

Resource Community Formation & Change:
A Case Study of
CLANDEBOYE

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INTRODUCTION

This paper reports the findings of a case study of the locality of Clandeboye, South Canterbury, location for a major dairying processing plant. It is one of a series of four case studies of agriculture communities in New Zealand. The case studies are part of an ongoing project entitled “Resource Community Formation and Change” that has been funded by the Foundation for Research, Science and Technology. The other case studies of agriculture communities in this series are Katikati (WP12), Waitaki Plains (WP14) and Otautau (WP15). Further case studies explore communities in the forestry and mining sectors.

A variety of research methods were used to focus on the history of agriculture within the locality of Clandeboye, an analysis of census statistics, a review of published documents about farming in South Canterbury particularly relating to the research community, and three days of interviews with farming families, community leaders, local business people, a school principal and local government and welfare agency officers. The interviews were carried out during the last week in November 1997. Some further interviews were carried out by telephone.

Research Community

The research community lay within an approximate triangle the three points of which are Clandeboye in the east, Temuka in the south and Winchester in the north. Throughout the report this research community will be described as ‘the district’. The difficulty in obtaining a more exact research community was because Clandeboye no longer exists as a physical village community. All that remains is the school and a hall. Without the centrality of a village the definition of a Clandeboye community becomes confused. A thorough but unsuccessful search was made at the Canterbury Public Library for historical reference to Clandeboye, none was forthcoming. Clandeboye in a literary sense did not exist. It exists today more as a concept or a focus for historical retrospection.

The social and economic impacts of Alpine Dairy Products establishing their plant at Clandeboye spill over into the wider South Canterbury region including Timaru. Alpine draws its milk from a geographical area extending from Kaikoura in the north to North Otago in the south. Alpine's value added production of a variety of milk products is marketed internationally, giving the locality strong regional, national and international linkages.

AGRICULTURE IN THE DISTRICT AND SOUTH CANTERBURY

Farming in the district

Clandeboye was named by one William McCully, after Lord Dufferin and Ava's estates in County Down in Northern Ireland (these estates were extensive and today are occupied by much of modern Belfast). As this was a district of relatively small holdings, a generation of landowners did not work the land themselves but employed labour who lived in farm cottages in local villages. These men, often retired Army officers, were recognised as “*gentlemen farmers*” and they acquired their land under the Soldiers' Settlement Act following the First World War. Their farms were further fragmented through the process of succession. When asked to describe the major changes he had seen in the district the elderly son of one such farmer noted:

- amalgamation from small blocks to today's larger holdings,
- increase in cow numbers and decrease in people and
- the rapidity of change of land ownership.

Traditionally dairying was the dominant land use although both the farm and herd size typical of the time was small. The district was natural dairy country. It is criss-crossed by streams, canals and small rivers, straddling as it does the Orari and the Opihi rivers and bordered by the Rangitata river. By 1894 the first of a number of strong river bridges were built that were only replaced by the existing concrete structures in recent memory.

Intensive farming practices could be carried out in the district because of the existence of good soils. These soils are of cropping quality but dairy farmers who put them in pasture can achieve their production goals in two rather than three years. Some “*old timers*” were shocked to see such “*sweet*” arable land turned to dairying.

An important measure in the 1970's was the introduction of tax incentives to establish and develop on-farm irrigation systems. New technology encouraged the use of spray irrigation enabling land use changes that included the utilisation of differing soil types and product intensification. By the mid-eighties there was a group of district farmers who were converting to dairying. Dairying that was established on the intensification philosophy and driven by irrigation. A plentitude of artesian water, existing good soils and flat contour were ideal for spray irrigation. Farmers quickly learnt that irrigation should not be used as a backdrop or insurance against a perverse climate. Irrigation was a daily function if its merits are to be maximised. Observers noted that the adaption of water technology was also linked to youth and enthusiasm.

In the 1970's there were also a number of dairy farms in the district that were traditional town milk supply operations. These farmers had winter contracts with non-dairy farmers for rye grass and other seasonal supplies. They were as dependent as the “[*dairy*] *factory farmers*” on other farm types to provide winter grazing and supplementary feed.

Early dairy processing

The first cream factory was built at Clandeboye in 1904 having been preceded in 1900 by the school which had been moved from Geraldine Flat to Clandeboye. Prior to 1904 Clandeboye dairy farmers sold their cream to the Temuka Cheese and Butter Factory which had been established in 1884. The first dairy factory in the district was built at Orari in 1852. According to local legend a box of cheeses from the district was sent to London in the SS Dunedin in 1882 with the first shipment of frozen mutton from New Zealand. Respondents described grandparents taking milk to the creamery in horse and dray and in one instance of a grandfather working at the factory for the last 15 years of its existence hand pressing the cheese. In 1910 the financial structure of the Clandeboye creamery was changed to a co-operative dairy. By 1911 Clandeboye boasted a telephone bureau.

Today Alpine Dairy Product's factory stands on the site of the former Temuka Co-operative Dairy Company. This factory was one of four independently run district co-operatives sited within the three river catchments.

Clandeboye - 1960's to today

An aerial photo of the Clandeboye village taken in July 1960 shows a small dairy factory, a church, a hall, a school, factory cottages and a tennis court. Amongst the cottages there was a store and earlier a blacksmith's forge and shop. A canal meandered through the village and past the school. All that remains of the village today is the school and the hall. The small dairy factory has been replaced by a vast dairy plant containing the tallest building in South Canterbury. The canal has been diverted creating wider road access to the factory, the school has added a building and the hall has almost

disappeared from sight surrounded as it is on three sides by the factory. During the 1960's, however, the factory had little impact outside the immediate district. The milk was still coming to the factory in cream cans on lorries and milk tankers only appeared with the expansion of the factory.

In 1997 Alpine's newest development, the \$90 million milk powder plant, came on stream. It processes 40 per cent of the total milk supply, and some 290 million litres annually into 37,000 tonnes of milk powder. The new powder plant is also producing anhydrous milk fat (AMF) topping 10,500 tonnes in 1997. The brine-salt plant has a capacity of 17,000 tonnes of gouda and 2,000 tonnes of parmesan-style cheese. A whey protein concentrate plant within the complex utilises the whey stream from the factory's cheese unit.

