

A Market Town is a self-contained, car-free town built on a self-supporting local economy to enable its citizens and visitors to enjoy a *good life*, understood as the social pursuits of conviviality, citizenship and artistic, intellectual and spiritual growth. It is intended to implement the purpose of the Resource Management Act: to enable its local people and their communities to provide for their economic, social & cultural well-being, health and safety while protecting and preserving the environment, in the present and for future generations.



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1 Overview

The Prototype Plan is the first of three documents necessary to secure consent Market Towns in New Zealand under a Private Plan Change, a Public Plan Change or Kāinga Ora.

The three linked documents are:

- **Prototype Plan** sets out generic design and rules. This document is the prototype plan.
- **Acquisition Authority** sets out the process that identifies and acquires suitable sites.
- **Site Specific Plan** adapts the prototype plan to the selected site.

1.1 Public Private Partnership (PPP)

In all three instances (public plan change, private plan change or Kāinga Ora) the process of concept approval, site selection and development is a public private partnership (PPP):

Public: The role of government (central, regional and local) [herein called **the authority**], is:

- **Protection:** To ensure through policy, contracts, rules and monitoring that the public interest, common wealth and the natural and physical environment are protected.
- **Public Works:** To ensure the necessary infrastructure (most notably transport links to the town) are maintained.
- **Permission:** Efficiently and with the minimum in elapsed time and costs, to enable the private sector partner to effectively perform and deliver the outcome.

Private The role of the partner (herein called **the Market Town Company or company**) is:

- **Performance:** To fund, design, plan and implement the town plan
- **Production:** To build the infrastructure, common property and privately-owned buildings
- **Probity:** To do this in a way that serves people and planet as well as earning profits

Partnership: Both parties commit that the project is for the public good, where reasonable profits are earned by the private partner while ensuring the project achieves its public purpose. The authority commits to efficiency and the company commits to effectiveness.

1.2 Concept approved before sites are identified

The Market Town prototype is approved by the host authority before the land search begins. Most district/unitary plans are car-based, thus the prototype plan is likely to be outside the scope of the authority's plans. Market Towns are car-free, technology-based, and commuter-free, with all day-to-day destinations within walking distance. They need not be in the next suburban expansion ring. They are best located beyond urban growth boundaries. Thus:

- The prototype plan is adopted and adapted by the authority before land is identified
- The PPP identifies appropriate land that can be acquired and its land-use changed
- The specific site is conditionally purchased, subject to site-specific plan approval
- The Prototype Plan is adjusted to fit the site specific characteristics of the selected land



2 Three-Part Process

2.1 The Prototype Plan

The prototype plan sets out the generic framework that describes the purpose, function, objectives, policies, rules and general legal and operational structure of the Market Town. It is what would be implemented if the site selected were a flat, featureless 200-hectare paddock with no issues. It sets the boundary conditions for the Site-specific Plan

This document is the Prototype Plan.

2.2 Acquisition Authority

The central, regional and or local government (the “authority”) enters into a PPP with the Market Town Company to find an acceptable site.

Agreement to Proceed: The purpose of the PPP agreement is to grant to the Market Town Company a framework from which it can:

- Identify, reserve and, when the Specific Plan is approved, acquire appropriate land
- Write the site-specific plan that is approved by independent commissioners
- Be assured the Specific Plan goes into effect at the time of acquisition
- Be assured the project may proceed without government delay or undue expense

This is accomplished within a system of checks and balances to ensure the public interest is protected and that the Market Town Company can get on with its mission and purpose.

2.2.1 Why?

Affordability: The cost of housing is becoming unaffordable. This is an outcome of

- Global monetisation of real estate
- Local government planning regimes that failed to make provisions for growth
- Supply chain raising prices of materials
- Building Act that drove up the cost of labour

2.2.2 How to make housing affordable:

Lower the Cost of Housing: There are three practical ways to lower the cost of housing:

1) Lower cost of compliance

- a) The Prototype Plan lowers resource consent costs and elapsed time
- b) Manufacturing buildings lower the per-unit cost of building design and consents.
- c) Factory manufacture replaces building inspections with factory quality-control
- d) Factory manufacture eliminates ancillary requirements, such as cost of scaffolding

2) Lower cost of manufacture.

- a) Factory-manufacture cost less than bespoke on-site construction
- b) Fewer bulk materials introduces economies of scale in supply chain

- c) 21st century 3D-type assembly-line manufacturing lowers both cost & build time
- d) On-site, temporary factory lowers the cost of transport
- e) Assembly-line systems lower elapsed build time from months to days

3) Lower the cost of land.

Government has the power of permission, a power it rarely uses to its full effect. Under the charter agreement, the raw land cost is *demonetised*, meaning:

- The land is acquired by the Market Town Company at a rural-land price, typically a farm
- As a condition of agreement, raw land cost after subdivision forgoes rezone capital gain

Example: A 200 hectare property designated under the local government district plan as Rural (one dwelling) is on offer for \$40 million. It is suitable to be subdivided into a Market Town with 4,000 building lots. The Agreement requires the average raw-land price of each lot before improvements shall be \$10,000, not the \$100,000 per lot raw land capital gain that rezoning grants. The raw land price does not include improvements, and the enterprise is permitted to apply a reasonable margin for their risk. The enterprise gets rapid certainty that they have an approved project; the government gets more affordable housing.

Commentary: Under common law, land is real estate, a commodity in which title grants a bundle of rights as found in almost all European-origin land law. In New Zealand, with the Crown signing the Treaty of Waitangi, an indigenous concept of land was introduced into Common Law: whenua. Whenua is not a commodity. It does not add to the cost of living. Whenua is there, and it is occupied. Merging sovereignty with whenua has been a challenging process, still controversial 180 years later. The land for a Market Town is real estate (although it can be placed on Māori land if suitable arrangements are made), but the principle of whenua is appealing. Titles are issued for plots underlying each building, because buyers feel title to land is important, but the streets, plazas, commons and Greenbelt are held in common, owned by the Market Town company which is owned by the people who live there.

2.2.3 Lower the Cost of Living

The cost of living includes housing. Lowering the cost of transportation, utilities, food, recreation, goods and services all contribute to making life more affordable.

2.3 The Site-specific Plan

Each site will have its own characteristics and challenges. The specific plan takes the master prototype plan and adapts it to the land. This will include consultation with the neighbours who will be affected by the new settlement and with the district council if it has had its authority superseded by Kāinga Ora.

The Specific Plan will be evaluated by an independent commission, with the commissioners appointed by the authority following the normal processes.

The Specific Plan is analysed to ensure that it complies with the Resource Management Act (RMA) and all other applicable acts of Parliament.



3 Purpose

The purpose of a Market Town is to provide for complete, not elite, urban living that is built upon a sustainable, self-supporting local economy. The economy is not an end itself, but a means to enable people and communities to enjoy *a good life*; understood as the social pursuits of conviviality, citizenship, and artistic, intellectual and spiritual growth.

A Prime Intent of the Market Town Prototype and Site Specific Plan is to demonstrate that the purpose statement of the Resource Management Act can be implemented:

- The *people* referred to in the purpose statement are the people who will live with the results: the people who will live in or visit the Market Town including the affected people in the surrounding host region.
- The *communities* refer to the separate and distinct neighbourhoods (the side-by-side villages) within the town, as well as communities of interest in the host region.
- The purpose is to enable those people and communities to provide for their economic, social & cultural well-being, health and safety while protecting and preserving the environment, both for the present and for the foreseeable needs of future generations.

3.1 Human-scaled patterns

The use of timeless patterns: *Timeless patterns* are a way to describe human-scaled design proven over the centuries. They were articulated in book entitled *A Pattern Language*, (ISBN: 978-0195019193 – 1977) written by Christopher Alexander, et. al.. The authors proposed a language exists for towns, buildings and construction; a language that the intertwined, distinct elements of human habitat that are used and loved world-wide. In doing so, it avoids the failing of contemporary design described by Victor Papanek in *The Green Imperative*:

We all sense that something has gone terribly wrong with our communities. Hamlets and cities, slums and suburbs all lack a sense of cohesion. Not only is there no centre - there is no there there. Cities, towns, villages and communities that were designed hundreds of years ago are obviously based upon some basic purpose of living that eludes the designers of our own time. (ISBN: 978-0500278468, p. 105, 1996)

By drawing on timeless patterns that are adapted for the emerging-technology era that vanquishes the tyranny of distance and reduces the need for transport in favour of digital telepresence, forms of habitat that are human-scaled become possible once again.

