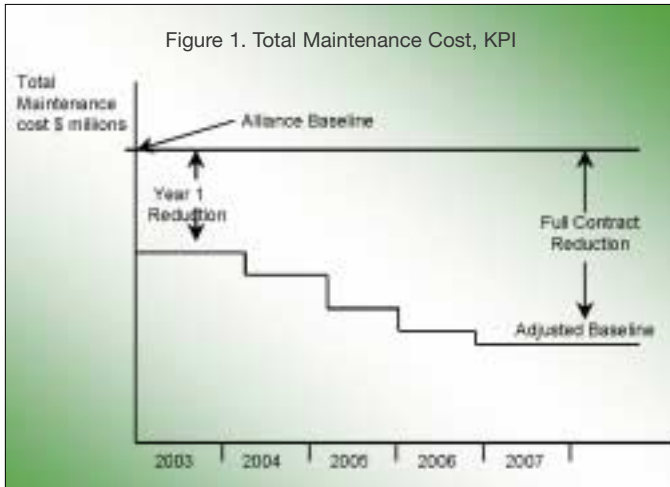
Financial performance has improved greatly and the mill is now thriving. It is able to react quickly to changing market demands, and safety records have improved over prior years. As a result of the new alliance, coupled with Kinleith's Total Productivity Improvement initiative, the mill earned internal awards from Carter Holt Harvey and two New Zealand national awards.

The maintenance transformation is viewed at Kinleith as having saved the mill from closure, and morale is positive. Armed with the success at Kinleith, Carter Holt Harvey has now designated its Tasman pulp mill in Kawerau, New Zealand, as a beneficiary of ABB's Full Service Maintenance

### The following list summarizes results achieved at the Kinleith mill:

- Organizational transformation goal of US\$18 million per year exceeded
- A total of 14 production records in the period June 2003 – March 2004 exceeded
- Production volumes increased approximately 8% over two years
- Containerboard line OEE increased by 3.16% in Year One
- Bleached market pulp line OEE increased by 4.06% in Year One
- Productivity (tons per year per employee) increased by 36% over two years
- Number of employees reduced by 18% over two years
- Total employee costs reduced by 22% over two years
- Total maintenance costs reduced by 15% in Year One
- Mill gate cash costs substantially reduced over two years.

For the 2003 – 2007 contract period, Figure 1 shows total maintenance cost reductions for the Kinleith mill, while Figures 2 and 3 show operating equipment efficiency (OEE) gains for the No. 1 and No. 2 fiberlines, respectively. Figure 4 shows actual productivity (tons/employee) for the years 2002, 2003, and 2004.



Performance Management services. ABB will again serve as a change agent to accelerate improvement and allow Tasman to compete effectively on an international scale.

The new ABB partnership that went into effect Sept. 8, 2004 is targeted to help Tasman achieve around \$39.5 million in a combination of cost reductions and productivity improvements over the next five years. In addition, ABB will be able to leverage the synergies and efficiencies across two mills.

After overcoming many challenges, the future is brighter at Carter Holt Harvey. Kinleith's remarkable recovery bodes well for future investment in New Zealand and the forestry industry in general. Maintenance outsourcing, a business model once considered drastic and risky, proved to be a very desirable and rewarding method to revitalize this once struggling pulp and paper mill. It may prove to be the answer for others as well. ■