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WAGENBY FOREST AND TOWN
This study is submitted as an Academic Requirement for the completion of the Diploma of Landscape Architecture, Lincoln College. The Author would hope however that the content may be of some practical assistance to the people involved in the areas studied, if not the detail at least the philosophy. Naseby has an evolving charm which could easily be destroyed. Change is inevitable but need not be destructive where it is in sympathy with the place. May those responsible for the change, and ultimately that is everyone, be aware of the place.

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B.Sc. (For) (Aberdeen)
February 1978

'Although centred on the Hogburn gully the miners frequently pursued its tributaries and the greater their fervour the deeper the ravines. Perhaps more dramatic under snow for one then appreciates more vividly the drama of their toils; inadequate shelter, food, clothing and a paucity of firing material, icy winds and icy water'.
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'The most recently worked area contains a collection of hardware used by the gold sluicers. The contrast of this equipment, stark and metallic, with the 'natural landscape is dramatic - and beautiful'.
location
1.1 STUDY AREA

The drive from Dunedin north to Palmerston is varied and delightful. The motorway climbs Dunedin's enclosing hills through remnants of native bush until it curves over the top and a vast coastal vista opens up. The highway touches the coast at Blueskin Bay and then it's intensive farmland on the coastal plain with scrubby foothills inland. There are gentle undulations in the plain with tree-enclosed spaces of varying sizes, the whole a rich and vivid green.

From Palmerston, a small rural service town, the road goes inland into the hills and the patterns of farming begin to change. The scale of the enclosures increases and tussock begins to dominate on the bold rounded hills of the Kakanuis. As the hills grow on either side the road becomes smaller and more intimately interwoven with the converging lower spurs. Suddenly the hills open up and the Maniototo Plain lies ahead, vast and featureless. State Highway 65 crosses the plain, with Ranfurly at its centre, and passes on to Alexandra. Naseby lies off the main highway some 15 km north of Ranfurly in the foothills of the Ida Range. The forest sits as a gentle dark green bump on an otherwise agricultural landscape, always in sharp contrast to the back-drop of the Hawkden and Ida Ranges, pale tussock and scree in summer, white with snow in winter. The town lies hidden in a tree-surrounded hollow. Quite suddenly you are enclosed in an intimate human environment, contrasting with the vastness of the plain. The drive from Dunedin will have taken some two and a half hours. A hundred years ago it would have taken two and a half days!

1.2 OBJECTIVES

This is not a 'development study' in the generally accepted sense of the word. 'Development' is so often interpreted as synonymous with growth; more people, more houses, more impact. The intention is rather to identify and evaluate the significant features of Naseby and ensure that the most important are preserved.

Where man is actively involved in the landscape there is always change. In virtually all New Zealand towns the development has been haphazard with an insensitive imposition of unnatural forms and lines on the land. Naseby, quite by chance, is a peculiar exception. Its containment in a
natural hollow has been reinforced by
the natural regeneration of introduced
trees and without major intervention by
man will eventually be surrounded by
forest. The existing situation
already offers high visual values but
without careful management these will
be downgraded and other potential
benefits lost. Within the forest
framework there are historic sites of
considerable interest and the recrea­tional opportunities are considerable.

The primary objective then, will be to
identify the values of both the town
and surrounding area and ensure that
proposals for the future at least
preserve, and optimistically enhance,
these values.

Many of the values of the Naseby area
have considerable significance for
Otago as a whole. The forest is the
oldest exotic plantation in the
province and one of the first in New
Zealand. The Gold Rush days were an
essential element in the early evolution
of the character and national
significance of the province and Naseby
retains a unique landscape remnant of
this era; the workings of the
alluvial mining process.

A final objective will be to examine
Naseby as a unique example of a town
forest, for this is what it has
become. Many New Zealand towns are
holes in forests, be those forests
native or indigenous, but here the
trees have spread naturally into the
town and the town into the forest.
Apart from the obvious visual values
of this situation there are others
which are extremely significant. The
town forest may well have merit in
other parts of New Zealand and Naseby
exists as a model.

1.3 THE BRIEF

The brief is to identify clearly the
particular attractions of, and
detractors to, Naseby township and its
immediate surroundings and propose a
form of development which protects
these values and alleviates
detractors for the mutual benefit of
the people and their environment.
Specifically:

(i) Development must ensure the
    protection of the forest and
    the cultural values of the area.

(ii) The relationship of the town to
    the surrounding area must be
    clearly established to protect
    and enhance the values which the
    people of Naseby regard as
    important.
Any proposal must recognise the financial constraints of the town and the management constraints of the forest.

The Eastern side of Leven Street. The Ancient Briton Hotel retains much of its original character. The street is however out of scale with the buildings and their era.
2.1 MAORI TO EUROPEAN

"Range succeeding range in monotonous uniformity, devoid of animals as of human life; where the profound stillness was painful in its prolonged intensity; and the only sound that greeted the ear from dawn to dusk was the melancholy wailing of the wind among the tussocks'.

'Before the Miners and Pastoralists'
Vincent Pyke - later Goldfields Secretary'.

The Maniototo Plain is a dry tussock grassland typical of much of Central Otago. It has been so for a long time and the Maories are known to have made summer excursions from their coastal settlements to hunt Moas there. Relics of their temporary summer camps are periodically turned up by the farmer's plough.

The first Europeans in the Maniototo were the graziers. The first provincial council of the new province of Otago met in December 1853. At this meeting the council, who controlled the disposal of land, passed new regulations which required a ten shilling down-payment for land alienated within the block and an annual improvement of ten shillings per acre per annum for three years before a title would be granted. The price was seen as excessive by many who pushed inland beyond the initially surveyed block confines. Although restrictions were subsequently made less stringent the graziers freeholded little other than homestead blocks and squatters continued to move inland and stake out blocks right up to the foothills of the Southern Alps. Crown rights were eventually asserted on inland areas to raise revenue and graziers were compelled to carry maximum stock units and pay six pence a year for cattle and one penny a year for sheep. Between 1855 and 1861 the number of cattle in the province rose from 6 500 to 44 000 and the number of sheep from 59 000 to 694 000.

2.2 GOLD

In 1861 Gabriel Read discovered gold in what is now known as Gabriel's Gully, an area adjacent to Lawrence. Although not the first discovery it was the first of significance and initiated the changes which so radically altered the nature and tempo of activities in the province. The gold rushes of the South Island occurred at a time when much of the South Island seemed likely to remain in vast sheep runs controlled by absentee capitalists and a squatter
aristocracy. The influx of large numbers of miners changed all that. In 1860 69 vessels entered the Port of Otago and the population rose to 12,691. In 1861 256 entered and the population rose to 30,269. By the winter of 1862 the Tuapeka field was all but exhausted and the provincial government offered a £2,000 reward for the discovery of a new field not contiguous with the latter. In the same year the Dunstan field was discovered ('Dunstan' became 'Clyde' near Alexandra, in 1863). The pressure of miners was continuing to increase. Many were simple people who abandoned their trade in the hope of vast fortunes but there were also the veterans who had been through the Californian gold rush of the 50's, passed through the Australian boom of the late 50's and had now arrived in New Zealand, ever optimistic.
The pressure on the gold fields of the Arrow and Shotover Rivers forced people out to new areas and the Maniototo was close by. In March 1863 gold was discovered at Moa Creek, a tributary of the Poolburn, and on the 20th of May in the Hogburn, a stream flowing off Mt Ida into the Taieri River. Within a month a canvas city of 2,000 people had sprung up.

Between the spring of 1861 and the winter of 1863 42 tons of gold valued at £4,000,000 were removed from the province. Initially gold was won with a dish or cradle by the individual but amalgamations and co-operation became necessary when the more capital intensive hydraulic sluicing techniques, well known in California, were introduced to Otago. This doubtless removed much of the romanticism and many moved away.

The Hogburn field was discovered by the Parker Brothers who had previously been on the Dunstan field. The discovery was announced in the Otago Daily Times on 8 July 1863 and gazetted on 20 August at the Mt Ida Goldfield. Within a short time there were 5,000 people on the site. Although the Hogburn field was the centre of activity there was gold at St Bathans, Kyeburn and Waipiata.

In 1864 Vincent Pyke estimated that there were some 18,000 miners; by March 1865 the number had declined to some 7,000, most of the losses being to the West Coast.

In the mid 60's the Chinese began to flock into Otago. By 1867 there were over 1,100 and four years later this number had doubled.
Initially the centre at the Hogburn was called 'Parkers', but this soon became 'Hogburn', later 'Mt Ida' and finally, in 1874, Naseby. Naseby had been the English birth place of the then gold field's superintendent of Otago, John Hyde Harris.

After the West Coast rush interest in Naseby, never a rich field, declined. Water was scarce and often collected by races from 15-20 km away. Miners paid £6-£9 a week for a water supply (the poorer paid 6d a bucket!) and competition for water resulted in wealthy monopolies so that in 1877 a race was completed by the Government which carried water from the Manuherikia River some 100 km away. This race, plus the Hogburn sludge channel, were constructed at a cost of some £75,000. The race remains vital in supplying water for irrigation.

The mining activities resulted in major changes to the landscape. Huge quantities of alluvium were hydraulically sluiced and this required large volumes of water. Storage dams were constructed and water was often pumped back up to them. Mini canyons were created amongst the gentle hills and the streams filled up with sediments and boulders. For a short time a dredge was operating on the Hogburn.

In 1874 Naseby was described as "a funny collection of small iron shanties, including 18 publicans". By 1880 Naseby had become the main service town for the Maniototo and is described by an admiring visitor of that year - "The racecourse, a mile out of town, in its neatly picketed fence, the large flour mill, and then the town itself with its courthouse, warden's office, county council chambers, town hall, Masonic Lodge, Athenaeum, district hospital, several neat churches, State and R C, schools, and several large hotels". Little of this apparent grandeur remains and Naseby has been replaced by Ranfurly in its administrative role. Most of the buildings have long since disappeared. But the impact of the gold miners was immense and their activities have left scars on the landscape which will never be erased. These scars have been softened by the offspring of the trees they planted, the seeds taking root in the bared earth. Their drudgery was not in vain for the heritage that remains has become the element of rejuvenation; a unique man-made landscape of considerable beauty and charm. More than 500 ha of broken hills with twisting ravines and cliffs, many 30 metres high; golden in the bright sunlight, complemented by the autumn larch, places of endless fascination.
2.3 FORESTRY

Before Europeans arrived some two thirds of New Zealand was afforested. Early settlement proceeded most rapidly on the tussock grasslands and in the coastal regions but inroads into the native vegetation were rapid and an estimated 11.5 million ha in 1847 were reduced to 7.0 million by 1909. The first reservations for forestry purposes were made under the Forests Act of 1874.

Exotic trees, both from the northern hemisphere and Australia were being introduced as early as 1836. These were initially planted for ornament or shelter and when Mathews, a forester with the Lands and Survey Department, visited the Maniototo in 1896, there already existed many examples of species suitable for the area.

New Zealand's future need for an exotic forest estate had already been established and Mathews had been appointed earlier in the year to evaluate potential sites.

The decision was made to establish a nursery at Eweburn (later Ranfurly) and the first crop was sown in 1896. This included most of the species now present in the Naseby area; pines, larches, Douglas firs, spruces, some birch, rowans and Eucalypts. A number of cabbage trees were grown for local ornamental plantings, to be handed out free of charge to interested parties. The Eweburn nursery was the first official forest nursery in the country.

In 1897 some 350 ha of tussock was reserved for the establishment of a plantation. In November a second sowing was made at the nursery and the previous year's seedlings were reported as healthy, in spite of two of the driest years on record (some 216 mm of rainfall each year).

In 1898 further nursery sowing continued and an area was ploughed in the proposed plantation reserve in readiness for planting the following year. Rainfall was double that of the previous year and trees were planted in ideal conditions in 1900. 108 000 trees were planted at an average stocking of some 8 500 per ha (compared to an average today of around 2 000). All trees were planted in pits prepared the previous autumn at about 1.0 m x 1.0 m. An additional 1 540 trees were planted in Domain lands. This was the beginning of a forest now covering some 2 500 ha, remnants of those first plantings still remaining in the Black Forest.
'Houses set in semi mature larch, with odd pines, and simple garden treatment, and a simple but sealed roadway. An area which is cool, quiet, and has a true forest character. The cul-de-sac below the camping ground'.
3.1 FORESTS AND PEOPLE

Forests have been a major obstacle to the development of the Western World. Their material value has always, at least until very recently, seemed less than the many possible alternatives. They have been the symbol of nature under siege, the object of man's need to dominate that which has for so long held him in subjugation and humility. Man has stepped from the confines of nature into the world of man-made ideas. He no longer sees himself as merely a part of nature but rather nature as a part of him. It is something glimpsed through dulled senses as people dash from one man-made environment to another. Man holds nature at a distance, regarding any experience of it as an indulgence. He has made it as a loved but tolerated older relative, dutifully visited and loved for a brief moment and then alienated from his emotional responses, submerged by material aspirations. But nature is now demanding that he pause and re-evaluate her place in his life. It is not simply the objects of man's ideas that originate in the finite resources of nature, but the ideas themselves. Only by ensuring the constant renewal of nature in its infinite diversity will man sustain his intellect and hence himself.

There have been tentative moves to reinstate nature in towns and cities. The remnant trees of a bygone era are now protected and the odd 'specimen tree' has appeared on the peripheries of sports grounds and in the waste lands of motorways. But trees remain a mere gesture, a concession, curiosities in regimented rows or standing alone and awkward in an alien environment.

Naseby is unique for New Zealand, not as a result of any conscious action by man, but simply by circumstances of nature. The contained exotic plantings of 'productive' and 'horticultural' pursuits have escaped their intended confines and invaded a new ecological niche, the tussock grassland, held back only by grazing animals where these are inclined to exotic tastes, and man where he is not. The trees have surrounded the town and become the essence of its character. In order to derive the maximum benefit from this situation we must first understand the forest and the potential benefits it might confer.

3.2 CLIMATE AMELIORATION

The value of trees in providing both shelter from wind and shade from the sun is widely appreciated. But trees have other more subtle influences on
the micro climate. A canopy of trees will tend to moderate temperatures; it will be cooler beneath than outside them during the day time, warmer at nights. Summer temperatures will be lowered and winter temperatures raised. Maximums may be reduced by 3-4°C and minimums raised by 2-3°C. The same patterns are reflected in soil temperatures. Trees are constantly taking water from the earth and returning it to the atmosphere via transpiration. (In extreme cases a tree has been calculated to lift 400 litres of water in a 24 hour period.) Heat is drawn from the surrounding air to evaporate this water from the leaf surface and relative humidity will be high compared to an area lacking vegetation. A differential in relative humidity between the area above and the area below a tree canopy will develop from about midday in the summer and this may be up to 10% higher below than above by late afternoon.