Human-scale: Human beings are, by nature, social beings who cooperate and compete in social groups. They create wealth by specialising and trading their talent, by harnessing energy, air, water and the earth to grow food, make tools, and build habitat to create a comfortable and stimulating physical environment in which to enjoy a good life. The most proven, timeless form of this human habitat are villages and towns, which have proved their worth for over 10,000 years.

The more recent, 19th century great industrial cities were not human-scaled but industrial-scaled where human capital was housed in anti-social conditions to provide cheap labour for the industrial revolution. Likewise, the 20th century spread of suburban development was not

human scaled, but car-scaled where a consumer class was spawned to provide a market for the petroleum, motor vehicle and chemical industries. This worked well in the United States that pumps oil, makes cars and manufactures a wide range of chemicals, but makes little sense in New Zealand that must sell milk to buy oil, cars and most of its consumer products.

With the introduction of global, ultra-fast broadband and the hardware and software that is part of this revolution, the human-scaled pattern of village and town living has come full circle. New Zealand is especially well-positioned to benefit by this technology shift because it never suffered the damage of the industrial revolution and it has a tradition of resourcefulness that encourages innovation, especially in the areas of applied technology.

3.2 Wealth Creation, Needs and Aspirations

New Zealand needs to diversify its economy so that it is not overly dependent on primary industries and tourism. The purpose of the Market Town is to provide the physical infrastructure and capital resources that enable its people to create diversified wealth.

A local economy works best if no less than 20% of the businesses sell local-to-global (trading businesses) with the balance being locally-owned and operated businesses (merchant and service businesses) that strive to internally turn the externally-earned dollar at least five times before it is spent externally (on goods or services purchased outside the local economy).

It is important that the Market Town is structured so it is a complete, not elite community. This means it must find ways to ensure lower-earning members of the community can afford to live there. As a car-free / no commuter design, it cannot function if low-income workers must commute in from outside the town. This requires that parallel housing markets are established and maintained in the market economy to ensure permanent affordable housing for all.

3.3 Optimal population sizes

Core Unit – the Village: The core unit of the Market Town is a neighbourhood; a face-to-face “sub-bubble” or cluster of about 200 buildings that is home to a population of 250 to 750 people. For simplicity, these are called side-by-side *villages*. Each has its own identity, character and design qualities as determined by its founding settlers. These core units are side-by-side because a single village cannot support a functional local economy.

Social Number: In villages people know each other. They tend to resolve their differences and challenges directly; they take care of their own. This *social number*, on average 500 people, supports social connection. Children learn from adult role models – people they know. Elders are included, respected and taken care of in their infirmity. Families share the load, and when crisis occurs, people tend to help each other rather than call upon public servants.

Critical Mass: Aristotle wrote that when villages wish to rise above subsistence level, they must come together to form towns where there is a critical mass of customers to support specialisation and trading. This basic fact forms the basis of market towns: to create wealth.

- A village can support a general store.
- A town can support a wide range of goods and services to be self-supporting.
- A city can provide even more specialisation but size introduces additional challenges.



Economic Number: A town of 10,000 provides a critical mass so that all day-to-day destinations are within walking distance. In order to preserve the Social Number the town is made up of twenty side-by-side villages. Each village has its own distinct character within defined boundaries. While the people of the village resolve their own issues locally, town management uses a formal system of checks and balances.

Major Town/City: 10,000 to 50,000 people: New Zealand may need to build larger towns. This can be done with the same basic principle. However, just as the town is made of side-by-side villages, the major town/city should not become a monolith, but should be scaled.

Precincts: Divide the city into precincts of about 10,000 population each, so the city is made up of side-by-side precincts. If land is available, separate the precincts with the surrounding greenbelts so that people do not have to walk far to experience real Nature on Nature’s terms. Share common services where sharing is more efficient, but note Pattern Number 12 in *A Pattern Language* which observes that when decision-making over local matters in what it calls *the political community* grows too large, it separates the people from their decision-makers. By separating the city into precincts that are their own political communities (not to be confused with public government which will continue to be the host district council or territorial authority), citizenship is fostered.

Scalability: These core units become scalable building blocks for various sized Market Towns where larger size fosters a larger local economy with the opportunity for more social and cultural enrichment. Different size towns have different qualities as well as different challenges. Note that in the population sizes given below, the number refers to permanent residents. At any one time a town may have a significant additional population of overnight visitors as these towns can be expected to become major visitor attractions for New Zealand

| Population | Villages + Centres* | Precincts 1 per 10K | Urban Core Hectares | Greenbelt Hectares | Features |
|------------|---------------------|---------------------|---------------------|--------------------|-----------------|
| 5,000 | 10 + 1 | 1 | 20-40 | 10-40 | Minor Town |
| 10,000 | 20 + 1 | 1 | 50-100 | 50-100 | Trading Town |
| 30,000 | 70 + 2 + 1 | 3 | 300-500 | 300 | University Town |
| 50,000 | 100 + 4 + 1 | 5 | 500-800 | 400 | Major Town/City |

3.3.1 5,000 population

The minimum size for a sustainable town, the 5,000 population Market Town consists of about ten side-by-side villages, built around a small town centre. The villages have mostly three-storey attached townhouses whereas the town centre has four-storey buildings as well as a five-story clock tower or equivalent tower that people can climb and look out over the whole town. A 5,000 population is unlikely to have a significant manufacturing component.

3.3.2 10,000 population (one precinct and one bubble)

This is the largest size where local control can have a direct sense of accountability, meaning elected representatives are known by the citizens and are encountered on the street. Any larger, and the town should be divided into precincts of equal size (a 15,000 population town would be made of two precincts separated by greenbelts. Decision making over matters within the precinct would be reserved to the people of that precinct. Such a size supports a thriving local economy in which no less than 20% of the businesses sell local to global in order to support a positive balance of trade (money comes in to the local economy at a greater rate than it is spent beyond to purchase goods and services). A 10,000 population Market Town is likely to have a *walk-to industrial park* that provides blue collar, clean-tech jobs.

3.3.3 30,000 population (3 precincts and three bubbles)

The University Market Town. Based on the classic university towns of old Europe, at this size, an intellectual centre including undergraduate, graduate, and research / think-tank activities becomes a significant option. Learning is rapidly changing in the 21st century, where the traditional NZ university form is finding it needs to reinvent itself as online line learning is threatening the usefulness of the 300-student lecture hall. However, the human need for face-to-face connection in intellectual pursuits remains. Indeed the more technology physically separates people, the more human beings need real, not virtual, human connection.

3.3.4 50,000 population car-free (five precincts and five bubbles)

50,000 is probably the largest size that can be set out before the infrastructure requirements create the same adverse effects that pass for normal in New Zealand today. Using the same basic building block of the side-by-side village, the 50,000 population Market Town consists of smaller precincts with smaller greenbelt separators.

Commentary on bubbles: “Bubble is a term introduced to New Zealand with the COVID19 crisis. Market Towns are natural bubbles, capable of being sealed off both externally and segmented internally without the adverse effects of social isolation that the Level 4 bubbles produced in April 2020.

The Market Town has on point of vehicular entry with the potential for a gate at that point. All goods are delivered to the freight depot where contactless transfer can occur. At that point, the barrier between the outside and the town seals off all contact. Then within the town, each village can be its own bubble in the event of a severe threat. The on-plaza classrooms remain open for students. The villagers still gather at their village café. Businesses remain open, except for businesses servicing visitors.