The commissioning of the new powder plant ends an intensive phase of capital development at Clandeboye. The milk flow is now such that between 8 to 10 new trucks are required every year to ensure a constant stock of 33 available trucks. Alpine drivers recollect that ten years ago they were collecting from about 8 dairy farms in Culverden, North Canterbury; today collection is made from 48 dairy units there, and it is no longer unusual to see dairy herds of 1,000 cows.

In 1997 the National Business Review placed Alpine second amongst all New Zealand organisations in growth of turnover. However the growth has caught local government, the community, and Alpine even unprepared and the company has experienced what they call “*growing pains*”.

In the past, as a result of “*mis-management*” the company had made NIL pay outs to their dairy farmers. It was not suggested that this was the case today. However respondents maintained that the extensive development of the factory complex had been a liability in terms of pay outs. But they also noted that overall the low pay outs were compensated for by cheaper land, fertile soil and accessible water. Some were sensitive to the consequences of the capital development costs resulting in the “*lowest payouts in the country*”.

DEMOGRAPHIC FEATURES

Population profile¹

Population changes 1986-1996 for Clandeboye locality and Temuka are shown in Table 1. It can be seen that Clandeboye experienced a very significant fall in population over these ten years, whereas Temuka was static.

Table 1: Clandeboye and Temuka - Population changes 1986-96

Census Year	Clandeboye		Temuka		New Zealand	
	No. of Persons	% Change in Pop.	No. of Persons	% Change in Pop.	No. of Persons	% Change in Pop.
1986	129	-	3,984	-	3,263,283	3.8
1991	99	-23.3	4,002	0.5	3,373,929	3.4
1996	90	-9.1	3,981	-0.5	3,618,302	7.2

There are no data available at the mesh block level in Supermap 3 that would allow us to compile the age-sex structure for Clandeboye.

¹ The profile for Clandeboye has been compiled from Supermap 3. Data for this area have been obtained from mesh block numbers 2762400 and 2762500.

Demographic and socioeconomic characteristics

The dairy farming community comprises traditional dairy farmers, generational pastoral farmers turned dairy farmers and 'newcomer' dairy farmers mainly from the North Island. The majority of dairy farmers are generational farmers from the district.

On the Waitaki Plains (WP 14) everyone spoke about the increased population with the advent of dairying in comparison with pastoral and arable farming. In Clandeboye everyone spoke about the decrease in population with dairy conversion, as the smaller farming blocks were amalgamated into larger dairy units.

Maori

The residents of Clandeboye were entirely of European descent in 1996, whereas in Temuka they were 88 per cent of the population. Maori comprised 8.2% of the population of Temuka (cf. 14.5% for NZ). There is an active marae at Arawhenua just south of Temuka.

INDUSTRY, WORK AND OCCUPATIONS

The role of the state

The Dairy Board acts under the authority of the Dairy Board Act (1961) which defines its role as the New Zealand dairy industry's export marketing arm. The Act outlines share ownership by the export dairy processing companies. At present the Government is looking at ways of turning all producer Boards into full company structures independent of statutory protection. The Government provides no direct production or export subsidies. It does have an input in areas such as the funding of research and development through a FRST output area.

Structure of the industry

The dairy industry is a co-operative industry, the farmers own the assets of the dairy company, and until 1996 the assets of the Dairy Board. Today farmers own those dairy company assets that in turn contribute to and own the Dairy Board. The Board is responsible for the global marketing of New Zealand dairy products through a global network of marketing subsidiaries based in the countries where New Zealand dairy products are sold. The Board employs around 600 staff in New Zealand and a total of more than 6,500 globally. There are some 50,000 people working in the industry, including those on farms, in processing plants, in research and in marketing. Together they combine to earn 20 per cent of New Zealand's export income.

The Alpine Dairy Products Company is a farmer owned cooperative and therefore controlled by these shareholders. Alpine has a governing Board consisting of eight farmer directors and two commercial representatives. The company has a representative on the Dairy Board.

South Island dairy companies are vulnerable to North Island take overs in the ongoing restructuring of the industry. Especially as Canterbury, it was suggested, has the greatest potential 'to grow' the dairy industry in the country. At present the regions of Canterbury, Westland and Southland contribute around 25 per cent of the national dairy production. But a merger of Alpine Dairy Products and the

Southland Dairy Cooperative is expected to be complete by the beginning of the next season. The merged company will process 60 per cent of the South island milk supply, and be the third largest dairy company in New Zealand. It will also be the South Island's fourth biggest business of all types. The merger will allow rationalising of milk supply between the two plants, depending on the timing of production peaks, and for complementary product mixes - Alpine producing cheese, whey and milk powder and Southland cheese, milk powder and casein.

Previously, a series of amalgamations in South Canterbury were based on the need for increased efficiencies and reduced the number of factories to one with the final merging of Temuka with Cloverlea Dairy Co-operative in 1979. The action of the Dairy Board refusing any loan investment unless centralisation was completed was the ultimate catalyst. The decision where to centralise was both parochial and pragmatic. There were more people employed at Clandeboye and Temuka was the most efficient of the remaining dairy companies so Clandeboye was chosen. This amalgamation provided the base for the formation of Alpine's subsequent development and expansion. A new manager quickly got the operation together and that year the factory gained a Dairy Board contract for Parmesan cheese.

There were three factors why Clandeboye was chosen for further extension subsequent to amalgamation, and they were: i) water - dairying requires accessible and reliable supplies of water and there was a plentitude of underground water; ii) residues - there were no, or insubstantial, levels of DDT residues in the soils; iii) allied sectors - the interdependence of the farming sectors created viable alternatives for the industry like access to run-offs for grazing and feed supplies from cropping farmers.

Restructuring of the 1980's

Between 1979 and 1981 land values doubled, directly influenced by government policies: the Land Development Loans, Supplementary Minimum Prices and the Stock Retention Scheme. The economically inflated impact of these policies lead directly to the mid-eighties withdrawal of government subsidies and a total restructuring of the agricultural industry. There was a subsequent and almost immediate agricultural recession from which the district did not escape. Like all other rural areas, South Canterbury experienced the many impacts of restructuring and rationalisation in central and local government, and also in the private and community sectors.