Precipitation over forests is generally higher than over bare ground and increases with the altitude of the forest. Apart from the generation of moisture through transpiration trees also precipitate moisture on their foliage when moist air passes, as from a sea breeze.

The simple factor of shade and shelter in a town or city can have enormous benefits. Trees, depending on their density, raise winds above ground level resulting in reduced wind speeds both in front of and behind the barrier. Moisture losses are accordingly reduced via evaporation with reduced air movement.

Trees also screen the sun's rays and reduce the short wave radiation input to the ground. They deflect long wave radiation from buildings. The heat input to forests is used essentially for transpiration whereas in a city 4/10 of it heats air and the remaining 6/10 is absorbed in structures.

3.3 SOIL AND WATER

Forests have the ability to control water runoff and protect soils. They are excellent managers of the water resource. Moisture evaporation is reduced due to a lower wind velocity in a forest, a decreased soil temperature, a greater relative humidity, and a protective litter layer on the soil. Water tends to be captured and released slowly so that a steady output is sustained, particularly important in the spring and early summer when water deficits on areas served by catchments begin to develop. The forest humus layer can hold four times its weight in water and in California it has been reported that following a drought the
forest can absorb 3000-4000 mm of water before streams significantly increase their flows.

3.4 DESIGN UNIFICATION AND SENSORY VALUES

The majority of trees in towns are planted by individuals for their personal aesthetic pleasure. Everyone aspires to their own 'botanic garden' or arboretum. Whilst the objective of the individual may be achieved the variability in species choice is unlikely to achieve any overall design unification or identity for the community.

In the man-made environment trees can introduce nature in a dramatic and meaningful way. They soften the hard lines of built structures and provide a continuity in colour and form where there is otherwise conflict. They can demarcate and enclose spaces, different species and arrangements being specific to given areas, adding to their special identity. Their size establishes a scale to which people and objects can relate. Natural textures and patterns complement featureless engineered surfaces while shade patterns heighten their interest.
The forest can be imposed on the urban environment or the urban environment imposed on the forest. Where the natural forest is built into, enclaves must be created but the unity and cohesion of nature prevails. The 'natural forest' can be native and climax, having evolved and stabilised over a long period of time, or it may be exotic (of introduced species), where these have seeded and spread naturally to replace some former vegetation. In either case, native or exotic, the forest can be delicate and easily destroyed or it can be aggressively successful, spreading quickly and occupying new openings or regenerating beneath itself. The town in the forest will demand some positive forest management, either the control and manipulation of its spread or the careful preservation of its structure to ensure its survival.

Where the forest is imposed on the town the natural patterns must be created. The planted tree will require care and protection from the rigors of human activities. The species must be chosen carefully as a natural mixture and their spacial arrangement responsive
to their needs. It is the natural patterns which evoke the greatest responses and anything less will always be dischordant to the perceiver.

Sensory perception extends beyond the obvious, the visual. Most people respond at some time to the aroma of Eucalypts or Douglas fir on a hot still day. The gentle movement of a summer breeze or the roar of winter winds through the trees super-structures evoke different but equally strong responses. The constancy of such sounds can be soothing and over-ride the irritating noises of the town environment.

An indirect addition to the diversity of the town or urban environment which the forest brings is wild life. The rural dwellers habitats are extended into urban enclaves and a further dimension of nature is added to the man-made environment. The forest can be supplemented at its edges and in its openings with fruit bearing shrubs and bushes to support birds and animals.

But not all sensory responses to a forest environment are necessarily elevating. Fire, a source of fascination to man, can evoke extreme terror and forest fires are perhaps the ultimate source of this response. Whilst man may take a precarious delight in being at risk with one of nature's elemental forces, fire in the forest environment must be protected against. The need for management in the urban forest is reinforced.

A lesser understood but scientifically established fact is that plants radiate an energy within the electromagnetic spectrum which is of benefit to man. Legend claims that the North American Indians were known to embrace trees for several minutes in order to gain an energy renewal. The whole phenomenon of energy transfer between living things, although little understood, is gaining increasing attention in the scientific world and trees may be a significant source of accumulated energy.

Man cannot live outside nature for he is part of the whole. To do so is to be spiritually deprived, a desiccated shell, responding with only a part of his total being.

Living trees are a strong symbol of nature, offering much more to mankind than mere cellulose, the by-product of their death.
3.5 OPEN SPACE AND RECREATION

'Open space' in New Zealand towns and cities is synonymous with rural pastures in urban settings; the domain of the team sport enthusiast. Other forms of open space are rare, reflecting a failure to recognise the infinite values integrated and varied open space can offer a healthy community. Open space must form the linkages within a community, both in terms of physiography and people. It must be space for children and old people to be alone in as well as for sportmen to be together; space first to walk, sit, or sleep in, as well as to run in. It must be more than a two dimensional battleground; it can be infinitely varied in shape and size in three dimensions. Trees as well as buildings give the third dimension.

Fully integrated open space brings all forms of recreation to all people where it is most needed; in every day of their lives. It must be more than something to escape to on weekends for 'spiritual renewal', always a memory or an anticipated relief.

The town forest, whether the forest be part of the town or the town built into the forest, provides the ideal framework to open space and recreation of all kinds. A forest has the capacity to absorb large numbers of people in relative privacy and peace. Spaces can be created within it to incorporate virtually all forms of land based recreation in a perfect setting. This is further discussed in section 5.

3.6 A TOWN FOREST: A CASE STUDY

Throughout the world there are many human communities, both primitive and modern, which are located in forests. Most however have evolved slowly with the culture and have not been objectively evaluated. One exception is the 'New Town' of Woodlands, located north of Houston in the state of Texas. The plan for Woodlands was based on a comprehensive ecological study of an afforested area, under the guidance of Ian L. McHarg. The objective was "the achievement of the natural drainage system and the preservation of the woodland environment".

The site was virtually flat with poorly drained soils and a propensity to flooding. The estimated cost of a conventional engineering drainage system was some 18 million dollars and this would have involved considerable woodland destruction. The cost with an ecological approach was estimated at 4 million dollars, a 14 million dollar saving! What did this involve?
The site demanded a treatment which minimised the destruction of its water holding capacity and natural flow systems. Where development increased runoff this had to be compensated by the use of temporary storage and ponding areas. Excess water discharge was to be avoided on unstable soils. All vegetation associated with natural flow channels, steep slopes, and high litter with exceptional water-holding capacity, had to be protected.

Development was, as far as possible, kept to impermeable soils and a 'multipurpose' philosophy adopted in relation to infrastructure which might contribute to the water control objective.

Impoundments, settlement ponds and basins, berms to encourage recharge, golf course construction, highways, roads and streets, were all considered as adaptive strategies to meet the demands of a natural drainage system.

From studies of all the ecological factors a carrying capacity for specific areas was derived; just how much of an area could be rendered impermeable by development, given water impoundment provisions, without excessive disturbance to the natural water outflows. In phase 1 for example (1947 ha) 4300 dwelling units were located on 1255 ha (692 ha were left as open space) including community facilities, a business park, and a leisure centre. On average this equates to about 4 units per acre and the natural environment is retained relatively intact!

History records a world forest some three times the size of that which now exists. Most of what has gone was removed by man's activities; for civilisation. Man now realises that forests are vital to his survival, not simply physical survival but the survival of his very quintessence; his essential being. Man must renew his acquaintance with the forests, recreate them and live within them. For this reason the Woodlands project is a milestone for western society, the first step backwards in the evolution of man.

'Economic Laws may be permanent but their impact reflects what people want, which in turn reflects what they know and what they are'.

Aldo Leopold 1933.
3.7 IMPLICATIONS FOR NASEBY

For Naseby the most obvious value of trees is the shelter they offer from wind. Larch, the dominant and deciduous species, provides shade during the summer and allows the winter sun to filter through. As the forest surrounding the town matures it will increasingly generate cool moist air in summer which will drain into the town and alleviate the discomfort of the dry Central Otago heat. Trees around buildings and communal spaces will provide shade and reduce heat accumulation in structures and hard surfaces.

The drainage principles applied at Woodlands for storm water control would be equally applicable at Naseby and easier to implement with its very low annual rainfall (4800 mm p.a.). Unfortunately a considerable amount of money has already been spent on kerbing and channelling which is ecologically quite unnecessary and out of character in an historic town with a natural setting.
"Hoffmans Dam - Quiet reflections in the late afternoon."
RESOURCE EVALUATION AND ANALYSIS 4
4.1 REGIONAL SIGNIFICANCE

Naseby is but one of the many remnant towns of Central Otago, a town which boomed and then died when it was passed over in favour of Ranfurly as the main centre for the Maniototo. It was here that the railway from Dunedin stopped at a time when such was regarded as the life line. Naseby has languished as a low key holiday centre; many of the old family homes of the early pioneers have become second homes for their children and grandchildren who live in the commercial centres of the coast. It lies beyond the limits of the day tripper from either Dunedin or Oamaru and is off the main routes to the central lakes. In its isolation it lacks the usual supporting attractions for tourism; scenery, skiing, or a large area of water. More recently however Naseby has assumed a new interest and appeal which demands a reappraisal of its role.

On a regional level the historic values are being increasingly recognised. The 'gold rush days' have the greatest historic significance in Otago and there is now considerable interest in the preservation of cultural and landscape features of this era. There is little remaining in Otago which has not been at least tainted by subsequent development; at worst destroyed. There are few buildings remaining which bear more than a vague resemblance to the original; most have 'tarted up' facades, and the remaining cultural history is gradually decaying, much of it in inadequate museums and the remainder under the constant erosion of the outdoor elements. The alluvial workings are perhaps the most significant landscape remnants of Otago's early history and the most extensive of these are at Lawrence and Naseby. Historically Naseby is one of a series of sites with significant values in the Maniototo. There are gold workings up the Kyeburn and at Dansey's Pass, at St Bathans, and at Waipiata. Also of historic interest in the region is the water-driven engineering workshop at Oturehua, recently acquired by the Historic Places Trust.

Although there has been subdivision for the establishment of holiday homes, and some first homes, Naseby still retains, at least in part, the character of the original town. Much of what is not in keeping is hidden in the trees surrounding the town's centre. These same trees have quite suddenly imposed a major visual impact on the town, adding greatly to its charm and appeal.
In summary, although having significance as a remnant of the gold rush days, Naseby remains essentially a little known town which means a great deal to a few people as a simple quiet holiday centre.

4.2 CLIMATE

Central Otago experiences a continental climate. Temperatures can be extremely high in summer and correspondingly low in winter. Central Otago is shielded from rain on many occasions, substantial falls occurring only when depressions and fronts are unusually vigorous. Westerly winds associated with depressions bring heavy rain to western areas but little to the more eastern parts of the region. Easterly winds similarly tend to lose their moisture passing across the coastal ranges. Rainfall tends to be maximal in summer and minimal in winter but spring deficits of moisture can occur.

As part of an arid region severe moisture deficits can occur at Naseby which result in the retardation of plant growth. When rainfall is insufficient to supply plant needs moisture is drawn from the soil, and once the equivalent of some 70 mm has been removed plant growth can be depressed. The percentage of years when soil moisture would be drawn on to at least this equivalent is shown to be some 90%, with 40 consecutive years of moisture deficits having been recorded.

Because rainfall is at a minimum in winter and the winter variability is fairly high in Central Otago, the soil moisture reserves there may have been drawn on before September. This can be highly significant in tree and shrub establishment if the anticipated spring rainfall fails to occur.

Detailed climatic data is included in table 1.

Mean monthly maximum temperatures in spring and summer at some sheltered sites in Central Otago are up to 2°C warmer than those recorded in Auckland. The mean monthly minimum during the same period can however be some 5°C cooler than Auckland! The low temperatures are produced by radiational cooling on clear nights and the drainage of cold air down mountain slopes, especially when they
<table>
<thead>
<tr>
<th>TABLE 1:</th>
<th>Climatic Date: Naseby Forest</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rainfall, millimetres</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>Highest monthly annual total</td>
<td>1923-70</td>
</tr>
<tr>
<td>Normal</td>
<td>1941-70</td>
</tr>
<tr>
<td>Lowest monthly/annual total</td>
<td>1923-70</td>
</tr>
<tr>
<td>Av no. of days with rain 1.0 millimetres or more</td>
<td>1923-70</td>
</tr>
<tr>
<td>Maximum 1 day rainfall mm</td>
<td>1923-70</td>
</tr>
<tr>
<td>Temperature degrees Celsius</td>
<td>Highest maximum</td>
</tr>
<tr>
<td>Mean monthly/annual maximum</td>
<td>1930-70</td>
</tr>
<tr>
<td>Mean daily maximum</td>
<td>1923-70</td>
</tr>
<tr>
<td>Normal</td>
<td>1931-60</td>
</tr>
<tr>
<td>Mean daily minimum</td>
<td>1923-70</td>
</tr>
<tr>
<td>Mean monthly/annual minimum</td>
<td>1923-70</td>
</tr>
<tr>
<td>Lowest minimum</td>
<td>1930-70</td>
</tr>
<tr>
<td>Mean daily range</td>
<td>1923-70</td>
</tr>
<tr>
<td>Mean daily grass minimum</td>
<td>1936-70</td>
</tr>
<tr>
<td>Days with frost</td>
<td>Ground frost average</td>
</tr>
<tr>
<td>Frost in screen average</td>
<td>1923-70</td>
</tr>
<tr>
<td>Relative Humidity (%)</td>
<td>Average at 9 a.m.</td>
</tr>
<tr>
<td>Vapour Pressure (mb)</td>
<td>Average at 9 a.m.</td>
</tr>
<tr>
<td>Special Phenomena</td>
<td>Av no. of days with snow</td>
</tr>
<tr>
<td>Av no. of days with hail</td>
<td>1954-70</td>
</tr>
<tr>
<td>Av no. of days with thunder</td>
<td>1954-70</td>
</tr>
</tbody>
</table>
carry snow. Screen frost, recorded on a screened thermometer one metre above the ground, are frequent and although occurring at any time of the year predominate in the period mid autumn to mid spring. Spring frosts can be extremely detrimental to newly planted trees and shrubs. At Naseby an average of 133 screen frosts were recorded per year between 1923 and 1960 with a mean of 29 per spring and a maximum recorded for one spring season of 46. On the Maniototo Plain the soil can frequently be too hard to plough and at Naseby may be frozen to a depth of 5-10 cm well into spring. Snow occurs on an average of 5-10 days per year and can occur at almost any time.