3.4 Enabling People and Communities

The purpose statement of the RMA says that it is about *managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and avoiding, remedying, or mitigating any adverse effects of activities on the environment.*



3.4.1 Who are the people and communities?

The people who will live with the results. This includes both the people who will move into the villages and the people of the host region who will see, hear or visit the town that will change the character of the host community. The intent of this master prototype plan is to ensure the effects of the new town will be positive on the host community:

- It will bring an economic engine that will bring new money into the host economy.
- It will pay more rates yet ask for less in services.
- It will provide social and cultural enrichment and will not be gated. Open to all.
- It will avoid cross boundary conflicts by building a surrounding greenbelt.
- It will avoid congestion by making all day-to-day destinations within walking distance.

The communities within the town will be organised by village. Buyers and renters will not apply to move to the town; they will apply to move to a particular village within the town. They will be invited to participate in the design code for their village to literally enable them to provide for their economic, social and cultural wellbeing, health and safety.

The communities of interest in the host region will be different and depend on the level of interest expressed when a territorial authority begins the search for a potential site for the Market Town. Those communities may be geographic – a nearby settlement, or they may be economic – a nearby industry, including farming. They may be a community concerned about the environment such as Forest and Bird or share some other common interest.

3.4.2 How are the people and communities enabled?

Settlement not Development: The people and communities become involved in the process much earlier. This is the model used in the founding of Christchurch where John Robert Godley invited the settlers to make the decisions that would affect their lives. The company sets out the land, the roads and the villages, but invites the future citizens to participate in the design code of their village. In this, the community becomes primary.

Identity: Physical communities begin when the Market Town Company identifies a series of themes or definitions for each village. One may be designed for families with young children, while another may cater to single persons and childless couples. A village may be defined by a particular nationality or profession, such as a film-makers' village or a technology cluster.

Introduce: 21st Century Market Towns are made possible by the Internet, which enables prospective settlers to see a detailed visualisation of the village choices and to select their future home online. In the process of this, they will meet other prospective settlers on line, and a community begins to emerge.

Engagement: As part of the settlement process, the settlers are invited to participate in the design code for their selected village. This is a process familiar to crowd-sourcing of new products, although it may be alien for traditional developers. It becomes the process whereby the RMA words become real.

3.4.3 Economic Wellbeing

There are about 200 different types of local jobs and professions (see Appendix A for a listing).

These businesses, professions, services and jobs require a critical mass of customers. They also depend on two qualities in the local economy:

- **Money Import:** Trade with the national and global economy imports money into the town. With the introduction of global digital technology, and the presence of ultra-fast, low-cost and uncapped broadband, businesses can relocate, start branch offices and open new businesses in the Market Town. Given the high quality of life New Zealand offers, and the extra enrichment of the Market Town attracting these money importing businesses (also known as *local-to-global* or L2G) is a primary job of the Market Town company. At least 20% of the businesses should be L2G.
- **Money Turn:** The remaining businesses, as much as 80% of the local economy then turn that imported money. Studies show for a community to thrive, the dollar should turn at least five times before it leaves the local economy. Going car-free gives an immediately boost as the money most people spent on imported petrol is not spent in a Market Town. In addition, it is recommended that policies be implemented by the town to discourage businesses that are remotely owned and transfer local profits to global enterprises every night.
- **Venture Capital and Financing Fund:** When 4,000 buyers come together to buy homes and workplaces, the combined purchasing power is in the billions of dollars. If the buyers are asked to commit before their homes and workplaces are built, this lowers the risk and spreads it out among thousands. Further, it lowers the cost of manufacture of their buildings because all can be built in an on-site temporary factory that benefits from efficiencies of scale. If those cost savings were passed on to individual buyers, it would attract speculators and defeat the purpose of a settlement. However, if those margins were to be placed in a community-owned fund to provide financing and venture capital to local businesses, it would provide the one part of economic wellbeing that is otherwise very difficult to source... small business capital and the expert advice to make best use of such capital.

3.4.4 Social Wellbeing

Social wellbeing comes from:

- Living within a naturally supportive community where one knows others and is known
- Car-free streets where children can play and roam free in a safe environment
- 24/7 live/work communities where children interact with adult role models
- A car-free community where elders can without driving; remaining regardless of infirmity
- A diverse economy where people can find gainful employment that provides meaning

3.4.5 Cultural Wellbeing

Cultural Wellbeing comes from living in a community:

- Of all ages, stages and walks of life, transmitting culture from one generation to the next
- That creates wealth in sufficient amounts to enable the enjoyment of cultural activities
- That supports its creative class with artist guild halls and residences
- That is designed with separate neighbourhoods that provide cultural diversity

3.4.6 Health and Safety

The first advice any General Practitioner provides is to get more exercise and eat better food.

- **Walk:** The best exercise is walking. In a car-free environment walking becomes a form of exercise that is natural, especially if the urban landscape is designed to walk in all weather conditions. The Market Town provides this as a core part of its design.
- **Eat:** The Market Town provides the opportunity for its citizens to conduct wholesale purchase of foods, with a focus on lowering the processing that occurs between the farm and the table. This can be done through food grown in the greenbelt, as well as permanent contracts with nearby farms, where the town can specify a willingness to pay higher wholesale prices for healthier foods because the middle-man supply chain is minimised.
- **Streets:** Public safety, especially for children and elders improves when motor vehicles are eliminated from the urban core streets. As an intentional pedestrian design, with bicycles and slow-speed electric delivery and service vehicles, streets become safe places.
- **24/7:** As a 24/7 design where adults work in buildings facing the plazas and streets, walking to cafes for breaks, and generally being present day and night, tolerance for crime and delinquency is low. Outsiders with ill intent cannot hide in a car or van. Likewise, town folk who tear the fabric of society find their conduct shunned by their neighbours, especially because the primary social unit is the village, with its political size of about 500 people.
- **Greenbelt:** Almost all children used to be “free range”, but there was no word for it, because it was a normal childhood, especially in New Zealand. It means the ability to walk to the beach, go fishing, climb trees and be in the outdoors without adult supervision. The greenbelt is intended to provide such free-range access.
- **Self-Insurance:** With a critical mass of 10,000 people, it becomes feasible to purchase or operate a supplementary insurance program both to provide for health insurance as well as residential care for the elderly and infirm. The health facilities are built by the Market Town Company as part of the infrastructure, and through annual operating fees, the citizens pay into a self-insurance fund that provides supplementary care for those who need it.

3.4.7 Protecting and Preserving the Environment

- **Eliminate the need to drive:** By locating all day-to-day destinations within walking distance, the town opts out of the supply chain of mining, drilling, manufacturing, distribution, infrastructure and maintenance that is required to move people from point A to point B. Opting out is the most effective way to begin to protect and preserve.
- **Build better buildings:** Attached townhouses with better insulation, green technology and lower-impact materials lowers the environmental footprint of the Market Town.
- **Off-grid energy:** Solar energy lowers power cost and ensures a constant energy supply in the event of a catastrophic breakdown in the national grid, such as a major the earthquake.
- **Closed-loop water:** A Market Town is able to be designed with independent fresh, waste and storm-water systems and to ensure that water discharged into the natural environment is clean. Storm water runoff is cleaner – no cars, no car-contamination.
- **Farm-fresh food:** By operating its own food supply systems, more food is delivered in reusable containers with substantially less packaging waste. Food waste is collected, not discarded, to return it to a composting system.
- **Zero waste:** A community-owned company to provide collective buying, common products can be specified with reusable or recyclable packaging, and durability/repair standards can be set for acquisitions to achieve a goal of zero waste.



- **Lowering consumer demand:** The inherent activities within a socially and culturally enriched environment provide alternatives to consumer forms of entertainment, especially those involving complex electronic devices that have short lives before they are discarded. Face-to-face social connection can be more fulfilling than digital social networks or becoming lost in one's cell phone.
- **Separate People and Nature:** By placing the urban core within a greenbelt that is separated from the human activity by a pet-proof wall, fence or hedgerow, the natural environment has an opportunity to grow in a protected environment. The greenbelt also serves as a permanent boundary to prevent urban sprawl. If more growth is required, build a new Market Town somewhere else.