The structure of the farming industry in the district

The agricultural structure of the district has developed from small to medium farm based. The production base is diverse and while dairying may dominate, arable, cropping and pastoral farms all sit comfortably together in this synergetic district. In fact synergism and interdependence are compelling characteristics of this farming community.

The fragmentation of the district into small blocks of land had resulted from the 1918 Soldiers Land Settlement Act, which encouraged land to be subdivided into 40-60 acre blocks. Substandard farms evolved, with a nationwide social-economic group dependent on off-farm employment for a basic income. Locally, some of these small sub-divisions running between 20 or 30 cows persisted at least until 1947. At the end of the Second World War government directed soldiers into farm settlement through the Department of Land and Survey ballot system. This policy was influenced by the previous generation's bitter experience and settlement this time was on larger blocks assessed on an economic basis. The period after the Second World War was something of a social watershed. People became

affluent and there was a generation gap with parents who had experienced the Depression. There were global social changes that the district did not escape: a move to consumerism, consciousness of material wealth, the beginning of the erosion of local communities and changes in individual aspirations. Tractors appeared on the market! At this time there were only pockets of dairying in the district that focussed on the four dairy factories of Milford, Clandeboye, Orari and Temuka. The different sizes of land holdings and incomes between dairy and sheep triggered a widening social gap between dairy and sheep farm families. A visible impact as the sectors drifted apart was the erosion of combined community social functions held at district halls.

Farm amalgamation, a characteristic of the early 1960's, was in part a response to market demands but also reflected social class and status through ownership of large amounts of farm land. Prior to amalgamation a family dairy unit would run 100 cows and be considered a large unit, while 1,000 ewes would constitute a large pastoral operation. As a reaction against farm amalgamation, the Land Aggregation Act limited farm size but a loophole in the Act meant that it was not successful in containing the growth in absentee city based ownership. In the district land aggregation "*took off*" with individuals owning "*a string of farms*". A decade later capital gains tax was instituted as a measure to counteract the activities of speculators who were buying farms, holding them for twelve months, then selling them at a considerable gain.

Respondents provided many examples of changed farm structures and systems compared to the previous generation, farming 40 ha's and running 40 to 50 cows. By the mid-eighties change had accelerated as a result of more efficient irrigation systems, more efficient use of nitrogen, the availability of improved grass species and the technique of 'grazing off'. All of these encouraged the development and farming of larger dairy herds with 125 ha's and 340 cows common today. While such examples show a threefold increase in the size of land holdings, they also point to a seven fold increase in stock numbers. Gradual acquisition of small blocks and more intensive farming went hand in hand. Now a new dairy entrant seeks a 300-500 cow operation through a mix of purchase and lease.

As well as buying adjoining or approximate properties dairy farmers today are also buying 'run offs' for winter grazing that are not in the immediate vicinity of the farm operation. Run offs provide almost year round grass pasture for cows. Few dairy farmers run dry stock on their dairy units. They may run replacement heifers on the home farm but run offs have made inroads into sheep numbers as more sheep farmers enter agreements to winter dairy cows. The overall impact on land use in the district has been the formation of bigger dairy farms. The district is at an advantage when it comes to run offs. Grazing is available to dairy farmers within a radius up to 20 km. Having suitable run-off land in close proximity is a result of the compact but diverse land use in the district with arable, pastoral and dairy farms sitting side by side. While, arable farm incomes are also supplemented by McKains the frozen vegetable producers. Furthermore, arable farmers contracted to McKains recycle their unsuitable or waste vegetable produce through the winter feed wagon.

Farmers from the arable and dairy farm sectors described their reliance on each other for the successful continued operation of their farm business. This interdependence creates a "*closeness*" between neighbours and the district has become a "*self-contained dairy platform*". Dairying has benefited the district by adding value to land and strengthening other farm systems. But the benefits have not only been local. One arable farming leader described circles of development rippling out from Alpine to sustain dairying which in turn supported pastoral and arable sectors, which in turn increased service industries and technological based enterprises in Timaru and a wide base of technology experts.

Technology and the organisation of work

There are two distinct characteristics of employment by sector in the locality of Clandeboye and the nearby town of Temuka. Clandeboye is dominated by work in the agriculture sector. Temuka has a high proportion in the manufacturing sector (Table 2). Alpine Dairy Products is the dominant employer in the district with some 460 staff. In addition the local Temuka transport company is an important dairy related employer with a staff of 20. While a new joint venture packaging factory manufacturing AMF drums for Alpine employs some 15 workers.

However, it must not be assumed that employees are local or even sub-regional residents. In the early days the dairy factory workers lived in cottages at Clandeboye or else they were sons of local farm families. In the 1980's, as Alpine expanded, staff were increasingly recruited from outside Clandeboye and began travelling into work. As a result there was little increase in local population as "*people didn't want to live on the job*". Factory employees now come from as far as mid-Canterbury and North Otago.

In the farming areas, dairy farming is a major employer of sharemilkers and farm workers. Contract or sharemilkers have generally come into the district from the North Island. This southward migration is visible throughout the South Island dairy industry. The sharemilkers travel with their families living in the second farm house often on one of the acquired blocks.

Table 2: *Sectoral distribution of the workforce of Clandeboye and Temuka - 1996*

Sector	% of workforce		
	Clandeboye	Temuka	New Zealand
Agriculture	55.0	6.7	9.2
Mining/quarrying	-	-	0.3
Manufacturing	-	33.5	14.3
Electricity/gas/water	-	0.4	0.6
Construction	-	6.2	5.8
Wholesale/retail	-	21.5	22.3
Transport/communications	-	4.3	5.3
Business/financial	0.5	5.6	13.1
Community/social	30.0	17.2	23.0
Total Number of Persons	60	1605	1,630,812

Alpine advertises jobs including locally. They seek accounting skills nationally and senior management both nationally and internationally. Outside the district observers argue that in terms of employment the company has been the "*saviour*" of the district. While in Temuka it is argued that Alpine does not fulfil local employment expectations. In response Alpine suggested that there is a community reluctance to accept the contemporary, sophisticated technology of factory operations and as a consequence the educational qualifications that are required for the job. They argued that many potential employees expected to be offered positions. According to Alpine these people had limited schooling and no post secondary training. Alpine regretted that there was "*bad feeling*" amongst this group but maintained that it was no longer sufficient in a technological society "*just to be a hard worker*". Skills and up to date training are essential. Alpine had "*no jobs for people with hands*" they only had "*jobs for people with brains*".