In Central Otago over 2000 hours of sunshine are received a year on average, up to 55% of the possible in summer and about 40% in winter. In the South Island, Central Otago is exceeded only by Nelson and Blenheim for sunshine hours.

Naseby, elevated above the Maniototo Plain but sheltered from the north by the mountains behind, experiences strong winds from the south and west/north-west. Gales can occur at any time of the year but are most frequent in spring and autumn.

Wind can be extremely trying at all times of the year and dry Fohn winds from the north-west through spring and summer create very high fire hazards during the holiday period. With the majority of forest located to the west of the town fire can pose a major threat during high hazard periods. Similarly, when conditions have been dry for an extended period and easterly winds occur the forest can be threatened by the outbreak of fire from the town.
The rainfall which each month will be on the average exceeded on 10%, 50% and 90% of months is given.

a - highest recorded
b - mean monthly maxima
c - mean daily maxima
d - mean daily maxima
e - mean monthly minima
f - lowest recorded
The Maniototo Plains lie in a roughly triangular tectonic basin bounded by block mountains; on the north by Mt Ida, Mt Kyeburn, and the western end of the Kakanui Range, which form part of the watershed between the Waitaki and the Taieri Rivers; on the south west by Rough Ridge, and on the south east by the Rock and Pillar Range.

The northern mountains, composed of greywackes and subshistes, reach heights of more than 1600 metres. The Rock and Pillar and Rough Ridge Ranges, chiefly schists of a higher grade of metamorphism, reach heights of 1300 and 1000 metres respectively.

The floor of the basin is of low relief with a gradual slope towards the Taieri River, which flows near the base of the Rock and Pillar Range. To the north of the plains relief is somewhat broken, with higher terraces and more deeply entrenched streams.

The Taieri River carries water throughout the year although its tributaries, the Gimmerburn, Eden Creek, Wetherburn, Hogburn, Stotburn, Pigburn and Sowburn, may dry up in their lower courses in summer.

The old forest is located on the foothills of the Ida Range to the north west of Naseby township. The highest point on the forest is on Quartz Reef Hill at just below 800 metres. Naseby township sits in the gully of the Hogburn Creek at 600 metres, some 200 metres above Ranfurly.

Details of the topography of the area are shown on map 1.

During the Cretaceous period an extensive peneplain was developed on the basement schists and greywackes. The main structural features of the basin were acquired when the peneplain was broken by block faulting at the close of the Miocene and the present mountain blocks were elevated.

This was followed by a period of active erosion of the uplifted mountain blocks during which the basin was partly filled with detritus, derived principally from the mountains to the north. This detritus was coarser near the ranges and became finer towards the centre of the basin. At the end of the Miocene stage it seems probable that the southern part of the
basin was occupied by a shallow lake. The dominant cations of the alluvium deposited at this stage are calcium and sodium.

A further period of erosion followed during which time the surface of the plains was lowered by a process of lateral planation, accomplished by a widening and eventual coalescing of shallow stream courses. The deposited alluvium is dominantly of greywacke derived from the northern mountains. Remnants of the high terraces remain between Ranfurly and Gimmerburn.

Since late Pleistocene times the soils of the plains have been receiving small amounts of loess from the flood plains of the streams draining the basin.

Salt pans are numerous in the basin where the subsoil contains soluble salts and these may be visible as incrustations during summer. They may kill vegetation and expose a bare surface to wind erosion.

The soils of the Naseby area are classed as Dry Hydrous; prone to drought in the summer but subject to water logging in the winter or during wet periods as water sits on a 'fragipan'. This pan restricts water movement and may restrict subsoil penetration.

The soils of the study area are varied and made complicated by the activities of the gold mining period. The loess deposits of the gullies have been complicated by the outwash sediments of mining activities and on the higher ground there are soils formed on tertiary sediments, gravels and sands. Profile characteristics vary considerably.

The soils are classed as Yellow Grey Earths. The 'A' horizon, where undisturbed, is generally shallow, some 15 cm, with a friable crumb/nutty structure. The 'B' horizon is generally not more than 30 cm thick with a pale yellow and mottled colour and of blocky structure. This sits above deep massive stoney sediments with intermediate thick clay pans above which the gold deposits were located.

The soils have medium nutrient status where undisturbed. Where the top horizons have been washed away by sluicing nutrient status may be low with little or no organic material. Both sulphur and phosphate can be low and boron deficiencies are commonly reflected in tip dieback of trees growing in the study area. The Forest Service have several trials established to investigate boronated superphosphate applications and responses.
Wind erosion can occur where soils are cultivated and left exposed.

It is difficult to write sensibly about the soils of the study site as they vary considerably over quite short distances. In tree or shrub establishment species must be chosen carefully according to the specific site, reflecting drought resistance and nutrient requirements. Sites cover a wide range of variability, from rich deep soils with high moisture and shelter, such as the Coalpit Basin, to sites which are impoverished with no organic material, subject to drought, and very exposed with a high incidence of frosting. This latter condition would pertain over much of the sluiced area.

4.5 VEGETATION AND ECOLOGY

The first botanical records of the Maniototo are those of Buchanan (1868) and Petrie (1912). They first visited the plains in 1863 and 1874 respectively. The vegetation, a tussock grassland, was dominated by fescue tussock (festuca nova-zealandiae) with associated silver tussock (poa caespitosa) and blue tussock (poa colensoi). Blue grass (Agropyran scabrum), mountain twitch (tirodia spp) and Buchanan's danthonia (Danthonia spp) appear to have been conspicuous among the smaller grasses associated with the tussocks. Matagouri (Discaria toumatou), desert broom (Carmichaelia spp) and spear grass (Aciphylla spp) were locally common to abundant.

From a study of the vegetation remnants and patterns of soil and moisture status the undisturbed pattern has been derived as follows:

- Matagouri/fescue tussock on stony soils of river beds, terraces and fans. Included in the community would be desert poa (poa maniototo) blue grass, desert broom and scab weed (Raoulia spp).

- Fescue tussock/blue tussock communities on the shallow soils of terraces and fans, including spear grass, danthonia grasses, plume grass (Dichelachne crinita), mountain twitch, matagouri and desert broom.

- Silver tussock on deeper silt loams and moist soils, particularly on the flood plains. Associated species include blue tussock, blue grass, plume grass, danthonia grasses and matagouri.

- A salt tolerant vegetation on sites with high concentrations of soluble salts, particularly the flood plains and low terraces. The following plants are here included: puccinellia stricta, Cetula spp,
Salicornia australis, Selliera radicans, Atriplex spp.

- A swamp vegetation on the water-logged soils, particularly of the Taieri River flood plain. Little is known of this but it was probably dominated by Juncus spp and Carex spp.

Many of these communities, or their remnants, are reflected in the study area. However, one hundred years of grazing by sheep and rabbits has resulted in extensive changes in the native grasslands. Large areas have been invaded by introduced grasses and weeds, the process accelerated by burning of the natural cover. Outside the study area agricultural cropping has removed the native vegetation completely. Within the study area however the agricultural potential has been low so that disturbance has, at least agriculturally, been less.

Exotic trees, some planted but the majority seeding naturally from planted specimens, have invaded both the disturbed sluiced areas and the undisturbed tussock and will eventually dominate the entire study area. This aspect of vegetation is discussed in section 5.

4.6 CULTURAL

4.6.1 General

The Maniototo County, which includes the Borough of Naseby, covers an area of 347 070 ha. The population of the county has remained relatively unchanged since 1926 and is expected to remain at around 2800 until at least 1990. Of this total about 900 live in Ranfurly and some 100 permanently in Naseby. Approximately 56% of the work force in the county are involved in either forestry or farming and Ranfurly services these industries. The town has a sawmill, a post and pole treatment plant, stock and station agents, transport firms and the usual services and commercial agencies expected in small rural centres. The county office and depots, which also service the Naseby Borough, are located in Ranfurly as is the district's hospital and high school. In terms of the Maniototo County then, Naseby has a limited service role and has become increasingly dependent upon a seasonal trade with crib owners. Forestry provides the greatest single source of employment and supports some 15 Naseby residents. There are two hotels, two general stores and a craft shop which opens seasonally. One of the hotels has an accommodation licence and there is a motel and a
camping ground. There is a one man garage which services local people and a post office of some interest which is periodically threatened with a shut down. One of the store owners operates a bus service and is developing a small tourist enterprise.

The detailed layout of the town is discussed in section 5.

4.6.2 'A Survey of Attitudes and Interests'

In anticipation of this design study a questionnaire was circulated to all dwellings and occupied campsites in Naseby in early January 1977. 80% of these were completed and returned. The questionnaire was left with the respondent for some five days, to be completed in consultation with members of the family or group. Most respondents were spoken to at some stage during the survey. A copy of the questionnaire is included in the appendices.

The study attempted to discover those values of Naseby which people regarded as important, both cultural and recreational, and further to identify any apparent deficiencies or detractions. The cultural values are discussed here but recreational values will be considered in section 5. Further reference will be made to the survey elsewhere.

The estimated normal population of Naseby during the summer holiday period is 1200. This survey recorded 273 children and 430 adults. Of the 161 questionnaires returned 36 were from permanent residents and the remainder from campers (13) or cribs (112). Of the non residents 96 were from Dunedin and most of the remainder from either Christchurch, Oamaru or Invercargill.

In order to identify the essential features of Naseby which people regarded as important there were two questions. The respondent was first asked "What do you like about Naseby?" and then in the second question to identify from a given list of features the two considered 'most important' and the two considered 'least important'. The results from these two questions are given in table 2.
There is a very positive response to the physical environment of Naseby and the atmosphere this evokes.

In general the more commercial enterprises are less favoured although the negative response to hotels is not borne out in reality; in fact the hotels are extremely important points of social contact.

Respondents were asked the question "What services/facilities do you feel that Naseby lacks?" The most common responses were water reticulation of an adequate standard and similarly sewerage disposal. The latter has now been remedied with the installation of a new system. Better accommodation was a response recorded by 22.

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**TABLE 2:** The Attractions of Naseby

<table>
<thead>
<tr>
<th>Question 3&lt;sup&gt;1&lt;/sup&gt; % of Respondents</th>
<th>Question 8&lt;sup&gt;2&lt;/sup&gt; % of Respondents as Most Important Least Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peace and quiet</td>
<td>72</td>
</tr>
<tr>
<td>Larch, Douglas fir or &quot;Tree&quot;</td>
<td>33</td>
</tr>
<tr>
<td>Weather, Climate, Est Summers</td>
<td>32</td>
</tr>
<tr>
<td>The People Informality, Easy</td>
<td></td>
</tr>
<tr>
<td>Atmosphere</td>
<td>23</td>
</tr>
<tr>
<td>The Mountains</td>
<td></td>
</tr>
<tr>
<td>Historic Values</td>
<td>6</td>
</tr>
<tr>
<td>The Scenery or Surroundings</td>
<td>15</td>
</tr>
<tr>
<td>The Freedom, Space for Children</td>
<td>14</td>
</tr>
<tr>
<td>The 'Non Commercial'</td>
<td>11</td>
</tr>
<tr>
<td>Atmosphere</td>
<td></td>
</tr>
<tr>
<td>Friendships</td>
<td>-</td>
</tr>
<tr>
<td>Swimming</td>
<td>-</td>
</tr>
<tr>
<td>Hotels</td>
<td>-</td>
</tr>
<tr>
<td>Mountains</td>
<td>-</td>
</tr>
<tr>
<td>Golf</td>
<td>-</td>
</tr>
<tr>
<td>Horse Trails</td>
<td>-</td>
</tr>
</tbody>
</table>

*<sup>1</sup> Spontaneous response to question "What do you like about Naseby?"

*<sup>2</sup> Choose the two 'most important' and two 'least important' features
Recreational needs were recorded by 39 respondents and this is discussed later. Some, mainly permanent residents, considered basic services such as medical, transport, and meat supplies to be inadequate. In general however the services were considered adequate and this acceptance of simple provisions is in accord with peoples expressed desire for general simplicity and natural values.

Although not spontaneously expressed as important, historic values were acknowledged when people were made aware of them as included in a list (Q8). Unfortunately such values are frequently, through familiarity, ignored until they no longer exist. In discussion many people expressed pride and interest in the history of Naseby. There is an excellent museum in Naseby, albeit rather chaotic at present. Recently there has been a considerable upsurge in interest and the collection is being reorganised with provisions made for alterations to the building. Historic buildings and landscape is analysed in section 5.

4.6.3 The Forest Service Role and Objectives

Until 1967 the forest was confined to some 1600 ha, contained in the large isolated established block and the 'Black Forest' on the Naseby- Ranfurly Road. The forest was initially intended, in 1896, as an experimental one to investigate the potential for exotic afforestation in Central Otago generally and the Maniototo in particular. The forest now has a major production role and supplies posts and poles as well as sawlogs to the units in Ranfurly. A small quantity of material goes to a mill at Herbert on the coast. The processed material is used widely in Central Otago; posts and poles by the farming sector; poles for telegraph standards; sawn timber for both rural and town construction, and some for fruit boxes. The main species currently logged are Corsican and Ponderosa pines with minor quantities of Larch. In the distant future Douglas fir will become important.

In 1967 a further area of some 800 ha was acquired by the Forest Service and included most of the sluiced area of the alluvial gold mining era. In the initial development plan the majority of the area was considered suitable for production but three specific areas, the Coalpit Basin, the Hogburn Gully, and an area to the west of the town were designated 'Reserves' for future recreation. This land, adjacent to
the town, had always been regarded as available to the people of Naseby for recreation, walking in particular, and there was some concern when it appeared that access might be precluded.

In 1973 the 'Black Forest', conveniently located opposite the golf course, was developed in a small way as a recreation area. Picnic tables were provided and short walking tracks developed in mature stands of mixed Ponderosa pine and Douglas fir. At the same time ornamental planting was begun in the Coalpit Basin and in 1976 some play equipment was installed.