4 Site selection: specific qualities

Greenfield or Brownfield: Market Towns can be built on greenfield or brownfield sites. However, to be clear, they are not intended to retrofit of an existing town, because the cost of land would be too high, and the existing car-based infrastructure would be incompatible.

Likely locations outside the regional expansion ring: Market Towns are intended to be self-supporting, meaning almost all day-to-day activities are within its boundaries. It is designed to have no outbound commuters, students or shoppers. Therefore it does not need to be near existing jobs, schools or shops. It does not require enlarging access roads, since the primary additional vehicular transport will be limited to delivery trucks, business trips, leisure travel and visitor traffic.

The Market Town does not need to be near existing public utilities because it is intended to use water more efficiently to have an adequate supply based on rainfall, process its own waste and storm water, provide its own energy and manage its own solid waste and recycling.

Accordingly, it is not necessary to select land within the next regional expansion ring.

Flat land for the urban core is desirable. Reasonable access to international air travel, either by road or feeder airline to Auckland Airport is desirable, noting that a specific plan could include upgrading an existing or building an all-weather feeder airport.

Greenbelt around Urban Core: In principle, the best Market Town design prevents cross boundary conflicts by acquiring sufficient land that the urban core is surrounded by a greenbelt designated for mixed use, non-residential activities. The principle objection to proposed developments from neighbours is the conflict between rural and urban activities. Rural people do not wish to see or hear urban activities in what was previously a rural area. Urban people within the town do not wish to hear the sounds, smell the odours or suffer the sprays that accompany rural farming. A greenbelt provides separation. The greenbelt also ensures that the town size remains fixed without the development sprawl that otherwise happens in New Zealand. In some cases the greenbelt can include an existing public reserve or waterway; in others it may be owned by the Market Town.

Car-free Urban Core: Eliminating the need to drive within the town addresses a wide range of public health and safety concerns, lowers the cost of living, makes it easy for elders to remain in their homes when they no longer drive, and provides for a more cohesive and connected society. It allows for a more compact design because streets are for people, not vehicles other than bicycles and slow-speed (10kph) electric vehicles.

Town Centre: The design pattern intends for taller buildings toward the middle. Unless site specific geography suggests differently, the centre of the Market Town is a central town square surrounded by a four-story town centre. The town centre will have higher building, larger buildings and more formal buildings including public buildings, office buildings, apartment buildings and private mansions that would be inappropriate in the villages.

Side-by-side villages: Surrounding the town centre are side-by-side, distinct neighbourhoods called villages. Each covers approximately 4 hectares with an average density of about 70 buildings per hectare, which, including open space is about 200 total buildings. Each village

has a village plaza with the highest level of social and commercial activity. Villages have clearly demarcated boundaries and the founding villagers are invited to participate in writing their village's distinctive design code to give each its own character.

Motorpool and freight depot: Outside the urban core, within the Greenbelt, closest to the primary transport link (in most cases, the main road), the Market Town includes covered garage parking for motor vehicles as well as a transfer depot where highway trucks transfer goods to local delivery electric vehicles. Any resident may own and keep a motor vehicle in the garage, and the Market Town Company will operate a low-cost, automated car rental business to give residents a more affordable alternative when they need to drive away.

Walk-to industrial park: It is recommended, but not mandatory, that the Market Town include an industrial park within the Greenbelt to provide blue-collar jobs. These can be expected to include hi-tech/clean tech as well as for local food processing.

Self-supporting utilities: It is recommended that the Market Town build its own solar array with both PV and thermal energy collection. Unless this town-wide system is installed on roofs within the urban core, it would be placed in the Greenbelt. Similar systems would be in the greenbelt for solid waste recycling, rainwater harvesting and storage, and stormwater and wastewater reuse.

Temporary Activity: Initial manufacturing of Market Town buildings: The local economy requires a critical mass of local customers at the onset. Accordingly, all buildings must be built and occupied within a short time frame. This requires building thousands of multi-floor buildings which is best done on site using mass production and automation. Primary materials in their densest form are delivered onsite to minimise delivery traffic and are assembled on site in a covered, climate-controlled temporary structure to allow 24/7 operation. The structure may be a tensioned fabric structure over a concrete pad, where at the end of assembly the structure is removed. Or it may be a permanent structure initially used for the temporary, one-time activity and on completion converted to a pre-approved permitted use such as sports facility, food growing, motorpool or clean-tech industrial. By building on site, LTSA vehicle size limits do not apply. On public roads, any vehicle over 3.1m requires flag trucks. If buildings are made on site and delivered on private roads the only limit is the width of the private road.

Local management of local affairs: In the same way a shopping mall owns and privately manages the activities within its private property that is used by the general public, the Market Town owns and manages all its common land and property within its boundaries, including streets, parks, utilities and buildings that provide a common good for residents and visitors. The town will operate within the context of the host territorial authority, but will ask less of the authority because the town will provide local services privately. This is done through a citizen-owned company that operates under company law so that it may operate for-profit as well as not-for-profit activities that are of benefit to its residents and the surrounding regional economy.



5 The Prototype Plan

This section is written in the form of a Public Plan Change, Operative District Plan or a plan for an Urban Development Authority. In conjunction with the site specific plan, it would be evaluated by independent commissioners to ensure compliance with the Resource Management Act and other relevant legislation.

5.1 Market Town Purpose

The purpose of a Market Town is to provide for self-contained, self-supporting, complete community that follows the development pattern found in pre-industrial towns in which all day-to-day destinations are within walking distance. As civilisation moves into a post-industrial era, the earlier human-scaled development patterns become relevant once again.

The town is built upon a self-supporting local economy in which diverse businesses conduct their business using advanced technology, most notably global, ultra-fast broadband that supports a wide, and ever-increasing set of tools which support international trade and commerce. These local-to-global businesses import the money that then is recirculated among the many local-to-local businesses that people frequent on a day-to-day basis.

The purpose of the local economy is to enable the people of the town, visitors to the town and the people of the surrounding host region to enjoy *a good life*, understood as the social pursuits of conviviality, citizenship and artistic, intellectual and spiritual growth. To put this in other words, it is intended to implement the purpose of the Resource Management Act: to enable its local people and their communities to provide for their economic, social & cultural well-being, health and safety while protecting and preserving the environment, in the present and for the foreseeable needs of future generations.

The principle characteristic of the Market Town is that it is technology not transport based. There are no motorway-sized cars, trucks or buses operating within the urban core. In as much as is possible, outbound commuting is discouraged except for irregular business travel. Home, work, school, recreation, shops, services, public dining and other daily activities are all within town and are accessed by walking, cycling or low-speed electric vehicles.

The specific purposes of the Market Town are to provide for residential urban living and visitor experiences in a mixed use design often found in pre-industrial towns. Most buildings are multiple floor, attached, wide and shallow townhouses in which some buildings may combine residential and commercial activities as is frequently found in historic, pre-industrial towns.

Because the optimal size of a face-to-face community in which people know and take care of each other is 250-750 (on average 500) people, but the optimal size for a self-supporting local economy is closer to 10,000, the Market Town is divided into side-by-side neighbourhoods, called *villages* that are built around a more formal cosmopolitan town centre. Each of the villages is encouraged to be settled, as opposed to developed, which means that the people who will live there are invited to become involved at the onset of the project – thus enabling the people (the settlers) and community (collectively as the settlers of their village) to provide for their economic, social and cultural wellbeing. In doing so, they set out the unique the character, flavour and quality of their particular village.



5.2 Objectives and Policies

Objective

- 5.2.1** Development of an integrated MarketTown based on a self-supporting local economy incorporating residential living, visitor accommodation, small-to-medium scale commercial activities and the full breadth of community life within a framework of an urban core town centre and surrounded by an open space greenbelt.