Alpine brought in trained new technology staff from the North Island to ensure that their skilled workforce met customer requirements. Their new technology infrastructure includes daily computer messages relayed over the client farmer's telephone giving detailed descriptions of the condition of each milk batch. Farmers also have their own, confidential PIN number so that they are able to extract specific information regarding the quality of their milk. Alpine has developed its own computer systems based on a similar South African system. There are some 148 computer users in the factory and computer training is offered to staff.

Shift work in the factory requires a “*mind set*”, and combining shift work and family life requires organisational skills. A respondent commented that a secure family background is essential for shift workers and their families. In turn, a stable job and a regular wage packet encourages goals like the purchase of a home. While it was observed that “*wages were great*” at the factory there was also agreement that shift work “*spoils*” social life and workers suffer from associated stress. Drawing factory workers from a rural background means that they have to adapt to working in an enclosed space, with no access to open spaces or views. Going to work in the winter, leaving and returning in the dark, is also stressful.

In addition to the factory, Alpine employs 100 transport drivers and there are 33 milk trucks to ensure round the clock, 9-12 hour shifts. On average the drivers travel between 400 and 700 km each shift. These different shift work demands were described by a senior driver: truck driving is “*tough and a driver has to be fit; the job could never be taken lightly*”.

Dairy farming is also tough on farm workers who work long hours and during the season without regular weekend breaks. As a consequence they “*burn out*” quickly and move on creating a transient worker population.

Labour force mobility, continual job changing or continually travelling to and from jobs sited away from home, can result in workers not developing their social skills, sometimes resulting in mental health problems. An observer noted that not enough is known about the relationship between allergies, migraines, chemicals and good work practices. But by its appointment of an industrial chaplain, Alpine was seen to be sympathetic to their employees and their problems with work related stress.

Occupations and class structure

The employment status of the study area is shown in Table 3, with Clandeboye locality having very high proportions of the farming workforce self employed, and working full time. Temuka in comparison has a low number self employed or employers, and supplies many employees.

Table 3: *Employment status of the residents of Clandeboye & Temuka - 1996*

Area Unit	Wages or Salary %	Self-Employed & Employer of others %	Unemployed %	Full-time %	Part-time %
Clandeboye	36.4	40.9	4.5	59.1	22.7
Temuka	42.7	5.9	4.3	38.7	12.3
New Zealand (TLA)	43.5	11.0	4.9	45.0	13.6

The participation rate (full plus part time work) is high in Clandeboye locality at 82 per cent, with many women working part time on farms, compared to Temuka at 51 per cent (59% for NZ).

The occupational status of the area is shown in Table 4. There are none classified as administrators or managers in Clandeboye and this figure is low for Temuka. Other figures reflect again the predominance of agricultural work in the farming locale, with no influence from the major factory sited there, whereas Temuka is the base for manufacturing worker occupations. Respondents observed that there has been a loss of middle management in South Canterbury outside Timaru as a result of economic restructuring.

Table 4: Occupational status of the workforce of Clandeboye and Temuka - 1996

Occupational category	% of workforce		
	Clandeboye	Temuka	New Zealand
administrators/managers	-	7.4	11.6
professionals & technicians	6.3	11.9	22.6
clerks	-	9.1	13.3
service/sales	12.6	14.7	13.9
agriculture & fisheries workers	81.2	8.2	9.4
trades workers/machine operators/ elementary occupations	-	44.1	24.3
Total Number of Persons	48	1614	1,630,812

Incomes in Temuka and Clandeboye are in stark contrast, one low the other high. In national terms, Temuka incomes are low, Clandeboye incomes are high. It was argued that these high incomes derive from dairying. In previous decades the different size of land blocks between dairy and sheep, and the resulting different sized farm incomes, were triggers to a widening social gap between dairy and sheep families. Up until the 1980's the "sheep farmer had been king". Today's dairy farmers are a new breed, production and financially driven - different farmers in a different world. It was argued that sheep farmers allowed themselves to be lulled into complacency and did not immediately come to terms with their deregulated world. Back in 1925 dairy farmers forgave some independence when they entered a co-operative system of marketing. Today they were described as "conservative capitalists working in a social environment". Sheep farmers chose to remain independent traders. Some argue that that independence was responsible for the rapid decline of the sheep industry during the 1980's and this decade's mushrooming diversification of land use to dairying.

Table 5: Distribution of Household Incomes of Clandeboye and Temuka - 1996

Household income range	% of households		
	Clandeboye	Temuka	New Zealand
Less than \$10,000	-	7.5	5.4
\$10,000 - \$30,000	30.0	44.5	31.0
\$30,000 & over	60.0	35.5	46.5

REGIONAL AND LOCAL ECONOMY

The local economy

The district is an interdependent economy where sheep farms graze dairy stock providing a stable winter income and arable farms grow ryegrass and other fodder for dairy operations. The economic viability of each sector is delicately and interdependently balanced. Increased dairy diversification

could threaten that economic balance as winter grazing becomes the primary stable income for sheep farmers.

Irrigation is a critical cost in any dairy conversion. Current costs including labour costs are i) capital costs (setting up system) \$1,500 per ha, ii) running costs, \$1,500 per ha. Capital costs are rising steadily. A local service firm noted that after the initial ballooning of dairy conversions farmers are more selective buyers, always asking the price when previously they seldom did.

Nevertheless local dairy conversion has had a major impact on other district businesses. Dairying demands an extensive and efficient support service industry that ranges from veterinary services to milking machine maintenance services. Because dairying is a “*seven day*” industry there is an essential requirement that maintenance firms provide an “*on demand*” service. Firms that are not able to provide a parallel round the clock service do not survive. Service providers are not necessarily found within the district but can be “*out of town*” in the neighbouring sub region of mid-Canterbury or in Timaru. Half of the dairy unit income is used to “*keep others*” through support and technical services, so many business opportunities exist.