The Conservator of Forests, Southland, intends that Naseby should become a Forest Park. This will formally acknowledge its multi-purpose role and management will be directed not simply at wood production but also recreation and historic value preservation.
The essential land tenure is shown on map 1. The significant feature of land tenure is that within the present borough boundary there is little land available for further development. Naseby is in fact the smallest borough in New Zealand! The borough boundary virtually follows that of the forest boundary in the west and north and that of the domain in the east. The most obvious area for development, but currently outside the borough boundary, lies along the Hogburnsally to the south of the existing town. Any development in this area should be approached with care so as not to destroy the present containment of Naseby allowing it to become dissipated in a ribboned form. The question of development and tenure is discussed more fully in section 6.
4.8 SUMMARY

At the present time Naseby has little significance as a service town for the Maniototo or as a tourist town for Central Otago. A lack of employment opportunities limits the permanent residents to low numbers but increasingly former crib owners retire there. For its survival the town relies upon the influx of summer holiday makers, most crib owners but also up to 80 camping parties.

The pleasant summer climate, the ever increasing visual values, and the low key recreational opportunities in the area are attracting more people each year. The town is very committed to this role and it seems unlikely that this will alter. In order to preserve, and hopefully enhance, the values of the area it will be necessary to ensure that future development, for which there is likely to be considerable pressure, is compatible with these values and that the nature of the place is not destroyed.

Wet Gully Road looking North into the 'old forest'. A disced break with hard edges; potentially a dramatic open space in deme enclosure offering relief and a visual 'out'. Here the alignment of the road and the forest edges need particular care.
THE EXISTING DESIGN FRAMEWORK 5
5.1 INTRODUCTION

The design framework of the study area, particularly the town, is already firmly established. The essential element in this framework is trees and the main species, Larch and Douglas fir are well suited to the area. Visually both are attractive, either alone or in a mixture, and their regenerative capacity on a wide range of sites is an indication of their ecological attunement. Pines, particularly Contorta, Corsican, and Ponderosa, are also common in regeneration but less so than the latter, partly at least due to their seed source being less immediate to the study area.

The town has a geometric formal pattern at its centre but is rather more informal on the peripheries where the more recent development has tended to blend in with established forest stands. At the town's centre there are fewer trees and these tend to be specimen, or individual trees of a typical species for the area; the sports domain includes a range of fine trees. In the town centre buildings are the dominant element few of which have any particular virtue visually or historically. In contrast to the central area, forest trees, often quite dense, dominate in the peripheral areas where the buildings, whilst not always appropriate, tend to be subdued and unobtrusive.

In the forest, roads and fire breaks impose rigid and frequently unsympathetic lines which are essentially related solely to the requirements of forest management and protection. The existing walking tracks are unobtrusively located but cover only a limited part of the area. The significant features and areas of the forest are generally isolated one from the other and the existing linkages are not always satisfactory either visually or functionally. Significant areas presently tend to exist as islands in a 'sea' of tussock.

There are a number of important vistas and views in the town, in the forest, and in the domain to the east of the town. Many are threatened by closure from tree growth and those which are of value need to be identified and preserved. In fact the situation at Naseby is quite the opposite to that which usually prevails in a built environment where trees are inadequate; here they threaten to become excessive and there is a need to preserve and even create openings rather than develop enclosures.
Within the study area as a whole the design framework is essentially nature, albeit an exotic form, moving towards a self sustaining and expanding naturalised forest. The production role of the old forest is well established and the visual values are a reflection of this role. The study area has been undergoing a gradual process of change. Trees have seeded gradually outwards and occupied open ground where stock have been less aggressive in their grazing, notably on sluiced area. The study area has remained essentially open, except adjacent to the town, and has been available to the people of Naseby for their recreational pursuits. With the change of land use to forestry and the exclusion of stock for tree planting, the afforestation process has been accelerated and the established recreation pattern and experience altered. The purely production role of the old forest is inappropriate in the new setting and other human aspirations must be met. Its recreational role must be preserved and hopefully enhanced.

The people and their established cultural and recreational patterns are an integral part of the existing design framework. Their cultural aspirations have been discussed in the previous section but their recreational requirements, which impose a potentially greater impact on the design of the study area as a whole, are included here.

5.2 THE PEOPLE AND RECREATION

The questionnaire referred to in section 4 and appended was primarily directed towards an appraisal of the recreational needs of the Naseby people who the forest primarily serves. During the summer months there are up to an estimated 1200 people who make a considerable recreational demand on the area. This number will increase as the values of Naseby are enhanced with the maturation of the forest and trees. There is already a constant demand for sections which are extremely limited within the existing town boundary.

The questionnaire attempted to discover firstly, what people presently do in the way of recreation and secondly what they would like to be able to do but for various reasons cannot. In response to the former, peoples' answers were grouped and table 3 below lists the results. This table in fact lists the responses to two questions, one directed at
TABLE 3: Recreational Patterns of the Naseby People

<table>
<thead>
<tr>
<th>Active</th>
<th>Semi Passive</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Walking</td>
<td>74</td>
<td>54</td>
</tr>
<tr>
<td>Swimming</td>
<td>4</td>
<td>64</td>
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<tr>
<td>Golf</td>
<td>22</td>
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<td>Bowls</td>
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<tr>
<td>Horse trekking</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Tennis</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Trail bikes</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Push 'bikes</td>
<td>4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>A</th>
<th>B</th>
</tr>
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<tr>
<td></td>
<td>125</td>
<td>144</td>
<td>105</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>66</td>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* A - Q10 "What do you do in your spare time?" (while on holiday)
  B - Q14 "Where do the children spend their spare time?"

the respondent filling the questionnaire, or 'adults', and the other directed at children.

In the question "What services/facilities do you feel that Naseby lacks?" people listed a number of recreational inadequacies. Both swimming and tennis facilities were specifically noted as substandard by 24 and 6 respondents respectively and 32 people recorded a need for more organised entertainment generally.

A further question was directed towards children, i.e. "Are there any facilities lacking in Naseby which you think should be provided for children?" The response to this question is given in table 4 below.

With regard to future development respondents were asked to choose from a list the two 'most desirable' and the two 'least desirable' activities a forest might provide for. The results are given in table 5 below.
The responses varied little with the age of the respondent. Similarly it made little difference whether the respondent did or did not have children.

There was provision in this question for people to list any 'other' things a forest might provide. 'Other' suggestions included sign-posting for forest walks, walking maps, and for planting specifically to attract and sustain bird life through the winter months.
Since 1973 there has been little if any improvement and many people now feel a reluctance to allow their children in the dam due to a possible health hazard.

Apart from swimming, walking is the main activity children engage in and the main stated activity for adults. It was further recorded as the most desirable activity for the forest to promote, followed by, more specifically, educational walks.

Although 36 respondents saw forest driving as desirable 25 considered this activity undesirable and trail bike riding was overwhelmingly recorded as the least desirable forest use. Noise is obviously not regarded as desirable in the forest setting. The impression gained is that people favour low key peaceful activities and tend to regard as unfavourable those which involve obtrusive activities such as cars, trail bikes and boats. The negative response to camping is
presumably due to the availability of such facilities within the town and therefore being seen as unnecessary in the forest.

Within the range of opinions canvassed a reasonable indication of the recreational patterns and needs of the area have been obtained and development must ensure, as far as is possible, that existing patterns are preserved and aspirations fulfilled.

5.3 THE TOWN

5.3.1 General

This section should be read in conjunction with maps 4 and 5. These are intended to portray a visual understanding of the town as it presently exists. Given an appreciation of the existing framework the options for the future should be readily comprehensible as they are outlined in section 6.

For the first-time visitor to Naseby the sudden transition from the Maniototo Plain, a vast and open expanse of simplicity and uniformity, to the enclosure of the township with its diversity of tree species and complexity of buildings, is doubtless dramatic. Whether the town is entered from Ranfurly in the west or the main highway via Ridge Road from the east, entry is through an enclosure of trees through which the road descends. Although there are many substantial trees in the town's centre, it tends to be open by comparison with the surrounding forest, much of which is still immature and developing, particularly to the east. Tree enclosure is not entirely complete; to the south is an unattractive view of gorse clad hills above the Hogburn and moving north through the town there is a recurring and attractive view up the Hogburn gully onto the Larch covered sluicings.

Although the town has few historic buildings of any particular merit there are sufficient to convey an impression of the history, scattered in a linear fashion along the main entrance street. This lies within the more open area of the town at one end of which lies a poorly defined commercial area. The domain is the important visual centre of the town.

5.3.2 Access and Circulation

The town centres on Derwent Street and bifurcates to Earns Street and Tory Street, Lower Leven Street, off Earns,
forms the only significant commercial area although this has little substance as sketch A on the visual analysis map shows. Only here at the town centre, does the road layout assume any real symmetry; in general the roads include pleasant curves and informality (apart from the rigid lines of kerbing and channelling which seems both incongruous and unnecessary in a rural and historic town with a minimal rainfall).

Other important streets include Oughter, which leads in from the east, and Ness which provides the main access to the swimming dam and thence the forest via Translator Road. Although Ness Street is extremely pleasant as it curves through overhanging larch there is nothing to exceed the appeal of the road to the cemetery with the heavy pendulous branches of Douglas fir hanging over to provide a variation from heavy shade to filtered sunlight.

Within the built area of the town there are no walkways and pedestrians use the road edge, although there are some footpaths on the more important streets.

5.3.3 The Buildings

All buildings within the borough were appraised for visual value. There are few with any enduring historic value although many have considerable interest but are in poor repair, have been downgraded by inappropriate additions or alterations, or are painted in colours which are out of character (pinks, blues and apple greens). There are a few attractive private dwellings which include cottages, the Ancient Briton Hotel, and a few public buildings. The outstanding building is the church shown as a sketch on map 4 which has a beautiful setting. The Post Office, opposite the sports domain, whilst rather over-imposing and perhaps austere, is made tolerable by the large-scale of the trees opposite and has a definite interest.

Unfortunately the buildings with charm tend to be scattered and fail to provide a major visual impact. Whilst Derwent Street has a number of interesting buildings and trees, with views up the Hogburn gully, there are also many detractions with low standard dwellings, broken down buildings and weed growth, broom in particular. Much of the attractive detailing in fences and gardens is overwhelmed by these negative visual intrusions.

5.3.4 Significant Vegetation

There are a number of significant
trees, both in the town centre and on the peripheries, individual specimens and tree groups. The 'forest trees' include dominantly Larch and Douglas fir and these proliferate in the peripheral areas, particularly on the western slopes up to and surrounding the cemetery, and in the north. Of the pines Radiata is visually dominant; a few in the west and a number of large groups in the east, notably over the curling dam and above the main entrance.

The majority of the large specimen trees occur within the town centre adjacent to Derwent Street; from the cemetery road up through the Domain and in private gardens. Many of the species listed in the appendix occur but there are essentially cedars, firs, cypresses, pines and a few exotic broadleaves the most significant of which is a chestnut in the memorial domain.

In addition to the major trees there are a number of small trees and shrubs. Hawthorn is common and there are odd Yew trees, Rhododendrons, Azalias, Laurels and fruit trees. There are, predictably, a number of ornamental conifers.
5.3.5 Cultural Features

The major cultural and historic feature, if not in its outward facade then at least in its inner content, is the museum. An enthusiastic group of residents has plans for its restoration and extension. Opposite the museum is a large building, essentially a roof on poles, containing a substantial and interesting collection of former transportation vehicles, both for the living and the dead, the animate and the inanimate, as well as a range of farm equipment. Here, as in the museum, space is sadly lacking. Apart from the above, the buildings already noted in a previous section and those identified on map 5, the only remaining feature of cultural significance is the sports domain. Its significance lies in its very early establishment and some of the trees are now over 100 years old. It has great focal value for the town and without it a major feature would be lost.
5.3.6 Visual Analysis and Aesthetics

Many of the visual values and detractions of the town have been alluded to above. Individual perception of aesthetics varies but there are a number of visual features, areas, and views which a majority would agree have particular value and should be preserved, extended, or duplicated elsewhere. Similar agreement might be expected with regard to detractions and these should similarly be noted. A discerning analysis of the present makes its extrapolation to the future a positive rather than repetitive process; the negative is left in the past.

Views

The town's enclosure makes views from within limited. There are only two significant visual outlets. The Upper Hogburn is seen from many parts of the town's centre and makes a major positive contribution to the town's character and gives meaning to the cultural dimension of it by way of explanation; the sluicing activity and the landscape generated is intimately related to the town's origins. The mountain backdrop adds yet another dimension, a vast scale, and the snow in winter gives the scene a context. The character of the Hogburn is ever changing with the light and shadows on the cliff forms and the seasonal changes in the larch colour.

The view to the south is a detraction to the town, gorse covered hills being incongruous in the Naseby setting. The sense of enclosure and security is lost without a compensation in either visual values or an added cultural dimension.

From outside the town there are important views looking inwards. The most obvious are those associated with arrival; from either east or west the road enters tree enclosure, which creates a mood of anticipation, descends, and the town suddenly opens up ahead. The initial impression remains even after the less desirable detail has begun to cloud the mind as one moves closer. Derwent Street is in general a very positive visual experience with tall trees and a focus on the memorial domain at the end but again negative detail tends to intrude.

From the eastern slopes within the domain views into the town are attractive and important (see map 4). These will need to be preserved by ensuring that the prolific regeneration developing does not negate at least select vistas.
Visual areas

The total appeal of an area is the consequence of its parts. In one extreme there can be absolute sameness and in the other total diversity. One is monotonous and the other a source of agitation. Between the two lies the ideal; diversity or interest within sameness or cohesion. In Naseby it is the forest trees and their abundance which provides the unity or cohesion while their varying arrangement in terms of density, age, species composition, with and without the inclusion of odd specimen trees, provides the diversity. Areas which are visually similar, either due to the nature of their vegetation, man made structures, or some other unifying visual factor, are frequently referred to as identity areas.

Within the Maniototo the study area is a distinct visual zone, quite unique in character, within which the township is unique. This 'uniqueness' is principally due to enclosure in an environment otherwise associated with openness and provides a contrast which excites and a diversity which interests. Within the major visual zone the subdivision to identity areas occurs and in like manner adds to the diversity within. A further element in diversity is the abundance or paucity of visual elements and their arrangement. Openings and enclosures, depending on their nature, impose a scale to which man may or may not relate.