Policies

- 5.2.2** Use of a Site Specific Plan based on the Master Prototype Plan to establish the special layout of development within the several Market Town zones to provide for diversity of living and complementary activities, taking into account:
- Integration of activities and servicing;
 - Streetscape, landscape and amenity values
 - Local wealth creation and social / cultural enrichment, health and safety
 - Zoned separation of motor vehicle areas and pedestrian/cyclist areas
 - Separation of urban core and surrounding countryside with a buffer zone
- 5.2.3** Ensure subdivision and development incorporates the design elements shown on the Master Prototype Structure Plan as described in the Rules and Activities and that it includes:
- Motor vehicle access roads to the Market Town
 - Motorpool for resident vehicle parking access and bus/shuttle transfer
 - Visitor parking access and bus/shuttle transfer
 - Freight depot access
 - Industrial park access
 - Market Town service fire and utility vehicle access roads in the greenbelt
 - Pedestrian, cycleway and low-impact vehicle roads in the urban core
 - Alleyways, footpaths and public stairways in the urban core
 - Road connections
 - Open space
 - Access connections including public safety
 - Trails
 - Boundaries and gateways between villages
 - Protective walls, fences and hedgerows that preserve amenity values
- 5.2.4** Ensure the Site Specific Plan provides sufficient buffers to mitigate cross boundary conflicts between the residents of the Market Town urban core and the residents and/or rural activities of the properties adjacent to the Market Town boundaries.

- 5.2.5** Provide for public access to the commons owned by the Market Town
- 5.2.6** Provide for local biodiversity through
- The protection and enhancement of existing ecological values, in a holistic manner
 - The enhancement of ecological values in the greenbelt
 - Where appropriate, the provision of new reserves for native flora and fauna in the greenbelt where Nature is primary and people restricted
 - Building appropriate and attractive barriers between the urban core and the environmentally sensitive parts of the greenbelt to keep pets out
- 5.2.7** Ensure that development within the ecologically sensitive areas of the greenbelt results in a net environmental gain
- 5.2.8** Ensure that development and ancillary activities within the greenbelt maintain or enhance the character of the landscape.
- 5.2.9** Provide for garden allotments and food growing and associated activities in appropriate areas of the greenbelt, while ensuring that development associated with those activities does not result in cross-boundary conflicts
- 5.2.10** Provide a diversity of living accommodation, including homes for
- Two parent families and solo parent families
 - Extended families (whanau) and collective living (unrelated persons)
 - Solo persons living alone
 - Solo persons living in halls of residence
 - Adult couples without children
 - Young adults living in their first home away from family
 - Low-earning workers / essential workers
 - Moderate-pay professions (such as teachers and public servants)
 - Artist and creative class housing
 - Elders living in autonomous elder housing
 - Assisted living and nursing care living
 - Apartment living including comfortable minimalist housing (tiny units)
 - Co-housing and other forms of cooperative or intentional housing
- 5.2.11** Enable the development of education, business innovation and associated activities within the villages and on a larger scale in the town centre
- 5.2.12** Ensure the visual impacts of the motorpool, freight depot, industrial park, sports and festival fields, outdoor car parking, and other development and utilities within the greenbelt are appropriately mitigated through landscaping and the provision of open space.
- 5.2.13** Enable commercial activities throughout the urban core of a form and scale that compliments the amenity value of the villages and town.

- 5.2.14** To ensure that the local commercial activity within the town is primarily designed to service the needs of the people of the town, and not become a shopping destination for the surrounding region in a way that generates significant new car traffic on the access roads to the Market Town.
- 5.2.15** To ensure that the Market Town encourages visitor activity while discouraging tourist activity (see Definitions for the distinction)
- 5.2.16** Enable commercial and community activities and visitor accommodation, provided residential amenity, health and safety are protected or enhanced through:
- Compatible hours of operation and noise
 - A high standard of building design
 - An appropriate scale of activity and form of building development
- 5.2.17** Use residential development controls to protect privacy and amenity, provide access to sunlight, achieve design cohesion and to provide appropriate opportunities for outdoor living.
- 5.2.18** Provide for medium density, small lot housing to ensuring the scale and form of built development provides an appropriate standard of residential amenity and design in a village and town environment
- 5.2.19** Avoid industrial activities in the urban core other than craft industries that do not produce adverse effects of noise, vibration, dust, smell, light or freight.
- 5.2.20** Ensure provision of integrated servicing infrastructure, roading and vehicle access that separates car-free from freight delivery and motorpool zones.
- 5.2.21** Ensure an adequate level of sewage disposal, water supply and refuse disposal services are provided which do not adversely affect water or other environmental values, and are as much as possible, self-contained.
- 5.2.22** Ensure an adequate level of energy supply that, where possible and feasible, is supplied by on-site solar and other renewable energy capture and storage, both electrical and thermal.
- 5.2.23** Provide for a self-supporting local economy through the use of a citizen-owned Market Town Company that operates in a way that it can support and enhance economic wellbeing of the people and communities through the management of private venture capital and financing funds that are of, by and for the people of the town, for the benefit of the people and communities of the town and the surrounding host region.

5.3 Activities and Rules



Activities

Activities within the Market Town are based on a hierarchy of height, with the tallest activities in the middle, around the central town market square that includes:

Urban Core

The Urban Core is where everyone lives. It is based on traditional town design where urban day-to-day activities occur: sleeping, eating, working, shopping, learning, interacting and enjoying daily life. As a self-contained design, it is intended to eliminate the need for cars or mass transport to accomplish the chores of daily life. It includes the following activity zones.

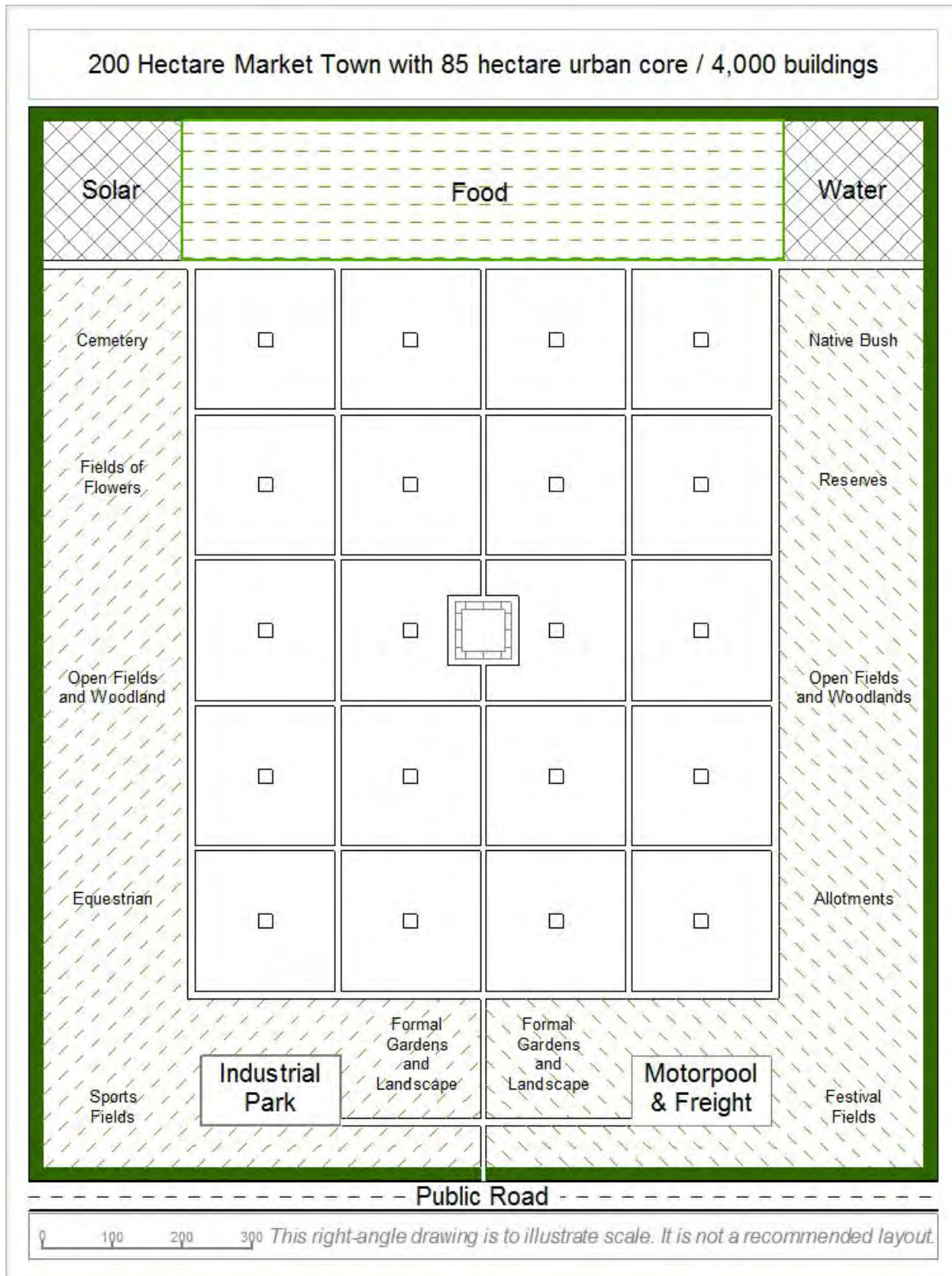
- 5.3.1 Town Square:** In the middle of the town (or where appropriate, subject to the specific site plan geography), a large public square
- 5.3.2 Tower:** The tallest building is a five-story clock tower that provides a lookout over all the town. It is located on or by the central town square
- 5.3.3 Town Square Buildings:** The prominent public and private buildings (Urban Core Structure Plan - Activities) that face the central square, and designed to complement public outdoor activity including public events that look up to balconies on public buildings
- 5.3.4 Town Centre Buildings:** Larger buildings up to four storeys
- 5.3.5 Villages:** One side-by-side village for each cluster of 250-750 people (500 on average), about 4 hectares each with no more than 60% site coverage and a three-storey height limit of primarily attached townhouses. Each villages has its own design code, and a neighbourhood boundary that defines its identifiable character.
- 5.3.6 Village Plazas:** Each village is built around its own central plaza that includes certain commons buildings as identified in the Urban Core Structure Plan – Activities
- 5.3.7 Urban Core Walls:** The word *urban* originally meant a walled town. In the 21st century walls are not needed for military protection. Walls define the town's boundaries ensuring it does not sprawl over time. It also contains cats and dogs that may cause damage in the greenbelt, and protect straying toddlers and elders suffering dementia who may get lost. The walls can be a combination discrete walls and buildings connected to the wall.