There are different opinions on the impact of Alpine on commercial business generally. One faction living outside the district believes that Alpine, as well as positively impacting on Timaru businesses, must have even more dramatically impacted on Temuka commercial business. A view not shared by the majority of Temuka business people interviewed. At a focus group meeting organised by the Temuka Resource Centre and attended by local businesspeople and a community police representative, Temuka was described as a town in decline. To emphasise their argument the participants produced a list of seven retail outlets that had closed in 1997 and a list of five more that were to close in early 1998. The decline was blamed on:

- the loss of passing trade following the recent state highway deviation away from the town centre;
- the shopping attraction of chain stores only to be found in Timaru together with the big city attraction of social activities and facilities offered by the nearby city;
- the job market attraction of Timaru and conversely the lack of jobs in Temuka or Winchester;
- the lack of jobs provided, especially for the young, by Alpine.

Timaru, it appeared, has acted as an economic and social magnet drawing people and resources out of the local community - a syndrome familiar to any who studied rural depopulation in the 1970's. Temuka residents challenge Alpine's assumption that the plant has been beneficial to the town and they point to the steady stream of traffic that flows out of Timaru every morning to Alpine and back again at night. The most important ‘allied’ local impact of dairy industry is still other farm operations, those pastoral and arable farms that create an agricultural support system for dairying. But there are some new flow-on businesses for the town. For instance, the establishment of a Southcorp Packaging factory in Temuka with 15 new jobs, manufacturing drums for Alpine's AMF export trade, enabled a transport company to lease one of it's buildings to the new factory. Some 35,000 drums will be needed to pack the 7,000 tonnes of AMF for the 1997/98 season.

Those outside the town tended to believe that Alpine's presence would be commercially advantaging Temuka but those who lived in the town described a depressed Temuka. There was a general belief expressed by farmers for instance, that the introduction of several hundred employees into the district “*must be good*” for Temuka. Yet the advent of Alpine had not, in fact, fulfilled Temuka's expectations regarding a new and vigorous labour market, a resurgence in the real estate market and the bonus of economic spin offs in the general business economy.

Much of the financial spin-off from Alpine's presence is indirect and filters through in sectors such as accommodation and food services. Two years ago, during an expansion period, Alpine imported North Island contractor labour who were accommodated within the town. While sending pay packets home the contract labourers "*spent up*" on consumer goods, food, cigarettes, snacks, chocolates and videos. The beneficiaries were "*the pubs, the taxis and the seven day dairies*".

Another example was a subsidiary of the sub-regional energy company that specialises in on-farm agriculture and dairy systems and irrigation equipment. This 10 year old Temuka based firm is in "*growth mode*". The firm services some 230 farms and their mobile shop has travelled 80,000 km in the past two years visiting farm clients from Waitaki to Kaikoura. The firm provides a seven day farm service. In contrast, smaller shops were no longer commercially viable because these retailers could not compete with the large national chain stores in Timaru. There was general agreement that the problem for local retailers was the "*retail drift*" to Timaru, an impact probably greater than Alpine's perceived lack of patronage. The town's commercial businesses had already suffered from the fluctuating fortunes of the farming community and while locals complain as yet another business closes, they ignore local shops and travel into Timaru - "*its a day's outing*".

The regional and national economic impacts of agriculture and dairy processing

The dairy industry is profitable and contributes from \$1.1 to \$1.4 billion dollars annually to Canterbury's economic base. Alpine buys stores and inputs either nationally or from Timaru. According to Temuka business people 90 per cent of Alpine's requirements are sourced through the North Island, the Company's justification being better prices. Alpine advised that their inputs were sourced internationally, nationally and locally. The company uses global technology. There are only two other similar plants to the new Clandeboye milk plant and they are based in Denmark and Holland. All inputs are judged on their price performance. The milk silos were successfully tendered for by a Timaru firm while the export AMF drums were made in Temuka. In these instances Alpine had provided another economic spin off for pro-active entrepreneurs. According to Alpine, such local entrepreneurs were "*doing a great job*". However they were concerned that those in the community who were "*not up to speed*" with change, or were adverse to change, "*saw only negative issues*".

Transport operators believed that Alpine at Clandeboye had benefited the entire district. While companies still trucked stock, the fertiliser spreading business had trebled and none wanted to return to a dependency on sheep, beef and cropping. The development of one company parallels the growth of Alpine. In 1967 this company took over the 'cheese run' from the four existing cheese factories entailing three loads of cheese into the Timaru cool store every three days. Today, 30 years later, the same company makes between 15 and 20 runs a day from Clandeboye directly into either off-site storage or into Timaru rail containers bound for Lyttleton. In 1967 the company ran two cheese and cream trucks, today ten. The company also transports some 35,000 tonnes of coal from Transrail to Clandeboye to power the dairy plant. The firm's income has "*doubled several times over*' in 30 years" but more specifically since the expansion of Alpine.

The international frozen vegetable business of McKains at Washdyke is the major vegetable contractor for the district's cropping and horticulture farmers. The firm experienced considerable growth following the adoption of irrigation in the district. It is a well run export company that had a considerable impact on arable farming. Its major competitors are subsidised USA firms and market competition is fierce. It was reported by arable farmers that this year the frozen vegetable business was

in “*retrenchment*” following the closure of uncompleted contracts because of over supply by the other vegetable contractor working in the district

Strengthening the economic base of Clandeboye

Further dairy development in the district is likely to be slower. There is only a certain amount of appropriate sub-divisible land. DDT levels will restrict dairy conversions as will the price structure in relation to the capital cost of conversion. There is a general appreciation that there is a balance between the dairy, arable and sheep farming sector, and that it may not be advantageous to disturb this balance.