The scale of Naseby township is totally comprehensible to the individual. There are many points from which the individual can perceive the total town and the surrounding landscape, particularly in its slight elevation, allows clear orientation. This may imply a lack of an important element, privacy, but within the whole are distinctive areas where this is possible, again within the framework of trees. It is important to identify distinctive areas and their values, both in themselves and as part of the whole, in order to gain insights on future patterns of development.

There are essentially two distinctive areas within the town; the central open area within which there is an historic area where certain features suggest such a character, and a surrounding area of enclosure, or at least developing enclosure, where forest trees grow in abundance. Within the two major areas are further distinct identity zones; for example Allen Street, perhaps the most distinct in the outer area, has
predominantly Douglas fir trees, very subdominant and essentially simple unobtrusive dwellings, is a quiet cul-de-sac, and in essence would seem to be worth emulating in future design. Other identity areas are shown on map 5, where the above is expanded.

5.3.7 Open Space and Public Areas

This has been alluded to in previous paragraphs but merits special mention, particularly public open space as development always threatens its availability and accessibility. Areas of significant public open space are confined to the sports domain, the camping ground, where use essentially negates its true availability as open space, and the school playing field. At present there are no walkways which are distinct from road access; pedestrians must endure the motor vehicle. Whilst such a provision may have been unthinkable in the past, with a vast easily accessible open space surrounding development, as the town has grown open space has shifted further away from its centre and the proportion of boundary which can be freely crossed has diminished. Tree development has concurrently closed in on formerly open areas. Future development must therefore ensure:

- that surrounding areas are readily accessible on all sides to all people, and
- that tree development does not ultimately present an inhospitable barrier to access.

5.3.8 Summary

It has not been possible to undertake a definitive analysis of the town's values and attractions but hopefully the written comments taken in conjunction with the maps and drawings has conveyed the essence of an evoked positive response to what is an extremely attractive town. Such are the essential pre-requisites to a motivation towards a protective and enlightened attitude in the future. Everyone in the Naseby community is potentially responsive, albeit in unique ways, to the town's values, but only when these are acknowledged as a community rather than simply individually will their protection be assured for the enjoyment of everyone in the future. The proposals as outlined in section 6 are based, as far as has been possible, on the values which already exist.
5.4 THE FOREST

5.4.1 General

For convenience the forest is described as being in two parts; the 'old forest' and the 'new forest', the latter being synonymous with the study area. The old forest is essentially contained within one compact block but there is a small outlier, the Black Forest, opposite the golf course on the main road to Ranfurly. This block contains remnants of the original plantings and part of the area, containing a mixture of mature Ponderosa pine and Douglas fir with dense young regeneration of the latter as an understorey, has been developed as a picnic area with a short walk.

The backdrop of species to the northwest of the study area are shown on map 2. The form, colour, and texture of the Ponderosa, Contorta and Corsican pines are essentially similar so that the old forest presents a rising face of similarity. Although the legal boundaries are straight, profuse regeneration is softening the forest edges. The old forest has basically a production forest character; blocks of single species prevail, roads are straight and paralleled by stand edges; there is a general feeling of enclosure with vistas available only from outside established stands. Exceptions to the general homogeneity do however exist where small enclaves of conifers have regenerated naturally and seeded into them. Poplars and Alders have been planted, and
subsequently seeded, along waterways. Whilst the old forest may have considerable interest it is unlikely, at present, to have a high recreational or scenic value. The future application of landscape principles, assisted by nature in the spread of established species, will doubtless enhance its aesthetic values in the future.

Although production planting was not undertaken in the study area until 1970, there already existed a substantial area of semi mature trees, dominantly Larch and Douglas fir. The majority of these originated from the early planting around the cemetery and in the domains. The natural regeneration has spread
profusely, particularly along the western and northern sides of the town and more recently in the east. Scattered throughout the study area are pockets of regeneration which have originated in part from the latter areas but also from the old forest. Following the removal of grazing stock following the acquisition of the study area by the Forest Service natural regeneration developed on tussock areas to supplement that in sluiced areas. The patterns of natural regeneration are shown clearly on map 2. Also shown on this map are the species and years of production plantings.

In some cases production planting has merely been to supplement regeneration and therefore quite random, but in general has been in rows of trees 2-3 metres apart with a similar distance between trees within the rows. A limited area of Corsican pine has been established at four metres between rows to act as a nurse crop for the later introduction of Douglas fir. The policy has been to establish Corsican pine on the harder sites, sluiced areas where soils are poor and water deficits are frequent, and other species, mainly Douglas fir and Radiata pine, on the better sites. For the area still not planted, the eastern portion of the study area, the main species will be Corsican pine in sluiced areas and Maricata pine on better sites. There has to date been no stated policy on the establishment of mixtures although some have been introduced on a trial basis. Without management intervention these will evolve naturally.

The forest boundaries are generally partly integrated into the adjacent land by natural regeneration and this molding will improve with time. All production species planted are already well represented as mature trees in and around the town so that some continuity is assured.

A brief summary of the main forest statistics is given in table 6 below.

5.4.2 Access Ways

Existing roads and walking tracks are shown on map 2. The requirements of forest management ensure a more than adequate provision of access for recreation. Roads, although often straight, generally follow the ridges and gulleys, so that major earthworks have been minimal and they are visually unobtrusive. Roadways serve not only as access for forest management but also as a fire protection function and some are
TABLE 6: Forest Statistics as at March 31 1976

- Total area = 2,427 ha (790 ha in study area)
  1,549 ha presently stocked and productive
  878 ha to be planted in the future
  270 ha unplantable (roads, reserves, etc)
  40 ha new area planted per year

- Production for year ended March 31 1976
  = 10,730 m³ sawlogs
  2,795 m³ roundwood (fencing material)
  1,268 m³ poles

- Production species
  - Main production: P. nigra var. laricio (Corsican pine)
  - Secondary: P. ponderosa (Ponderosa pine)
  Larix decidua (European larch)

- Employment = 3 staff and 8 forest workers

strengthened in this role by having open areas adjacent to them, particularly up the Wet Gully Road, where this fire break acts as a major barrier between the forest and the town.

5.4.3 Visual - Analysis and Features

Before man appeared on the scene the study area would have had minimal uniqueness, at least in the large scale sense, but rather have been but a small part of the Maniototo foothills. The remnants of a former time, the tussock cover and its associated ground cover, continues to provide a continuity but man's activities have introduced a diversity which makes the study area unique. And even within this area distinct visual zones have evolved, initiated by man and carried on by nature. Nature has softened the harsh sculpture of sluicings over some sixty years, while man has watched, and only recently has the Forest Service reawakened interest in influencing nature's patterns. Apart
from the pure visual values of these areas it is important to preserve representative samples of the landscape through its evolutionary stages; the pure tussock and sluicings through to sluicings completely clothed in natural regeneration.

The lack of major topographical variability coupled with the eventual height and density of trees threatens to make views from within the area, and certainly vistas out of the area, impossible. At the same time tree heights will reduce the visual scale of the sluiced cliffs. For these reasons management must ensure that at least some areas are kept completely open and in others tree density is such that light is not precluded and long views are possible through them. The areas having particular value and warranting a specific treatment must be identified and their values assessed. These are shown on map 3 and discussed individually as follows:

Coalpit Basin: The basin includes two dams; the upper larger dam and remnant of gold mining days, and the lower constructed by the Forest Service in 1974. Planting has been kept back from their edges some 25-100 metres but specimen trees have been planted inside this and natural regeneration is in parts prolific. A broken edge of Larch has been established on the western edge. Views into this basin are attractive
from all aspects and the extent and
density of developing trees threatens
to negate these and enclose the area to
the point of it becoming claustrophobic.

Hoffmans Dam: This is essentially a
gully, on a ridge, which was formed by
sluicing and has subsequently been
invaded by natural regeneration, mainly
Larch, and has at its southern end a
small water area. The gully has a
very high visual value from the
surrounding tussock and the still water
in the late afternoon contains
beautiful reflections of bare Larch and
snow covered mountains in winter,
bare mountains and delicately foliaged
Larch in summer. Here again the tree
density threatens views and light

intensity in the gully could easily
become limited.

The Hogburn: The Hogburn has a very
high visual and recreational value.
Although essentially enclosed there
are several visual outlets; to the
north and south and up side gullys.
The mountains at the northern end,
particularly under snow, add an
important dimension. They provide a
link with the greater landscape as do
the tussock ridges to the east,
visible from most parts of the basin.
Although the Larch and sluicing
throughout the gully might be regarded
as monotonous to the walker in fact
the variability in size and density of
Larch, the infinite variation in form
and scale of the sluiced cliffs, the
varying visual links with outside
features, and the ever changing light
results in infinite diversity and
interest.

Views into the area are important not
only from the town but also from the
eastern tussock ridges.

From both within and without this area
is again threatened with a diminution
in value by too dense tree development.

Roads and Firebreaks: Straight roads
and firebreaks are a product of the
machine age. Fortunately those in the
study area acknowledge the topography and some are located on former tracks of the gold mining days. In reflecting the ridges and gullies the roads tend to run north-south so that vistas to the mountains and the plain will always be kept. For walkers moving east-west these will provide visual relief from the general tree enclosure and the firebreak has a potentially very high visual value in this respect; a sizeable opening in an area becoming increasingly enclosed. For visual reasons such openings should be extended and would have the added value of lowering fire hazards. Tree edges do however require careful treatment and must be broken and irregular.

Recent Claim: This area, visually distinct as an enclosed sluiced out basin, adjoins the Hogburn gully and has a unique value in retaining samples of sluicing equipment in situ. The whole area can be viewed from the cliff tops to the south and regeneration has been removed to retain the authentic character of 100 years ago although the surrounding trees above the basin still intrude.

Water Races: The water races, particularly the Mt Ida race, have long been used as walking tracks for which they are ideal. They follow the contours with a minimal fall and are therefore easy to walk with gentle curves. They are generally located mid slope and allow fine views into the gullies as well as up to their heads and to mountains and plains beyond.

The Areas Between: Before the beginning of Forest Service planting in 1970 the areas between were either open tussock or rough sluicing with a mixture of regeneration. Many of those areas have a sameness and orientation comes from features in the distance; the surrounding mountains and hills and the old forest. Although the ridges are not high there are points along them where views are important and these must be preserved by identification before planted or naturally regenerated trees obscure them.

The Eastern Domain: The eastern domain is extremely important to the future amenity and recreational values of Naseby. It constitutes the most conspicuous backdrop to the town as the faces are in parts quite steep and some excellent vantage points exist. The large dam has a high potential value but at present the few attractive specimen trees are negated in their value by others, dead, dying or decaying, and weeds, notably broom.
Although generally open the curling and skating dams are enclosed by large, 30 metre+ radiata pine trees, which are a conspicuous visual element from the town. Along the majority of the eastern face however weed growth predominates with developing mixtures of regenerated trees, notably pines.

5.4.4 Design Constraints

1 Water Races

The Mt Ida race is of vital importance to the whole of the Maniototo and is maintained by the Ministry of Works and Development. Management must ensure the provision of access for maintenance and race protection from forest operations and recreational use.

2 Fire

During the months of highest recreational use the study area can be threatened by very high risks. Fire does not simply threaten the forest but the town also. Although Larch and Douglas fir are not high fire risk species there still remains a considerable understorey of dead material which could carry fire from the town to the forest or vice versa. All development, both within and outside the forest must take serious cognizance of the fire hazards.

5.5 THE TOWN-FOREST BOUNDARY

The town-forest boundary is the single most important consideration for the future if the forest is to provide the visual and recreational benefits for the Naseby people to the fullest possible extent. The forest land adjacent to the town is all managed as a reserve and can therefore be treated in similar fashion to that which lies within the town. In the west the boundary line is defined by a straight bulldozed break through the trees whilst to the north there is no ground definition.

At present walking access across the boundary is physically restricted. The only well defined access ways are up the Translator Road and up the Hogburn; ideally there should be access at all points but land tenure within the town makes this impossible. Future development must, above all else, ensure accessibility from as many points in the town as possible.

5.6 SUMMARY

During the last ten years or so society has shown some signs of moving away from its obsession with economics and growth, particularly where not to do so involves a confrontation with the environment.
At least some element of idealism is acknowledged in the evaluation of a 'do nothing' option even when 'doing something' is politically the expedient. For politics too acknowledges an idealism but it is not of the same kind that the environmentalists perceive but rather is founded in an ultimate affluence for everyone; a time when all have freedom to do and be exactly as they wish? But the limits of affluence have been reached; the desirability of more affluence for some must be weighed against the prospect of more undesirable effluents for others. There must be a resolution of the extremes and this cannot be by societal and environmental zonation; the acceptance of one extreme for one group or environmental situation and the other for another. Such a resolution results in the environment of the affluent being at the expense of the less affluent, be it in their work, living, or recreational environments. As affluence increases the environmental deterioration in exploited areas spreads to the less exploited until ultimately these are engulfed; or at best remain as precarious and isolated enclaves. Nature becomes a pale remnant of a distant past and the promises of affluence become an illusion. We must resolve a balance in all parts of our environment so that nature is everywhere respected and the benefits derived are available to everyone in perpetuity. We cannot deny technology but the economic system which supports it must not be the sole dictate in its use.

The Naseby area evolved as a result of the system we uphold and depends upon it for survival as it exists, but only in its failure as a recipient of high financial inputs does it now have the character which so many admire and seek.

The old forest has existed for over seventy years as a production unit with initially an experimental role but latterly a production one, founded in economics. Similarly the town finds its origins in economic pursuits; gold. The old forest and the town have existed largely in isolation of one another, both geographically and in the minds of people. The new forest lies between the two in a new era with a new generation of people with quite different expectations to those of the initiators. There are commercial commitments in town and forest as well as recreational and cultural expectations; what should their resolution be?
'The Hogburn Gully from the Southern end; and man made basin cut deep into the tussock ridge. An ever changing scene from season to season, day to day, and hour by hour. If pines should eventually dominate there will be nothing but sameness, engulfment and a perpetual dark'.
6.1 DESIGN PHILOSOPHY

The main objective in the future development of the study area must be the integration of town, forest, and domains. In the attainment of both optimum landscape and recreational values the legal boundaries must, as far as is practically possible, be ignored. Special areas and features must be treated as part of a greater whole without jeopardising their uniqueness. The people of Naseby have traditionally regarded themselves as part of the greater environment and its social fabric; the future must preserve and enhance this ideal.