Greenbelt

The surrounding greenbelt is intended to prevent cross-boundary conflicts and give people a place to experience Nature at a higher level than the conventional city park. It is also intended to provide space for activities that need separation from urban living, including town utilities, food and plant growing, recreational activities, enclosed clean-tech manufacturing as well as

the transport linkages with the outside world.

5.3.8 The greenbelt is divided into different activity zones as illustrated below:



5.3.9 Perimeter boundary: The greenbelt shall have a perimeter boundary that

becomes the first layer to mitigate cross boundary conflicts. It shall add to the amenity value of the surrounding land, which may mean a hedgerow, windbreak, stand of trees or similar compatible design. In parts of the greenbelt designated for native regeneration and protection of native flora and fauna from predators such as stoats or possums, where a barrier wall or fence is required, it shall be designed to not be seen by the public or that the surface visual amenity is improved with climbing plants or equivalent.

- 5.3.10 Non-residential buildings:** The greenbelt shall have non-residential buildings that are suitably mitigated.
- 5.3.11 Dams and Other Structures:** structures for the retention of water, ponds, streams, water races, drains, channels and pipes are a controlled activity in the greenbelt.
- 5.3.12 Transport Management:** All registered motor vehicles including cars, trucks and buses terminate in the greenbelt in the motorpool, freight depot, transport link or industrial park. Transport into the urban core is by small-size, slow-speed electric powered vehicles, both for delivery of goods and passengers. Emergency service and utility vehicles are purpose built for the urban core. Exceptions are by town permit.
- 5.3.13 Other Linkage:** Some locations may require rail linkage and/or the construction of a feeder airport to link the Market Town with NZ's several major international airports. These linkages are outside the scope of the Market Town prototype plan, except for the connections that may be within the Market Town boundary.
- 5.3.14 Adaptations of the Greenbelt:** In some site specific plans, existing resources, including waterfront, an existing local, regional or national park or reserve, surrounding hills or mountains, or other beneficial landscape feature may be incorporated into the greenbelt plan without requiring it is owned by the Market Town as commons.

If, for example, a site would be located along waterfront, the coast, a lake or river, it may be deemed appropriate to place the cosmopolitan town centre along the water, rather than in the middle of the town. Or an appropriate site may have a regional park adjacent to it that would serve as an appropriate part of the greenbelt. In such a case, it may be deemed appropriate to include the park as part of the special plan, provided the public land is reserved as a park in perpetuity.

Specific Activities

- 5.3.15 Buildings:** Buildings within the urban core shall be subject to the following controls as exercised by the Market Town Company and set out in the Site Specific Plan:

- **Platform:** All buildings in villages shall be located on fee-simple building lots that are the size of the building footprint. Buildings shall be located along the commonly-held car-free street fronts, with most attached – no setback from the adjacent buildings. Buildings that are set back from the adjacent buildings may use the commons for potted plants and seating.
- **Medium Density:** The median size of a village is 4 hectares for about 200 mixed use buildings, typically three storeys in height (not including rooftop outdoor living and optional rooftop glasshouses). Site coverage of all buildings in each village shall not exceed 60% including optional living arcades where the building purchaser may build an arcade over the street in front of their building and gain exclusive use of the flat roof as personal outdoor space.
- **Design Code:** At its founding, the first settlers in each village shall be invited to participate in the writing of their village’s design code with professional support and guidance. This is the process whereby the Resource Management Act enables the people and community to provide for their wellbeing, health and safety. The settlers will establish the guidelines for buildings within their village including:
 - i) The *theme* or general look, feel and character of their village
 - ii) The application of that theme to exterior appearance, exterior lighting, signage, and other aspects of building design to ensure visual amenity and social cohesion of the streetscape.
- **Bulk and Location:** The streetscape shall have variety in height, width, depth, setback from the road, as well as variety in ornament, surface treatment, balconies and joinery design to add to amenity value. This shall be accomplished by variable pricing of buildings and other incentives the Market Town shall offer.
- **Exterior Lighting:** Building exterior lighting shall not result in glare on adjacent roads or property, and except where required for a particular effect shall only use warm lighting (2700k or lower).
- **Colours and Materials:** The theme selected by each group of village founders will determine the range of acceptable colours and materials for that village or sectors therein. Some themes may be traditional, others modern; some may make reference to regional historical design, others may make references to the shared culture of the founding settlers. Variety with low-maintenance, durable materials that offer a harmonious visual amenity is encouraged.
- **Building Outdoor Living Space:** The village distinguishes public and private space acknowledging that people are social by nature, but also have a need to be alone, or to be alone with their family. Accordingly, public outdoor social space is provided by the plazas, public dining, pedestrian streets, and the other villages and town centre as well as cloistered outdoor living on the greenstreet commons behind

townhouses. Private space in buildings includes

- Use of the rooftops, which may be flat or be capped with glasshouses
- Balconies
- Inner courtyards
- Rooftop over the public arcade in the front of the private building
- Town Centre Buildings: Intended to be taller, wider and deeper:
- Apartments: Multiple units on multiple floors. May be mixed use with commercial activities on the ground floor
- Office Buildings: Commercial activities that employ office workers and provide services primarily to clients rather than customers (see definitions). May be mixed use with shops and eating establishments on the ground floor.
- Mansions: Privately-owned buildings built by the rich as an architectural statement can become a positive amenity attraction within a town, but their scale can be out of character within the villages. Accordingly, mansions are reserved for the town centre, and their building lot may include open and outdoor space.
- Public Buildings: The Market Town hall, Multi-college High School, Non-sectarian cathedral, clock tower and other anchor buildings that define the core character of the town.