PHYSICAL AND SOCIAL INFRASTRUCTURE

Transport infrastructure and funding

Alpine's expansion has been phenomenal, its ten year plan being completed in six years. Local families have watched as milk was collected not just from Clandeboye or from within the district but from as far away as Southland and Kaikoura. The collection rose from one to six million litres per day. The speed of growth relates to the use of new technology such as computerisation. It is not unexpected that the company has outgrown the existing infrastructure, particularly roads. Nevertheless the community could have expected the District Council to have responded in a six year period with a programme of road upgrading.

There is no current appropriate standard of roading. The roading infrastructure is the existing network of narrow and frequently humped rural roads. These roads are congested, and handle constant daily dairy traffic: 33 tankers and six to eight coal transporters, plus the workforce and other vehicles in and out of the factory. Some 40,000 tonnes of product are trucked out daily to Lyttleton while on a tonne for tonne basis some 40,000 tonnes of primary product and material are trucked in daily. The roads are neither suitable nor safe for the traffic generated by an expanding factory.

Federated Farmers made submissions to the District Council's 1997 Annual Plan. Measures have now been included in the Plan to investigate alternative routes for heavy traffic to service Alpine's factory. The Council intended that the investigations be completed by February 1998 when a report that contains alternative routes, costings and funding issues was to be forwarded to Alpine.

A road deviation at the factory was necessary to ensure safe and appropriate traffic access to the factory. However the ‘deviation’ was a total re-alignment that left the “*school stranded*” on its corner with limited and for a time dangerous access. The school found it almost impossible to view the new and regularly changing roading plans and it was difficult for them to obtain a clear picture of what ultimately would be the roading pattern. Their ability to respond responsibly to the new plans was hampered. The matter was finally resolved through a series of “*emotional meetings*” with the company.

Clandeboye's closeness to the port of Timaru is no advantage. Alpine produce is shipped out of Port Lyttleton. Consideration is being given to the extension of a rail link into Clandeboye to carry coal and milk to the factory and the finished product out. TransRail have investigated the economic feasibility of a number of routes that would link Alpine with the main trunk line. Both parties, Alpine and

TransRail, would be investment partners. The rail line would need to be laid over farm land and the preferred route would involve many landowners. The Resource Management Act (RMA) could in effect halt the process early in the proceedings so rapport between the landowners and the investors is essential if the proposal is to succeed. Should the rail link proceed it would ease the burden of road transport on the vulnerable and outdated Clandeboye roading infrastructure and it would decrease the traffic noise and pollution that accompanies heavy traffic flows.

Housing

In the 1970's and 1980's following farm amalgamation and acquisition of blocks of land there were many surplus houses in the district. Today they are mostly occupied, as dairy conversions and herd numbers multiplied with in an influx of contract milkers and their families. Data for the Clandeboye locality (Table 6) show that a high proportion of houses are rented (half these rent free).

Table 6: *Tenure of Dwellings in Clandeboye and Temuka - 1996*

Form of Tenure	% of dwellings		
	Clandeboye	Temuka	New Zealand
Provided rent free	20.0	1.9	3.7
Rented	20.0	15.8	22.9
Owned with a mortgage	30.0	34.2	35.2
Owned without a mortgage	30.0	41.7	31.1
Total Number of Dwellings	30	1,599	1,276,332

There had been little increase in real estate sales since the establishment of Alpine. Temuka had expected to house all Alpine staff and management. Nevertheless, it was acknowledged that without Alpine the Temuka real estate market would be depressed. About 15 houses annually enter the market. This is the stock available to managers and tanker drivers. However managers require the upper price bracket which is not available in Temuka so they seek accommodation in Timaru. Three-quarters of the managers are in the market for a house on the outskirts of the town, looking for potential sub division and an attractive property, replacement for the home they have left in the North Island. Drivers live variously in Temuka, Timaru, Pareora, St. Andrews, Pleasant Point and Geraldine. Drivers found that there was a considerable demand for houses and that stock was short in Temuka and houses small.

There is a demand for subdivision in Temuka but applications are declined by the District Council which adheres to a policy of infill housing on larger residential sections, a concept rejected by buyers in the market. Currently there is not enough high quality housing stock in Temuka and those in the town who bought second homes as rental investment are also unable to tenant their houses. Nor is there a quantity of up market real estate available in Timaru and the market there is not buoyant. The District Plan is currently at the hearing stage but it was considered not to address adequately the need for further subdivision in Temuka aimed at most favoured residential unit of land, the quarter acre section.

The housing market reflects social stratification in the industry, with management staff living in Geraldine (20%), Timaru (40%) and Temuka (40%). Alpine's general manager lives in Temuka but generally management lives in Timaru. Alpine found that there was not a great turn-over of good

quality houses in Temuka, *“local people don't sell to move, they stay”*. The current trend in management is to change every three to five years, so managers need to be flexible: *“a speedy house sale and get up and go.”* In these circumstances managers are reluctant to invest in housing based on an uncertain return. Managerial wives' primary gripe was housing. They were finding it impossible to replace the houses they had left in Auckland, Hamilton and Wellington and they regretted their changed housing status.

Education

Clandeboye had a higher level of education than Temuka, which is distinctly lower than New Zealand as a whole.

Table 7: *Highest educational qualifications held by residents of Clandeboye and Temuka - 1996*

Highest educational qualification	% of residents		
	Clandeboye	Temuka	New Zealand
University & other tertiary	23.8	19.9	32.2
Secondary	47.6	28.7	30.4
No qualifications	28.6	48.1	32.2

The Clandeboye School is bulk funded, *“the community has taken control of the running of the school”*. Dairying is labour intensive and school rolls are increasing despite a falling population because the operational structure of ownership, sharemilker, and farm worker encourages families into the district. The school roll has increased, but not necessarily because of increased employment at Alpine itself, rather as a result of the removal of restrictions on parental choice of schooling and initiatives taken by the school. A mini bus brings children to the Clandeboye school from Milford, Winchester, Temuka and Timaru. Parents seek small schools that can give individual attention to their children in a country environment with the small community feel of a rural school and low teacher to pupil ratio. In 1996 the school roll stood at 21, a year later it was 33 and it is still increasing. The two other small country schools of Winchester and Milford have each also experienced increased rolls. Like Clandeboye they have mini vans which collect pupils from a wide area.