The town relies heavily on the influx of summer visitors; permanent residents are few and many are retired. These visitors comprise three main groups; older couples or individuals who may eventually retire in the town, family groups which may include two or even three generations, and camping families. There appear to be few teenage groups, either in cribs or camping. The survey conducted in January 1977 and referred to in sections 4 and 5 concluded that both adults and children engage in activities which rely heavily on the outdoor environment. There was a strong positive response to the immediate surroundings of the township; the trees, the climate, the scenery generally, and the people or general atmosphere. There appears to be minimal interest in surrounding areas of interest such as St Bathans, Danseys Pass, or even the West Eweburn Dam on the western side of the old forest; people seem to come to Naseby for itself rather than it being a stopover or base for excursions elsewhere. Its location off the main highway means a significant diversion for the casual visitor. For this reason such visitors are few and the commercial sector must rely on the people who holiday there.

Both in their responses to the questionnaire and in discussions the people expressed strong reservations about the possible nature of future development in Naseby. A commonly expressed fear was that it would become 'another Wanaka, Queenstown or Arrowtown'. This prompts the question "What has been the nature of development in other Central Otago towns and to what extent would similar development be appropriate to Naseby?"

In both Queenstown and Wanaka the characters of the immediate town environments have been downgraded. The old buildings are dominated by the new and the rural atmosphere has
long since vanished; both places have to some extent become rural suburbia and dormitory towns for tourists. But much of their appeal remains for they are an integral part of a very much larger landscape and looking outwards from the man made environment remains an inspiration if looking inwards does not. The town scale is absorbed at least in part by the magnitude of the surrounding natural landscape which has both vertical and horizontal scale. Their development has made it possible for many to experience a slightly blemished landscape where only few previously enjoyed its more pristine state.

The charm of Naseby is almost entirely within. The scale is miniscule by comparison with the central lakes landscapes and Naseby's sense of enclosure is the essence of its character; the greater Maniototo landscape has, by comparison, only limited appeal. The scale and intensity of development must be in accord with what exists and in no way dominant; there is a highly desirable character to be preserved and enhanced rather than the need to create one. The trees give the key to scale and must remain dominant in both height and density. Where trees are fewer it is the older buildings which must control both the scale and form of new development. Any large scale structure or group of structures in Naseby would not simply 'blemish' but completely destroy its charms. In addition to development being visually in sympathy with what already exists it must ensure the continuation of ready access to open spaces for recreation, an essential element in the people's affinity to the place.

The availability of open space, given ready access to the forest, is considerable. Children are restricted to walking and many adults prefer it. Walking tracks of various types and distances would appear to be the primary requirement of the forest and this makes the study area itself, rather than the old forest, of greatest importance. The atmosphere an individual seeks when engaged in recreational walking, ideally precludes the noise of the machine; cars, boats, trail bikes, etc. Many people appreciate Naseby simply because they can ignore their vehicle for the duration of their stay and this quality rates second only to the lack of a telephone! Simplicity was an attribute almost universally acknowledged but was frequently in conflict with other aspirations expressed.
The kinds of services and facilities claimed as desirable are not necessarily compatible with the simplicity objective and many would require, for their economic establishment and maintenance, a population which seriously downgrades the existing character. Urban services and a rural character cannot exist together. Essential services do however require certain levels of patronage and at present these tend to be marginal. For this reason an increased population may be justified. The recreational resource should be available to as many as possible and what the upper limit might be can only be guessed, even with the use of wizardly calculations, but the study area will doubtless have a capacity to carry more people in the future as trees develop and privacy is available over ever smaller areas. Although increased numbers may come as day visitors these are likely to be few. People must be accommodated within the town. It is the availability of space within the town which imposes the limits to growth rather than the total recreational resource. In all planning, for either towns or recreation, 'development' tends to be regarded as synonymous with 'growth' and any limits planned for are exceeded in the rush. A continual awareness and monitoring is required to ensure that desirable limits are not exceeded, for growth rarely goes backwards.

Within Naseby growth must not be at the expense of either visual or cultural values and there is a need for a clear definition of acceptable area extensions and development standards in terms of visual and cultural alteration. While such parameters may be established by an outsider these cannot be definitive for the ultimate choice must be made by those who are directly involved. Community involvement in planning should always be a priority in establishing objectives. Without this support and involvement the objectives are rarely achieved. At Naseby there is an important additional reason. As a small community with limited rateable property income is limited. To improve facilities and services either rates must increase, rateable property must increase, or the third alternative is for the first to apply but offer the opportunity for people to contribute their skills in lieu of payment. A fourth might be for people to do the latter on a voluntary basis but where this was possible at Naseby in the past the town now seems divided into disenchanted former 'doers', and 'non doers'.
The occupational range of respondents to the questionnaire indicated a wide range of potential skill inputs and the scale of Naseby should make a very highly developed community sense possible. If the people really believe in what they so strongly express as the important values of Naseby and the preservation of these requires a very limited population growth, then they will be willing to make a physical contribution and in so doing enjoy the experience of communal participation, thus reinforcing the claimed cultural values of friendship and informality.

As a developing Central Otago holiday town Naseby is unique in having only a very limited commercial sector and thus being low key and very suitable for family holidays. This is the role it should retain.
6.2 A DESIGN PROPOSAL

6.2.1 Introduction

In view of the scale of the study area it will not be possible to provide detailed plans. The approach has rather been to provide development guidelines and principles with suggested concepts (and alternatives, where appropriate). The associated management problems and their possible solutions are discussed.

Maps 6 and 7 illustrate the long term form of the study area. This section discusses the overall design with reference to these maps, while later sections discuss specific aspects and outline principles and management.

The forest land was acquired primarily for its production potential. To date the design of the development has been directed essentially towards this end. Map 3 shows the general use zonation of the forest area. This is not derived from any clear statement of policy but it is simply a pattern which has evolved.

In future development any notion of zonation should be discarded. The entire area should be regarded as having a production role but the term 'production' is to be interpreted in its broadest sense; it must not be regarded as synonymous with the clearfelling of large swathes but rather seen across the broadest possible spectrum of its meaning. Clearfelling may be acceptable in some areas for purely economic gain whilst in others the preservation of the forest structure for aesthetic or recreational reasons may require tree removal. Decisions should not be overly anticipated and short term losses of visual value should be regarded as potential long term gains; change may be painful at its inception but bring new diversity and stimulate new perceptions in the long term. The zonation process tends to convey, albeit unwittingly, the idea that the zone title excludes serious consideration of other values and the healthy objective of diversity may be lost. A production zone becomes monotonous and devoid of aesthetic merit and the aesthetic zone may, without some tree removal, eventually become equally tedious as gaps close and a few species tend to predominate. This is not to say that priorities for different areas should not be clear but rather that there should be no definitive statement which predestines inflexibility and non responsiveness to changing circumstances.

Similar principles apply to the town's development where rather than prescribe the precise nature of the future it is
better to clearly identify the objectives and the values associated with these so that changes in circumstances do not invalidate what is prescribed but make possible the reinterpretation of the values and objectives in the changed circumstances.

6.2.2 The Forest

The forest area is almost entirely established so that the basic character is already formed. What remains to be planted in the east has few features of interest but does contain significant points of elevation. The main provision for the future must be to create a unity in design within which there is interest, primarily for walkers, in species and spacial variations. A certain unity already exists in natural regeneration and its continuation in spread will further add to this unity. To retain openness will require a constant management input; spaces will need to be left in plantings yet to be undertaken and created in plantings existing.

Recreational development for walking and the maintenance of an atmosphere appropriate to this activity will preclude noise generating pursuits such as motor boats and trail bikes. Except in the Coalpit Basin, access to which is adjacent to the forest boundary, motor vehicles will be kept to the peripheries and suitable car parks provided.

The Coalpit basin will provide for swimming, fishing, and picnics. Suitable facilities will be installed as demand requires them but the area is unlikely to become highly popular until the surrounding trees mature; in perhaps 15 to 20 years.

An adventure playground will be developed within the forest environment. Its location is tentatively prescribed for on map 6 but more careful consideration may suggest a better alternative.

In the long term production from either thinning or clearfelling should not be visually obtrusive or excessively disruptive to recreational pursuits. Topography is easy so that material can be removed by ground hauling and clearfelling areas need not be conspicuous. Material can be hauled back from sensitive faces along roads and walking tracks. Such edges can be preserved by planting perpetual species.

The general form of the developed study area in the future is shown on map 6. A general outline of species is given and the future location of tracks and special areas shown. No attempt is made to
prescribe exact times of implementation; this will occur as interest demands it. The principles observed in this design have taken cognizance of the objectives established in section 5 and prescribed for below.

6.2.3 The Town

Town development must preserve the existing character. New development should observe the nature of the existing and tend towards the type of more recent years which preserves the forest character. The central area should be kept open with the planting density of major trees restrained. In the historic zone building density should be allowed to increase but structures should observe traditional form and scale. Pedestrian access should be provided wherever possible both within the town and from the town into the forest, for the enjoyment of walkers in general, and the safety of children in particular.

People should be encouraged to clean up the 'junk'; whilst some structures have charm, even in the most dilapidated state, regardless of its age, rusting iron has none and frequently has long since had its original function negated. A minimal physical input on private properties and a communal clean up of public space, particularly the swimming dam, would immediately make a major difference to the town.

A development plan outline is given on map 7. This must be regarded as a broad scale interpretation and the precise details must ultimately be the concern of the local people.

6.3 RECREATION

Within the town there already exist adequate facilities for outdoor recreation, given an adequate level of maintenance. The most valuable asset, the swimming pool, requires considerable attention. Sheds need repairs and paint and the pool itself requires either an extension to the concrete base or a polythene film held in place with river gravel and boulders.

Within the forest walking tracks will be established to provide access to all main features and arranged in circuits of varying distances. An educational walk will eventually be established in the area north of the Coalpit Basin where a range of species can be seen. Also in the longer term a walk could be provided to the West Eweburn dam, through the old forest and along the northern boundary. The location of walking tracks and the
management of areas adjacent to them must provide the greatest possible interest and diversity. They must have appeal in themselves and not simply be linkage lines to special features. Eventually maps can be provided, perhaps similar to map 6, which clearly show the recreational possibilities of the area and all track locations. In general walking tracks will be of the following types—

- signposted and marked tracks.

- unmarked tracks where access is easy but walkers are free to make their own choices.

- educational walks with name tags on botanical material.

Picnicking will of course be possible anywhere within the study area but the Coalpit will be specially developed for this purpose and car access provided.

6.4 FOREST ESTABLISHMENT

At present there is no policy to extend forest land beyond the present holdings. Species selection for the eastern area yet to be planted is dictated by the knowledge of site constraints and wood markets. The successful establishment of large and previously bare tussock sites restricts the choice to pines, the most hardy of which is Corsican pine (Pinus nigra (var. laricio)). This is slow growing by comparison with Radiata pine but maintains superior form and is highly desirable for posts and poles. Radiata pine will grow
at Naseby on the better sites where moisture is not limiting but frosts can result in patchy establishment and snow damage can cause severe deformation. Muricata pine shows a similar growth rate to the latter and is professed to exhibit greater frost tolerance. Some of this has already been established in the east.

European larch has been very successfully established but form, except on the most sheltered sites, has been atrocious. This does not negate its visual value, only its production potential. Trials suggest that more careful selection of provenances may greatly improve the ultimate success of the species and management is thought to be critical, particularly early and heavy thinning, for the final tree form. Thinning in the past has been either nil or at best inadequate.

Douglas fir has been widely established, some in the open tussock but most beneath poisoned stands of 'failed' pine species where there is shelter. In the Black Forest there are some excellent specimens of some maturity and regeneration beneath is profuse. Under an overstorey form of Douglas fir is excellent, even on poor soils, whilst in the open both form and growth tend to be poor.

There are a number of other production species in the old forest but the above provide the range from which future plantings must be selected.

On exposed ridges and in sluiced areas Corsican pine will be planted but within these general areas Muricata pine will be established where soils are undisturbed. Douglas fir will be established on the eastern side of the Spec Gully up the steep faces beneath an initial crop of Corsican pine. The latter will be established at 4 m x 3 m and Douglas fir some ten years later at 3 m x 2 m. These faces are visually conspicuous and in the long term Douglas fir can be managed as permanent cover under a selection system. Also thinning will not be imperative and steeper areas can remain undisturbed until high value sawlogs are removed.

There will be no planting along the ridge to the east of the Hogburn Gully. This will be retained as open tussock and extend from the limits of the sluiced areas on either side. This tussock enclave will provide a link to the open country to the north and allow vistas from this ridge out to the Ida Range. The tussock ridge will provide an important backdrop to the Hogburn Gully where tall trees, if planted,
would diminish the scale of cliffs, and limit sunlight. An open area will also have the practical value of providing a fire break.

Along the Eastern Boundary, trees should be kept clear of the ridge to allow long term views through or over stands into the forest.

On all steep faces where logging is likely to be visually obtrusive, particularly track formation, access ways along the contour should be left unplanted. These can be available in the interim as walking tracks and roads eventually formed without a drastic opening of the tree canopy which, particularly on exposed faces with a westerly aspect, may predispose stands to wind erosion and eventual swathe clearance.

Larch should be established for its visual values where a variation is required or where a linkage to existing vegetation is needed. For example to the east of Redwood Road pockets should be established to provide a link with the Hogburn Gully from which they will eventually be visible; such plantings can provide further links with the Larch regeneration in the sluiced gullys to the east. All Larch should be established with eventual production in mind.

All land to be planted in the study area should be established by about 1982.

In order that the general unity provided by Larch and Douglas fir can be retained throughout the forest Douglas fir should be established in random pockets within and on the edges of pine stands after an initial heavy thinning. In the long term natural seeding will extend these enclaves and reinforce the recurring mixtures of the forest area. In the very long term the forest may centre on Douglas fir as the primary production species and its early establishment across a range of sites will provide both seed sources and guidelines to its future site suitability.

Any additional species should be established without the objective of production, although this may not be precluded in the long term. These 'other species' should be used to demarcate key points and add diversity. The main species will be Birch (Betula pendula), compatible with the tussock and providing contrast in all of form, texture, and colour to the pines. Redwood (Sequoia gigantea) will
be used as indications of key points, intersections of tracks, and entry/exit points to aid orientation. Groups of other conifers as listed in the appendicies should be planted where site and context suggest, again to provide contrast and add diversity.