5.3.16 Greenbelt Buildings: The greenbelt is a buffer zone to prevent cross boundary conflicts and to enable people to have direct access to Nature. It provides space for non-residential buildings (and caretaker residential buildings) inappropriate inside the urban core. Greenbelt buildings are subject to the following controls:

- Location, scale and external appearance of buildings
- Setbacks from public roads
- Landscaping
- Associated earthworks
- Enhancement of ecological and natural values
- Noise
- Hours of operation
- Scale of activity
- Access and car parking
- Public highway mitigation if required (intersection controls)
- Traffic controls if required

5.3.17 Mixed Use Commercial: Distinction is made between businesses that attract customers and businesses that attract clients (see definitions of client/customer and street hierarchy).

- Commercial activities that attract customers are limited to the cosmopolitan town centre, the village plazas and primary streets.
- Low-impact businesses that attract lower numbers of clients may be located on any street except for those that the founding villagers designate as residential only.

- Any building may be used for home offices that attract few visitors.

5.3.18 Visitor Accommodation: Market Towns can be expected to have a significant visitor population. Where they stay involves different activity levels appropriate for different zones within the villages and town:

- **Town Centre Hotels:** Large, multi-floor traditional, full-service hotels
- **Travellers Inns:** Located on village plazas with large common rooms
- **Boutique Hotels:** Located on primary streets, include guest dining
- **Bed & Breakfast:** Located on primary and secondary streets
- **Guild Hall Accommodation:** Rooms for visitors in the Guild Halls
- **Airbnb type:** Anywhere in urban core subject to nuisance controls
- **Backpackers and hostels:** Youth zone only, subject to nuisance controls
- **Marae style:** Permitted in where tapu subject to village policy (koha only)
- **Tents and glamping:** Seasonal in greenbelt, subject to town controls
- **Festival accommodation:** Temporary and controlled, in greenbelt

5.3.19 Village Streetscape: Each village’s design code includes decisions on

- Street furniture, bollards, signs, lighting, street and plaza paving
- Plaza design and permitted / village-controlled activities on it
- Acceptable noise levels
- Scale of activities and hours of operation of commercial activities
- Artist guild hall: type and cost (basic village, or seek patrons)
- Village café: scale, scope and operation
- Eldercare: location and amenities
- Primary school classrooms: location and extent of integration with plaza
- Wharenui: purpose, design and cost (basic village, or seek patrons)
- Social amenities (family village: playground vs youth zone: climbing wall)
- Public greenstreet use (determined by the people on each greenstreet)
- Other appropriate controls over village-based activities.

5.3.20 Sale of Liquor: Premises license for the sale of liquor (including both off-licenses and on-licenses). Initial and ongoing consent for the sale of liquor is reserved to the Market Town with discretion restricted to all of the following:

- Concentration of other off-licence and on-licence activities
- Location
- Scale of the activity
- Residential amenity values
- Noise
- Hours of operation
- Abuse of privilege

5.4 Urban Core Structure Plan - Activities

The siting of buildings and activities within the Urban Core must be in conformity with the Activity areas of the **Structure Plans** as set out below. The location of activities as provided



for by the Structure Plan is restricted to the following:

5.4.1 Town Market Square: at the centre of the town, or nearly so as appropriate within site-specific conditions, a public market square provides a platform for public gathering, temporary events, as well as casual food and drink, busking, festival events, regularly scheduled farmer and craft markets and other similar activities common to market squares around the world.

5.4.2 Temporary and semi-permanent structures: The town square is intended to provide for informal social and commercial activity including:

- Festivals: Temporary activities during special events that includes portable tents, marquis, carts and trailers that sell food and drink and craft products, pop-up music, dance, theatre and similar entertainment, town-licensed busking, parades and processions, and related festival activities
- Markets: Farmer, arts/craft, trader and similar types of markets that occur on a regular weekly or monthly basis, year round or seasonally. These would include permits to bring appropriate motor vehicles into the area.
- Semi-permanent stalls, stands and carts that sell food and drink
- Band stands, stage platforms and other entertainment/speaking platforms
- Children’s entertainment (carousels, puppeteers and similar)
- Speakers corner and designated unlicensed busking area
- Clock tower or similar tower that looks out over the whole town

5.4.3 Town Square Facing Structures: In the Town Centre the following buildings shall be built facing the town square. It is encouraged that these buildings follow timeless design principles to add to the visual amenity in a way that expresses the prominence of the town centre.

- Town Management including speaking balconies seen from the square
- Multi-college high school (academic, vocational, arts, hi-tech)
- Non-sectarian cathedral (see definitions)
- Major hotel and visitor facilities
- Major concert or arts hall, theatres
- Major museums
- Major office buildings
- Major stores and shopping centres
- Major educational facilities including colleges, universities and research
- Other primary buildings deemed appropriate for the Town Centre

5.4.4 Town Centre Structures: In the rest of the Town Centre zone, larger, more prominent buildings as well as appropriate buildings that would be out of scale in the villages, shall be built in the town centre. These include:

- Four story office buildings

- Four story apartment buildings
- Four story commercial buildings
- Mansions and other large residences
- University, college and research buildings
- Museums, arts facilities and artist guild halls
- Mixed use activities in any of the above buildings

5.4.5 Urban-core villages provide for:

- Single residential living including townhouse and townhouse apartments
- Multiple residential living including extended family and halls of residence
- Micro-offices (1-5 employees) and small-offices (6-19 employees)
- Home-offices within residences
- Small to medium size enterprises
- Commercial activities
- Settled work (providing supplementary income for pensioners)
- Purpose-built autonomous elder housing near the plazas
- Local shops and services
- Cafes, restaurants, taverns and travellers inns
- Low-impact visitor accommodation in private homes and B&B
- Community, health and public services
- Primary education
- Creative arts and entertainment

5.4.6 Village plaza: On the perimeter of the village plazas, the following shall be built as core facilities

- Village-owned café serving meals all day, every day to support public health and conviviality on an affordable basis
- Primary school classrooms
- Child care facilities
- Elder care facilities
- Town-funded artist guild hall (see definitions)
- Whare tapu (see definitions)

5.5 Greenbelt Structure Plan - Activities

Surrounding the urban core, the purpose of the greenbelt is to provide a buffer zone to prevent cross-boundary conflicts, to provide direct access to Nature, bush, gardens and other natural experiences, and to provide appropriate space for activities incompatible with urban core life. These include:

- Access to public highways and other transport linkages
- Motorpool for privately-owned and rental motor vehicles & maintenance
- Freight Depot and storage units
- Helipad and Medevac subject to noise controls
- Firefighting station and access roads in the greenbelt

- Walk-to, clean-technology industrial park
- Perimeter boundary of hedgerows, trees or native fauna protective barrier
- Native and regenerating native reserves
- Productive timber that can be sustainably managed for local industry
- Formal gardens and landscaping especially at the junction of the highway
- Festival and amateur-sports fields including ancillary buildings
- Temporary, seasonal tenting / glamping facilities for visitors
- Permanent accommodations for greenbelt caretaker
- Public swimming pools including heated and covered
- Tennis, basketball and other ball courts
- Equestrian facilities including stables
- Where suitable, boating facilities including public ramps, piers and sheds
- Open fields and woodland with a mix of native and indigenous flora
- Protected reserves for native flora and fauna
- Fields of flowers and woodland suitable for walking and jogging
- Cemetery
- Solar array and energy storage
- Allotments and commercial food growing including ancillary buildings
- Water storage and management (fresh, storm and waste water)
- Solid waste recycling, recovery and reuse buildings
- Maintenance Services including storage, maintenance and depot facilities
- Earthworks, height of cut, fill and slope according to the site specific plan
- Earthworks shall not modify damage or destroy any waahi tapu, waahi taonga or identified feature as found in the site specific survey

5.6 Temporary Activities: On-site building manufacture

The Market Town local economy requires a critical mass of local business customers, thus the schedule for implementation and move-in is compressed into months, rather than staged sales over years or decades. This requires that buildings are manufactured rather than constructed. Once the buildings are built however, the manufacturing process is over, making it a temporary activity for 12 to 24 months.

In the greenbelt, as a temporary activity, a tensioned fabric structure is a permitted use to manufacture the town buildings. At the end of the project, the temporary use expires and the machinery to make buildings is removed.