The factory is sited directly opposite the school and its physical presence cannot be ignored. The relationship between the school and the company has not been good. During the early years of Alpine's development there was no communication and both the school and the community felt ignored. It was suggested by the school that the priorities of each were different, the school's for their children, the company's for their shareholders. However the relationship has improved more recently with the appointment by Alpine of a public relations position. Examples were given of Alpine's largesse providing heavy machinery when the school built an adventure playground, milk powder during a lamb-rearing fund raising project, and access to canteen lunches which can be bought by pupils. But a request for the Company's defunct computers was not successful. While the relationship between the Company and the school has improved there is still not a formal and regular path of communication between the two.

The dominating environmental effects of the factory on the school are noise closely followed by emission pollution. Emission pollution is manifest by coal dust on window ledges and sediment in the swimming pool. The school set up monitoring stations for *“pollution fallout”*. They receive wind and weather reports from Timaru airport to ensure safety regardless of emission flow.

Training

The Company finds there are fewer skilled people in local communities, and the experienced labour base is low. The Company requires a high level of educational qualifications, secondary school to the 6th Form at the very least, otherwise tertiary schooling to a completed degree. Local education does not provide for the demands of a highly technically sophisticated industry like Alpine. Many of those looking to be educated go to bigger centres - creating further emigration of the community's potential skills base. General factory labour must be sought throughout Canterbury or sometimes the South Island.

Alpine have a reputation for encouraging young people to complete or continue their education whilst in their employ. The father of an employee reported that his daughter left the local high school going straight into Alpine's laboratory working a 12 hour shift. The company persuaded her to return to school to resit her University Entrance exam, which she did and gained.

The Company must meet strict quality assurance standards, so they need to maintain high levels of new technology and business management skills. Organisational systems must be exceptional to ensure that at busy seasonal times there is no delay when milk tankers arrive at the factory. As a guarantee of efficiency, Alpine provides in-house staff training programmes that include induction and standard training and the company subsidises attendance at dairy industry training courses. But the demand for courses is not always meeting the company's expectations. Alpine considers that some employees expect to have their jobs without retraining.

Agencies and social welfare organisations

The Temuka Resource Centre argues that today social welfare service provision is "*city power based*". Timaru was seen as the power base, the place where "*the money is*". Government agencies supply services in Temuka for limited hours: e.g. NZ Employment Service - two hours every two weeks; Income Support - two officers once a week from 10.00 am to 3:30 pm; Dept. Of Corrections - once a week from 10:00 am to 3:30 pm. None of these services were available prior to 1990; they followed the establishment of the Temuka Resource Centre. Services that are only found in Timaru include Accident Compensation, Family Planning and counselling services. But public transport costs to Timaru for beneficiaries seeking services can be considerable. According to the Resource Centre, 47 per cent of the community is on some type of benefit while between 12 and 14 per cent are unemployed.

The Temuka Resource Centre assists people seeking jobs by way of preparing curriculum vitae and job applications especially for Alpine positions. The Centre's experience was that skills were drawn from "*out of town*" and that local applicants required at least University Entrance for factory work. There was general agreement during a focus group meeting that Alpine's ability to employ locally should be an integral aspect of their employment policy. There was estimated to be an annual exodus of between 20 and 25 young people seeking work outside the district. It was felt that core factory jobs should create a job market for the unskilled. The focus group also identified a number of social issues that they linked to a lack of employment opportunities in the town (see below).

RESOURCE AND ECONOMIC PLANNING AND LOCAL GOVERNMENT

Local government

Clandeboye is in the Timaru District Council. The Company is a major ratepayer enabling the Council to retain a number of population based services. While there is a general population drift north statistics show that the population within the Timaru District is stable.

Alpine reported that today they have good working relations with the District Council and that they “*try hard*” to accommodate community concerns. They also appreciated that because local government must continually “*fight for funds*” against competing needs, decisions must be financially focussed. It can therefore be difficult for the Council to respond positively to community development with the immediate provision of infrastructure and amenities. But because of demographic trends that have seen an outflow of people from rural provinces they suggest that the Council must “*actively change*” its decision making procedure regarding infrastructure.

The environment and resource planning

By the mid 1970's the dairy company operation had grown to such an extent that it could no longer appropriately dispose of whey effluent by irrigation onto local farm land, a dairy farm practice to fertilise the land. As well as running out of land to be fertilised the irrigation equipment was out dated and the combined result was effluent pollution, in some instances of underground water. The addition of whey nutrients must be monitored, and specific measurements and standards must be adhered to for different soils. When correctly managed, spraying effluent onto land helps aerate and break down the soil components with a positive effect on the district's light soil types, especially on coastal blocks where soil fertility is low. There is an immediate increase in grass growth. Government valuations reflect large increases where whey effluent has been spread and nutrient status improved as a result.

Initially the Regional Council had no environmental pollution monitoring programme with the result that when the dairy company pipeline carrying effluent to the coast collapsed, there was no monitoring programme and considerable damage was done to the quality of the reservoir water, killing fish. Pressure from some community members demanded action from the Council but they had to become “*zealous in their pressure*” before the Regional Council would consider prosecution. It was believed that such a situation was unlikely to arise today because there is greater environmental awareness and the RMA requires responsible action from local government. Also, effluent spray equipment is technically more advanced. The community was not impressed with the management of the dairy company at this time and whilst consideration was given to legal proceedings the community appreciated that such action would have “*torn the factory apart*”.

To create a car park Alpine diverted a major water canal that ran through the village past the school. The work was undertaken “*too late in the season*” and was reported to have interrupted the trout spawning cycle

Today Alpine requires resource consents for expansion, a process that they follow through with the District and Regional Councils, and which includes community consultation. While the process costs “*a great deal of money*” it was essential to Alpine that they work within the context of the RMA to continue an improving community relationship. Alpine acknowledged that they have only been able

to proceed so far with the “*trust of the community*” and they believed that without that “*give and take*” the situation today would be more controversial.