Exotic hardwoods have not been widely grown in the Maniototo and are difficult to establish, particularly on a large scale where regular weed removal and watering is not possible. A number of Eucalypts would grow in the area but although appropriate to the Maniototo they are frequently out of character with pines and European hardwoods as an intimate mixture; they can be attractive where they have sufficient space to stand alone or in groups. Some of the oaks, particularly *Quercus cerris*, English Beech, limes, Ash and Elms could be established given sufficient care. Trees which provide edible nuts would be well worth trying on an experimental basis. Small trees and shrubs may be established as fillers but except for those which produce berries they should be kept to limited areas. Rowan is already widespread and produces heavy crops of berries.

It is not possible here to explore either the full species potential or their locations; these must be regarded as of secondary importance to the basic form of the forest with its major species and space/density relationships. Once this basic form has been established then it may be desirable to make detailed designs for the more intimate areas such as the Coalpit basin.

For 'other species' special care will be required in establishment. They should not be generally planted until production species can provide some shelter; nurse crops may well be specifically established or enclaves formed by the removal of production species. They should be planted in sufficient numbers to allow for some mortality but more importantly to ensure that they become a conspicuous element in normal management; single species are frequently forgotten and vanish in the grass. Visually an isolated hardwood can look ridiculous against a sombre backdrop of pines. In general not less than 20-30 trees of any one species should be planted at any one location, except where they are intended as markers.
6.5 FOREST MANAGEMENT

6.5.1 Introduction

From the landscape point of view the main objective will be to create and maintain open spaces. There is an immediate need to remove a large number of naturally regenerated as well as planted trees while this can still be achieved with slashers at low cost and with minimal visual disruption. Ideally felled material should be removed but the scale of some operations will make this impossible.

Tree removal should not always be entire; a range of tree densities, although not visually important until stands attain some maturity, must be initiated early to ensure long term wind stability and a natural variability in canopy size. Map 6 shows, by comparison with map 2, where some tree removal is required. Specific areas were referred to in section 5.

The general principles and circumstances to which they apply are outlined below.

6.5.2 Stand Edges

Straight stand edges, particularly where these parallel roads on both sides over long distances, can be visually monotonous. At Naseby most forest boundaries are either well integrated with the adjacent land, not conspicuous from any important viewpoint, or occur in gullies rather than on ridges. Where they are presently conspicuous natural regeneration is developing to soften them. The boundary to the west of the Coalpit basin does however require careful treatment and some planted stock should be removed to avoid what will otherwise become a sharp straight line when viewed from the Coalpit road.

Within the forest straight edges are frequent and the fire break formed on Wet Gully road, unaltered, will eventually be a most undesirable visual feature. The need to keep the road at a reasonable distance from stand edges requires that the alignment must follow, at least in the main, the configuration of these edges. Both the road alignment and the stand edges therefore need to be altered. Stands should be thinned to create variable stocking and favour different species along the edge, at the same time creating enclaves into the stands. Some of these might later be partly planted with broadleaves which could also be introduced in what is now open ground to extend the stand edges towards the centre of the fire break.
Pruning trees to various heights would also introduce another element of diversity and allow visibility into stands. The fire break width can be maintained by compensatory extension and enclave creation on opposite sides.

Although straight portions of roads and tracks have visual value, over long distances, particularly walking tracks, they can become monotonous. The stand edges should ideally be of a variable distance from the road or track and constant changes in space introduced; completely canopied to completely open with the access way varying between the centre and edge of the opening. Variation in species and stand treatment will occur between roads and walking tracks; the walker will appreciate infinitely greater diversity and detail than the motorist. Occasional distant views out of the immediate environment offer relief and re-orientate the viewer.

From ridges, views can be given interest by being completely open in parts, partly obscured by thinned stands in others, and entirely obscured in yet others. On thinned edges however an awareness of likely succession is required; Douglas fir will regenerate under low light conditions and may eventually dominate if thinning is not sufficient
to allow other more light demanding species to develop.

6.5.3 Special Areas

In all areas of special interest, as outlined in section 5, there is an immediate need for tree removal, either partial or complete. It is impossible to prescribe in detail for this requirement; such operations need to be designed on the ground with all persons involved keenly aware of the intention. Specific areas are discussed as follows:

Coalpit Basin - To preserve the openness and scale of this basin there is a need to shift the present plantings back. Map 6 shows the general form to be created by:

(i) the removal of swathes back to the water race in the north. This will increase the scale when entering from the Coalpit road, at the same time opening up views to the old forest. Views into the basin will be possible from the water race track. Shifting the edge back generally will, in the long run, ensure low sun enters the basin.
(ii) A similar removal of swathes, or at least heavy thinning, to allow views into the basin from other points around the water race and roadway entrances from east and west.

(iii) The planting of broadleaves along pine stand edges to soften and break their monotony. Species should be limited to two or three, the basic one Larch, with shade species for the car parks and other key points, and also to divide the area loosely into two spaces.

Hogburn Gully - Tree removal here must be considered from four view points; the gully bottom, the ridge and water race tracks, and from within the town. Important views of the cliffs must be kept open and trees removed for a suitable distance back in order to maintain their scale. This distance will vary according to the distance from the track, the slope of the ground to the cliff face, and the species. A final stocking must be attained now to prevent the later need for removal of large trees with major visual disruption.

Diversity will be introduced by variable density, final stockings, variable pruning height, and favouring variable species. The stocking adjacent to walking tracks should be carefully manipulated to create variability in experience; completely canopied to open, dense stands to 'transparent', clean tree boles to heavily branched. A further sensual experience in this area can be accentuated; the basin can be extremely hot and the coolness of a canopy, with water on the race track, will contrast sharply with the experience of openness.

Recent claim - here all trees have been removed to create an authentic atmosphere; the requirement will be to maintain this and ensure that stands in adjacent areas are kept back from the cliff top edges and open to prevent excess shade on the surrounding cliffs.

Sluicings in the eastern sector - Although some planting has been undertaken to supplement the regeneration here future thinning should be heavy to retain views into workings where appropriate. Untracked access should be possible and linkages between tracked areas allowed for, say from the Redwood Road to Spec Gully. Larch should be the favoured species in these areas.

Hoffmans dam - This basin is threatened by complete enclosure both from within and from the surrounding trees above the
cliffs. Heavy thinning and tree removal is required similar to that outlined for the Hogburn. Thinning within the basin should consider the viewpoint of persons wandering about inside the gully.

Car Parks - Car parks should be located as shown on map 6. These should be informal and, where not already existing, trees should be planted to afford shade. Parks should, except in the Coalpit Basin, be located as near to the forest boundary as possible. As most parks will be located within forest land it would be desirable in the long term to shift gates from the boundary into the forest beyond parks and provide walking gates adjacent to vehicle access gates. Any park demarcation or containment should be by low pole fences.

Adventure Playground - The site shown on map 6 has been chosen for its easy access to the camping grounds and swimming dam, while being sufficiently remote from dwellings to allow children privacy and freedom from noise constraints. The forest structure should be retained within the area and any construction be of natural materials; poles, posts, shingles, rope ways, bridges of timber, etc. In addition to built structures there could be a supply of easily managed pole and plank material for children to construct their own creations. The possibilities are infinite and any development should be a joint project between the local people and the Forest Service.

Forest Signs - There is a considerable literature available on forest signs. Briefly, they should be simple, of natural materials which are preferably local and of natural colours if painted, easily read and suitably located, and above all, robust and easily maintained. They should be of uniform style throughout the study area. The information included on any one sign should be appropriate to the user and circumstance. Detailed information is of little value to motorists but may be perused in depth by a walker. Educational detail is probably best kept to the information centre to be developed in the town.

6.5.4 Forest Maintenance

The essential problem for recreation and visual values will be the maintenance of open areas. The constant invasion of natural regeneration will threaten infilling and means will need to be devised to prevent this. Discing is a traditional means of fire break maintenance but this is not only expensive but visually quite unacceptable.
Various green crops have been tried, with and without annual harvesting. Lucerne has been tried at Naseby with variable success in the forest and considerable success outside it. There seems little alternative, whatever additional means may be required, to stock grazing. This will require subdivisional fencing both for stock control and the protection of newly established areas. Stock will also aid the reduction of waste material from production operations. In order to improve the quality of the open spaces, both visually and as sustenance for stock, topdressing and oversowing may be desirable at least in some areas, particularly fire breaks. Grazing is unlikely to be an economic proposition initially with high capital inputs and poor access, but in the long term, once grass swards are established and stands have become more open with maturity, it may prove profitable. This should not be its objective however; it should be regarded firstly as a cost for recreation and secondly as an aid to forest management.

Other means of regrowth control, of both trees and weeds, will need to be employed. Tractor-mounted scrub cutters could be used on accessible areas but otherwise hand slashing and grubbing will need to be resorted to. Chemicals should be applied only from the ground and where runoff will not contaminate any water supply.

6.5.5 Forest Production

To obtain quality timber in the long term from production species thinning is essential during the development of the stands. The only exception is Douglas fir, which can produce quality timber without thinning although there may be some reduction in final quantity of better grades. Thinning inevitably results in some visual deterioration. With the generally easy topography at Naseby it should be possible in most areas to thin back from a face and skid within the forest rather than in the open. Logging tracks should be allowed for at establishment. Skid sites should be kept within the forest where to have them on the stand edge would be disruptive.
Although clearfelling is so far into the future that any serious consideration of its implications at this stage would be unrealistic, it is possible to initiate some practices to protect stand edges. On sensitive faces species which can be selectively logged rather than clearfelled should be planted and similarly on sensitive edges, hardwoods established. The objective should never however be to totally obscure the production aspect of forestry from the recreational uses. Production from the land is a perfectly natural process. It can only be genuinely offensive where it is associated with excessive scale, and hence major visual disruption, excessive waste, or serious disruption to natural soil and water systems. The recreational uses should never be allowed, as a heavy consumer of forest products, to disassociate from the source and nature of raw material production. The link between the two ends of the process is frequently conveniently ignored and many environmentalists tend to be mildly schizophrenic, on the one hand accepting without question the consumption of natural materials and their by-products whilst on the other lamenting the deterioration of the natural environment.
6.6 THE TOWN

6.6.1 Introduction

Map 7 shows a general outline of how the town might look in the future. The forest character has been preserved in the peripheries and extended into the town where appropriate. In the central area specimen tree planting has been intensified, particularly along the main access ways, Derwent and Nighting Streets. A more definite and logical circulation pattern has been outlined and in new development provision is made for pedestrian access ways which are, as far as possible, isolated from vehicle access. New development preserves the forest character or strengthens it, as in the eastern domain. Housing density is allowed to increase within the historic area. Tree enclosure of the town is reinforced and trees established at the southern end; here the damp conditions would preclude conifers but broadleaves, poplars, willows, or alders, would be appropriate. Views into the town from the eastern domain are retained.

6.6.2 Trees

The pattern of forest trees requires little alteration. A few additional larch are required in the west. In the east, particularly on the slopes of the domain, considerable alteration to the developing structure is suggested. Contorta pine should be removed and other pines kept to a minimum. The species prevailing on other sections of the town edge should be favoured and reinforced. Douglas fir should be established in the gullies and larch on the spurs, running out onto the flats above. Their sparser crowns will allow greater visibility from the ridge top, provide a backdrop of autumn colour to the town, and allow sunlight through in winter.

The thinning of larch and Douglas fir will be required in the west and southwest to allow for the proposed development. This thinning should be well in advance of road formation and building, at least five years, to allow for tree stabilisation.

Specimen trees, both broadleaves and conifers, should be established not only within the town centre but also in that area which is essentially of a 'forest' character to add interest and diversity. Single specimens or groups should be used as appropriate. The majority should be species already represented in the area to preserve a unity but others should be introduced to provide variations in colour, form, and texture. Care will be required in
placement to ensure that undesirable shade is not created, particularly during winter, and that views are not obliterated.

Whilst a detailed plan may be desirable for tree establishment within the town and random approach is in keeping with the existing character and appropriate to its historic basis. A haphazard distribution of a wide range of species is typical of early New Zealand towns, where tree planting was afforded any attention.

6.6.3 Town Layout

The essential feature of the town's future layout is cul-de-sac development. These have many advantages which are appropriate to Naseby where privacy and quiet are essential aspirations and objectives. Through traffic is negated and a curved alignment with a narrow running surface reduces traffic speed so that there is less noise and pedestrians, particularly children, are safer.

In the developed part of the town some of the purely residential streets have been closed off where this is unlikely to result in undue inconvenience. A loss of access from one end of the street should be more than compensated for by the values outlined above. Tree planting becomes possible at the closed end and some enclosure of the entire street with the establishment of a unique identity becomes possible.

The road to the cemetery has been used as access to new residential development. Traffic to the cemetery is light and this would be encouraged to use the proposed car parks adjacent to it. All development here is based on cul-de-sacs and their overall shape allows for the retention of forest between, with the development of pedestrian access ways within. The objective has been to segregate residential vehicle and pedestrian access from that associated with car parks and camping.

The existing and proposed development is integrated by the vehicle circulation system. A central circulation is given emphasis which incorporates the two main access ways from east and west, includes within it the Forest Service H.Q. and proposed information centre at the critical access point, and incorporates the commercial centre. Access to the proposed car parks in the west, the swimming dam and translator road in the north west, and the Hogburn Gully in the north east follow logically from the central system. In
the centre of the area roads are formed to cul-de-sacs.

In the commercial area Broom Street is developed as part of the circuit off which car parks could be developed to remove cars from Leven Street, the lower end of which becomes a one-way south. With parking here negated and the need for only one-way access it would be possible to establish trees in the street. This would be highly desirable to reduce the scale of the main street, provide shade, and generally improve its visual value.

The District Scheme currently allows a minimum 40 ft road width. For cul-de-sac development this is excessive and visually disruptive. Whilst a hard surface to carry light traffic is necessary there is no justification for footpaths or curbing and channelling. A 25 ft running surface with a stabilised edge would suffice.

The development outlined in the eastern domain would be very long term but the forest framework should be established immediately. This is needed to establish shelter in what
is presently a very exposed area. The primary purpose of the domain should continue to be recreation but low density dwellings should be allowed without land ownership. The area would require a link to the sewerage system established in the town below and a water supply for the town is currently being investigated for some renovation and the possibility of a long term supply to this area must be considered.

Access to dwellings in the eastern domain should be minimal. Although vehicles would require access this would be infrequent and running surfaces should be visually unobtrusive to prevent disruption to the recreational value of the area.

6.6.4 Structures

The need to remove obsolete structures has already been referred to in section 5. The 'clean up' aspect of visual improvement is re-emphasised here; it is the least expensive and frequently the most rewarding.

Power poles are invariably noted as undesirable structures. If the intention is to emphasise the historic character then, given finance is available, power reticulation would best be converted to an underground system. In many situations however they can be visually absorbed and whilst not a desirable structural element they can be tolerable. In new development however, where choice exists, the power reticulation should be through underground cables. In a forest environment this also negates the long term need to grossly deform trees by pruning where branches threaten to ensnare power lines.

The district scheme prescribes a minimum section size for detached units of 20 poles (semidetached and terrace units require slightly less). Such a standard may satisfy the average physical need for the average householder in the average residential development. At Naseby there are special conditions. A 20 pole section is not in keeping with an historical development form and is probably an unnecessarily large area of land for many crib owners who come to relax rather than duplicate their normal year round activities of lawn mowing and gardening. There is furthermore no need for private recreation space where public space is plentiful. For these reasons then, subdivision to less than 20 poles should be allowed at least within the historic zone where early New Zealand residential areas frequently had 10 pole sections.
this way some people would be able to subdivide an over-large section and thus allow more people to enjoy Naseby without the need for area expansion. It was to observe this constraint, containment of town area, that the type of new development outlined is proposed.

It was decided that the town needed more people for economic and basic commercial viability but that growth in the traditional sense of high capital investment and area expansion would destroy the simple character. It has been one of the few towns in Otago, and New Zealand, to develop as a strictly quiet family holiday centre without a major commercial input. There is a cross-section of occupational and income groups and a general lack of pretention. It is in fact what many New Zealanders lament the loss of in the so called 'boom' of the post war years. Formerly regarded as a phenomenon funded in conservation the simple community is now becoming the objective of idealists.

If the normal approach were taken in developing what remains, 20 pole sections for single units, then within the limits of the town boundary perhaps 30-40 families
may be provided for. The section costs and building codes would further make this available only to high income families. Although rates would provide a source of income to the town high income groups tend to be less tolerant of low key services and whilst they may support their immediate environment and enjoy the forest they are less likely to support the town physically or commercially. They will bring what they need from outside rather than 'make do'.

The alternative is to make provision for further camping as demand requires it. The existing camping ground is booked out in a good year. This would allow for a very much greater number of people who would tend, due to the need to carry a lot of camping gear, to support the commercial sector to a greater extent. In addition to camping provision is made for additional 'residential' development but the intention is that either section sizes be very small or that land be leased. A further alternative would be to sell or lease only a right to erect a building rather than giving land rights. In general there would need to be a much stricter control on, and greater attention given to, the visual value of dwellings rather than section size, building specifications of a quantitative nature, and other dimensional limitations.

Within the developed area buildings should conform to the form and style of those already existing, particularly in the historic zone where high profile modern buildings, even in low numbers, would very easily visually outweigh the character of the old. All materials and colours used should be in accordance with the historic character or the forest environment. There are some excellent examples of new buildings which are highly appropriate to the area; there are also a number which are not.

The objective of intensifying development to increase viability whilst containing the town's size is reinforced by a recent amendment to the district scheme. This allows for the subdivision of land zoned 'rural' to less than 10 acre lots where the land can be shown to have no agricultural value. In the greater Naseby area, through to Dansey's Pass, this would apply to sluiced ground in particular. This should make it possible for people who wish to have holiday dwellings in the Maniototo to do so without necessarily being restricted to limited urban zoned areas and thus generating demand pressures for town boundary extensions.
All plans, and District Schemes in particular, tend to constrain rather than inspire. They legislate what can't be done rather than giving a lead to what can. In being directed at individuals the community as a whole tends to be forgotten. Being constrained as an individual the individual thinks in isolation of the community. Naseby has size and scale in its favour. It is a place where the community ought to be cohesive and able to express some concensus. The survey conducted in 1977 clearly showed a strong community feeling and concern. At Naseby the people should be involved in any development proposal before final decisions are made.

6.6.5 Community Involvement

As a follow-up to the 1977 survey the intention was to present, at a public meeting in early January 1978, the plans outlined here and gauge the reaction of local people so that their comments could be included in this final document. This might then have given some impetus to a consideration of this plan, essentially an academic exercise, in the future revision of the district scheme. The mayor was approached and, after consultation with the council, decided that a meeting would be inappropriate at that time.

As one who can claim to have some experience of planning, not simply in this study, but also with the Forest Service, I would only hope that in the future there might come a time when a far greater number of the people, to whom planning is directed, can be involved in the process. This should be easy where the group is small and can be gathered together. To write a plan or propose an idea is easy; to see it worked through to a conclusion is extremely difficult without the support of those who must make it work. This support will only be forthcoming where there is a shared belief in the objectives. Co-operation is not easily achieved and its failure has resulted in an individual abdication of responsibility to elected individuals or non-elected experts. These satisfy only those nearest to their own aspirations and beliefs. True co-operation, though fraught with difficulties and dispute, can only ever be desirable in the end, humanising for all concerned and leading to a greater understanding of both the community as a whole and the individuals within it. Ultimately the incorporation of all aspirations must result in a lively diversity rather than a drab sameness.
"A rare bird or flower need remain no rarer than the people willing to venture their skill in building it a habitat. Nor need we visualise this as a new diversion for the idle rich. The average dolled up estate merely proves what we will someday learn to acknowledge - that bread and beauty grow best together. Their harmonious integration can make farming not only a business but an art; the land not only a food factory but an instrument of self expression, on which man can play music of his own choosing.

It is well to ponder the sweep of this thing. If offers us nothing less than a renaissance - a new creative stage in the oldest, and potentially the most universal of all the fine arts. "Landscaping", for ages dissociated from economic land use, has suffered the dwarfing and distortion which always attends the relegation of aesthetic or spiritual functions to parks and parlours. Hence it is hard for us to visualise a creative art of land beauty which is the prerogative, not of aesthetic priests but of dirt farmers, which deals not with plants but with biotic, and which yields not only spade and pruning shears, but also draws reign on those invisible forces which determine the presence or absence of plants and animals. Yet such is this thing which lies to hand if we want it".

Aldo Leopold 1933.
"The West Eweburn Dam from the dam wall looking North. A vast and simple landscape. The planting of birch around the dam edges is entirely appropriate to the setting."
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<td>Picea sitchensis</td>
<td>Thuja plicata</td>
</tr>
<tr>
<td>Cedrus libani</td>
<td>Pinus attenuata</td>
<td>Tilia x Europaea</td>
</tr>
<tr>
<td>Chamaecyparis nootkatensis</td>
<td>Pinus contorta</td>
<td>Tsuga heterophylla</td>
</tr>
<tr>
<td>Chamaecyparis pisifera</td>
<td>Pinus muricata</td>
<td>Tsuga mertensiana</td>
</tr>
<tr>
<td>Cupressus lawsoniana</td>
<td>Pinus nigra</td>
<td>Ulmus procera</td>
</tr>
<tr>
<td>Cupressus macrocarpa</td>
<td>Pinus patula</td>
<td></td>
</tr>
</tbody>
</table>
A SERIES OF ATTITUDES AND INTERESTS

Dear Sir/Madam,

I am a Forester and have spent several years in the Otago area, being closely associated with Roxby during this time. Last year, I gained a Study Award to undertake a post-graduate diploma in Landscape Architecture. This course involves major design study and I have chosen Roxby Town and Forest as the basis of mine. The attached questionnaire is designed to provide basic information on the attitudes and interests of the Roxby people as a background to my study.

Your assistance will be greatly appreciated by me and I hope that my study may be of benefit to you once it is completed. All information supplied will be treated in absolute confidence and any comments used in reports quoted anonymously.

Thanking you sincerely in anticipation.

Clive Ansey

(Shcl.

This questionnaire is to be completed by an adult female or male on behalf of those present on the property/camp-site.

Answer only those questions applicable. Please feel free to use extra paper and attach if you wish.

THE QUESTIONNAIRE WILL BE COLLECTED ON WEDNESDAY 11 JANUARY. If people in houses are not at home at this time you could leave it pinned to your door or in the letter box.

1. Are you or a member of your party:
   - The owner of this dwelling
   - Renting this dwelling
   - Other (please specify) ................................ [Please tick]

2. Are you a permanent resident of Roxby?
   - Yes .................................................................
   - No (Tick) ......................................................

IF YES: For how long have you been a resident? ........ years

If you are NOT a permanent resident of Roxby, where are you from?

.................................................................

3. What do you like about Roxby?

........................................................................
........................................................................
........................................................................

4. What services/facilities do you feel that Roxby lacks?

........................................................................
........................................................................
........................................................................

........................................................................
2.

5. How do you think Banbury will develop in the future?

6. How would you like Banbury to develop in the future?

7. Do you intend to continue living in/visiting Banbury in the foreseeable future?

   - Yes
   - No

8. The following is a list of features at Banbury which I would consider of value. You may think of others. Please indicate what you would consider the two most important and the two least important.  

   - Most important
   - Least important

   - Historic values
   - Easy atmosphere
   - Scenic values
   - Golf
   - The hot spring clients
   - The mountains
   - The larch and Douglas Fir trees
   - Norm trail riding
   - The friendships you have at Banbury
   - The swimming dam
   - The hotels
   - The peace and quiet
   - Other
   - (Specify)

9. THE FOREST

   a. How many people work in the forest?
      - 10
      - 20
      - 40

   b. Does the forest produce timber
      - Yes
      - No

   c. Who owns the forest
      - Private enterprise
      - The Government

   d. Is the forest
      - Hand-planted
      - Natural

   e. How old do you think the oldest trees are?
      - 200 years
      - 100 years
      - 70 years
      - 40 years

   f. Are the trees
      - Mainly Coniferous
      - Mainly Broadleaves
(vii) Can you name two types of tree there?
1. ...........................................
2. ...........................................
Can you name one which loses its foliage in winter?
...........................................

(viii) Have you ever been in the forest?
☐ Yes
☐ No

10. If you live in Handy - what do you do in your spare time?
...........................................................................................................
...........................................................................................................
...........................................................................................................

If you do not live in Handy - what do you do with your spare time while on holiday?
...........................................................................................................
...........................................................................................................
...........................................................................................................

12. The following is a list of possible activities which a forest may provide for. Please indicate what you would consider to be the two most desirable and the two least desirable.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Most Desirable</th>
<th>Least Desirable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest driving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest walking - with tracks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pincing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horse riding - with tracks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trail bike riding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational visits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camping - with facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rteating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children's play areas</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are there other activities which you think a forest may provide for? Specify -
...........................................................................................................
...........................................................................................................

13. How many children are with you?

<table>
<thead>
<tr>
<th>Age</th>
<th>Girls (Number)</th>
<th>Boys (Number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Where do the children spend their spare time?
...........................................................................................................
...........................................................................................................
15. Are there any facilities lacking in nearby which you think should be provided for children?

16. Age of person filling out this questionnaire?

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-30</td>
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<tr>
<td>31-35</td>
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<tr>
<td>36-40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41-45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Age of other persons not previously recorded (one tick per person)

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-20</td>
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<tr>
<td>41-45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. That is your main occupation? Please be specific, e.g. self-employed butcher; (v) time-mother etc.

Occupation of wife/husband

Occupations of other working adults

19. Frequency of visits:

(1) How many times have you been here in the last 3 years? ...........

(2) Will you come again in the future?

☐ Yes

☐ No (Please tick)

(3) Is nearby:

☐ The place where you are spending your whole holiday

☐ One of a series of places you will visit

20. Do you consider that there is too little space for the number of carpers?

☐ Yes

☐ No (Tick)

Would you prefer to have:

☐ A more developed camp site with a greater range of facilities?

☐ A less developed camp site with fewer facilities?

Would you please place your completed questionnaire at the office in the box provided.

Thank you.
'A view into the town from the Eastern domain. Derwent Street can be seen centre left.'


'A view South down Derwent Street from the commercial area. The 'court house' is on the right, the school beyond the cottage, and the vacant section beyond the future Forest Service Headquarters and information centre. The power poles are not a desirable visual feature, especially in what is an historic setting.'
ACKNOWLEDGEMENTS
Many people have assisted me in the completion of this study; the people of Naseby, the class with whom I have been associated at Lincoln, and members of the Forest Service and the Maniototo County. A number of individuals have influenced me profoundly, not simply in the preparation of this study but over the course of my two years at Lincoln College which have been invaluable to me, whose thoughts are an integral part of this submission.

Charlie Challenger, Mike Cole, Earl Bennett, Mary Chapman and Jan Woodhouse have been constant friends and teachers. Mike Cole has been a particular influence as Tutor for this study and a constant stimulus to a wider dimensional perspective. Claire Findlay, a close friend who shared a cubicle in the studio with me I thank for her extreme tolerance as a listener and inspiration as a quiet persuader.

I would also thank especially Tad Motyl, the Officer in Charge of Naseby Forest, Brian Sly of Lands and Surveys in Dunedin, Mrs Moore of the Maniototo County, and finally the interpreters of my scrawl Jennie Ansley and Judith Mackenzie who typed this study.
'A view into the Coalpit Basin from the Bridle Track'. Provenance trials and the 'old forest' behind, new plantings behind the upper dam, natural regeneration in the middle and foregrounds'.
The maps included here are photographic reductions of the originals. Their original size, A0 or approximately 900 x 600 mm, was inconvenient for inclusion with this document. They are however available for planning purposes and copies can be obtained from the Forest Service at their original size.
 fishermen. To determine the areas where the
plants are likely to grow, the following infor-
mation was obtained:

- The vegetation types present in the area
- The soil conditions
- The rainfall patterns
- The presence of water bodies

The diagram shows the vegetation types and
the areas under different vegetation types.

The areas under different vegetation types
are identified as:

- Coniferous Forest
- Deciduous Forest
- Grasslands
- Wetlands

VEGETATION - TREES
NASEBY FOREST AND TOWN

SCALE 1:5000

SECTION 5-4-1
**Key Features**

1. Crowning Dam
2. Water Gates
3. Hodinore Creek
4. Canoeing Gound
5. Town Water Supply
6. Cemetery

- Forest Service & Mail Site
- Tennis Court
- Sports Domain
- Ice Skating Rinks
- Curling Rink
- Church
- Sun Access Roost

**Buildings - Approximate Age**
- 0-25 years
- 26-50
- 51-75
- 76+ or Historic or Interest

**Town Layout**

**Haseby Forest and Town**