There have been three pre-hearing meetings with Alpine and at least one joint meeting with the Regional Council to address community concerns. The joint meeting involved considerable discussion between the two councils, District and Regional, as they formulated a common approach to avoid future lengthy appeals. The community concerns fell into three categories, effluent, noise and air (emission) pollution. Resolution was reached at the pre-hearings meetings. One example was submissions regarding the potential effects of emission from the new boiler plant. Alpine's response to the community was a commitment “*to raising the height of the boiler stack and using low-sulphur coal*”. The boiler stack was to be heightened from 30 to 45 metres at a cost of \$60,000. A deputation also appeared before the Council to express concern at the possible removal of the Clandeboye Hall; it could have obstructed Alpine's building expansion. The decision was that if the Hall was to be moved it must be moved onto freehold land. Alpine built around the hall. Alpine's goal was to restore their reputation, their “*credibility needed to be seen to improve*”. They also suggested that they needed to adapt to the slowness of the process, that resource hearings were not as speedy or straightforward as commercial enterprise decisions.

COMMUNITY

The Company as citizen

Clandeboye has a long tradition of dairy farming, therefore social change resulting from an increase in dairy conversion was not as dramatic as in other districts where there had been no dairy tradition. It was in the 1980's as Alpine strengthened as a co-operative that the company sought staff and directors from outside the district. From this time the relationship between Alpine and the district changed. There was some local concern at the company's continued growth and the parallel decrease in local involvement. It was at this time of massive expansion and marginal local staff or board representation that the community judged the Company as being arrogant.

The District Council instituted a development levy (of 0.05%) over all new commercial buildings valued over \$300,000, excluding the first \$300,000. The levies contribute to the development and maintenance of residential and recreational facilities. A proportion of this levy was used to upgrade the Clandeboye hall. When the hall needed a new roof the community ran its own survey to ascertain if the hall should be retained and maintained. Strengthened by a ‘yes’ vote the community and Alpine together made representations to the Council. This exercise, it was said, proved not only that a community still exists in Clandeboye but it has shown that the community and the Company can successfully work together.

The community expected Alpine to provide a leadership role. They argued that Alpine had a social responsibility based on their presence within the community. There was a community expectation that “*you could really fly*” with help from Alpine. At the least their expectation was that there should be communication and follow through after Company policy decisions were made. Respondents considered that the community would like to “*embrace*” Alpine but such assimilation would be viewed negatively by the Company.

The Company maintains that today they have good communication with their neighbours and that they do appreciate the impact of an industrial site within a rural community. They intended to play their part

in minimising that impact. According to Alpine their direct involvement with the community is minimal because there is no local market revenue stream. The revenue stream is from sales generated by world wide export markets. Any direct community involvement is via the shareholders and the dairy farmers. Alpine's business is to transform milk into dairy products, as a result there is no significant link between community work and the business of the Company. There is no common community meeting place, they suggest, like Westpac Trust or Alpine Energy. However Alpine does aim to be ethically responsible to the community. In an attempt to minimise their impact on the community's lifestyle Alpine now hold regular site meetings.

On the other hand, Alpine argues that their indirect involvement with the community “*is enormous*”. The dairy industry is singular in that it has no overseas investments, all profits are returned to the shareholders, the farmers themselves, through the milk payout, creating economic multiplier effects that ripple through the community. First as income to the dairy farmer, then to pastoral farmers wintering off/grazing, to arable farmers stock fodder, to contractors, builders, sector services and so on.

Community activities and leadership

Some argued that the dairy factory “*hasn't done much for the community*” as it evolved from a small locally supplied plant. The community was described as no longer being “*close knit*”. In Clandeboye the church, local store, tennis club and the former dairy factory houses had all gone. Respondents spoke of having been involved in a range of community activities all of which centred on Clandeboye and none of which exist today. There is no longer a community spirit they said, although submissions against actions of Alpine have sparked a community cohesion. The advent of Alpine coincided with the rural downturn experienced across New Zealand and affecting rural communities and towns alike. Many of the descriptions of decline in this study are similar to other rural communities, with no obvious countering effects from the processing plant.

Social Problems

Dairy farming can be said to be inherently anti social with its seven days a week milking timetable so “*settling in*” can be difficult for newcomers unless there are children and the families get involved in school activities. It was suggested that dairy farmers are more aggressive than pastoral farmers, they ‘drive’ their investment, buying large farms for lower capital costs and that “*they don't make roots but they do make money*”.

Few locals were employed during the two year period of expansion. The skills required were those of construction technology. North Island building contractors worked 12 hour shifts and were flown home every two weeks. Some came with their families and “*bought some stability to the scene*”. According to community police officers the majority of the contractors, without their families, added ‘*nothing of benefit to the town*’ and were ‘*ignorant and arrogant*’ bringing in drugs and exacerbating an existing situation.

The Temuka Community Care Trust was established in 1990 following a public meeting and community concern about local youth, the popularity of the skinhead cult, and the problems they were creating both for the community and for themselves. At street level the Trust is represented by community youth workers. The community and Lottery Board funds the Trust to support and help

families at risk and those affected by drugs and alcohol abuse. Concern was expressed that the community has to cope with the problems arising from mis-management of personal finances as much as from problems arising from a lack of income. It was generally believed that some of these ills arise from the presence of Alpine in the community. Alpine, it was argued, had a responsibility which, if they didn't accept it, could open them to accusations of "*using the community*".

CONCLUSION

The character of Clandeboye has changed dramatically as it has evolved to become the host of one of the two main processing plants belonging to by far the largest South Island dairy company. Parallel to the amalgamations from small local factories to a few major plants has been the amalgamation and expansion of small dairy units and herds. Centralised capital has been related to technological changes and higher labour productivity.

The connection between plant and local community has changed dramatically, with much of the processing and associated transport workforce living outside the locality. The major connection with the locality is now through the few farmer shareholders and milk suppliers who live there, with the great majority now spread over the South Island. Tensions have arisen between the Company and the community over the environmental effects of the expanded plant and its vital transport system, and the role of the Company in the community.

Economic benefits and impacts of the plant and dairy production flow well beyond the farms and local area, and the nearby town of Temuka. Despite the major industry that they host, the local communities and Temuka still feel the many effects of social and economic restructuring of the last decade. They are also now very dependent on the employment and business flowing from the dairy industry, and are therefore vulnerable to future swings in the price of milk products in international markets.