The site specific plan will determine if the tensioned fabric structure is removed or if it is used for a different activity including motorpool, clean-tech manufacturing, covered sports facility, food growing or some other activity.

5.7 Standards for activities located in the Urban Core

- 5.7.1 Town Square:** At two people per square metre, the town square shall be large enough that the population of the town can safely stand in it for a public

event such as a dignitary speaking from the balcony of the town administration building. A 10,000 population town would require 5,000 m² (1/2 hectare) of open space. The streets exiting the town square shall be adequate to safely evacuate that number in reasonable time.

5.7.2 The town tower: Rising 5 metres above the next-highest building, by or on the town square, a tower from which people can look out over the town.

5.7.3 Town Centre Buildings: Up to four storey. In the specific plan the maximum height of four storey buildings shall be established dependent on local visual amenity. Building height should be generous to allow for high-ceilings in some buildings. Building height should be variable to contribute to streetscape character. Building height shall take into consideration its effect on sun and on wind corridors.

5.7.4 Village Plaza: At the social centre of each village, a small village plaza becomes the heart of the village. Village plazas shall not be more than 20 metres on its shorter size. It can be longer, but if the shorter distance is more than 20 metres, it will feel empty.

- Cafes and restaurants shall be encouraged to place alfresco dining furniture on the village plaza commons, rent free.
- In the centre of each plaza, it is encouraged but not required that a central feature is built. This can be a fountain, statue, bandstand, conversational seating, or similar as deemed by the founding villagers as appropriate.

5.7.5 Plaza-facing commons buildings:

- **Artist Guild Hall:** A prominent multi-floor building not more than three floors in height, suitable for 25 artist work space and modest accommodation and up to five visitor accommodation rooms. It is recommended that this building is detached.
- **Whare Tapu:** A prominent single floor building with a high ceiling as found in sacred architecture. It is recommended that this building is detached.
- **Primary School Classrooms and Childcare Facilities:** The ground floor of a three-storey, mixed-use building facing the village plaza and designed so that children may observe the life of the plaza while in class. Upper floor units may include parallel market housing for teachers.
- **Nursing care facility:** The ground floor of a three-story, mixed-use building owned by the Market Town company that uses rental income from the upper floors to contribute to the operating costs of the facility.
- **Village-owned café:** The ground floor of a three-storey, mixed-use building facing the village plaza. Upper floors may include parallel market housing for the café staff. Note that a village may elect to also fund a restaurant, tavern or travellers inn in this same ownership model

5.7.6 Village Buildings: Except for the plaza facing commons buildings, all village



buildings will be two or three storey attached townhouse design (wide and shallow to let in sunlight). Maximum height will be determined by the Site Specific Plan, but should allow for up to 4 metre high ground floor rooms and 3 metre high upper floor rooms.

5.7.7 Street width: Urban Core streets do not provide for motor vehicle traffic or parking. Accordingly, road width is determined by pedestrian, cycle and NEV (see definitions) as well as sunlight to buildings and suitable scale for the visual amenity of the streetscape.

- **Village Parade:** It is recommended, not required that a wide road is built from the entrance to the town square suitable for parades and provides for public safety in the event of a need to evacuate the town population.
- **Primary Streets:** Wide enough to support large volumes of movement during peak hours and after festivals or other visitor events.

5.8 Standards for activities located in the Greenbelt

5.8.1 Buildings: For buildings in the Greenbelt, control is reserved to all of the following:

- Location, scale and external appearance of buildings
- Setback from public roads
- Setback from internal boundaries
- Traffic generation
- Vehicle access, street layout and car parking
- Street scene including landscaping
- Protection and enhancement of ecological and natural values
- Provision for walkways, cycle ways and pedestrian linkages
- Scale of the activity
- Noise
- Hours of operation
- Public highway mitigation, if required

5.8.2 Specific Plan Guidelines for building standards in the greenbelt

Contextual considerations

The location, scale and external appearance of buildings in the greenbelt are closer to the boundary of the Market Town thus have a greater potential to affect the visual amenity of public roads and adjacent properties than buildings in the urban core. For this reason, all greenbelt buildings are a controlled use.

The planet's population, and especially its middle class population is growing, placing greater demands on land; thus the sprawl that was popular forty years ago is no longer deemed sustainable. Instead buildings are going up. This introduces new design challenges as non-residential buildings grow in scale and bulk, but their design too often remains utilitarian, giving no consideration to visual amenity.

The buildings that are likely to have the most significant presence in the greenbelt are in the clean-tech industrial park and those related to transport, including the covered motorpool, passenger transport linkage (bus and shuttle depot) and the freight depot. The following guidelines should be considered when drafting the site-specific plan:

Guidelines

- The industrial park building or buildings are likely to be of a single floor, very high ceiling design. Industrial buildings in the Market Town can be expected to consist of machine areas where products are made and warehouse areas where raw materials and finished products are stored. Warehouses in the 1980s tended to be 6 metres with large areas set aside for material storage. Contemporary warehouse design can be 10-12 metres with racked storage to make more efficient use of land. Further, contemporary design calls for natural lighting, efficient climate control and where workers are present a healthy and safe work environment.
 - Consideration should be given to building a rooftop glasshouse above it and on its outer perimeter, and use those glasshouses for food growing. Design the glasshouse to provide natural climate control.
 - Design with light shafts into the industrial area to provide natural daylight.
 - On the sides that face the public road or adjacent dwellings, design the side wall glasshouse to have high visual amenity and include landscaping.
 - Alternatively for the side walls, follow the principle of breaking up flat surfaces. A long, wide flat industrial wall may be practical, but it is a blight on the landscape.
 - Wall surfaces can be broken up with ornament, glass, or traditional surface material such as stone veneer that reflects NZ's colonial era stone walls (a popular treatment found in the Queenstown and Otago regions).
- The transport centre may be a single floor design similar to the industrial park, in which case the same recommendations for the site-specific plan should be considered. If instead, the motorpool is a multi-floor carpark, the side openings common to such facilities should be designed in a way that mask its bulk and scale. One effective way to do this is to design the exterior wall with planters that provide niches for climate-appropriate vegetation to grow and cover the wall. If this is done, design it to require no watering during dry season or drought.
- **Tensioned fabric structure used to manufacture the Market Town townhouses:** As described below, the development of the town requires rapid implementation rather than staged development over years or decades. Each village becomes a parallel project, meaning in a 20-village project each site must erect 200 buildings at the same time, and do so in under 12 months. This requires an on-site factory that manufactures the townhouses on a 24/7 schedule. This structure must be of sufficient height and scale (about 10,000 m² under cover) to build the townhouses. At the end of the temporary activity, such a structure and the factory within can be taken down and moved to the next project in another part of New Zealand. Or the tooling removed and the structure converted to another permanent use. The life span of the fabric ranges from 10 to 30 years. If the structure is to be retained as a permanent fixture

in the greenbelt, it will be a prominent feature requiring careful design to ensure it works in harmony with the overall site-specific master plan.

5.8.3 Temporary Manufacturing Activity during implementation

During implementation of the project there are necessary but temporary adverse effects required to deliver raw materials to the Market Town site and to transform those raw materials into townhouses that are delivered in finished form to the nearby urban core. By manufacturing on site, raw materials are delivered in their most compact form, thus reducing the number of truck movements on the adjacent public roads. In some projects, on-site temporary worker housing may be provided to reduce the number of workers commuting to the job site and to address off-site worker housing shortages.

- The temporary factory making buildings shall operate 24/7 every day
- Manufacture shall occur inside a temporary building
- The tensioned fabric structure shall be insulated to contain internal noise
- External lighting shall be shielded to prevent glare at night
- Where required, the site specific plan shall include temporary on-site worker housing
- Where there is sensitivity to night truck deliveries, the Site Specific plan may include on-site material storage so that truck delivery can be limited after business hours.

5.8.4 Ongoing Temporary Activities

Some temporary activities, such as festivals, sports events and farmers markets will occur on a regular basis. The design of such facilities shall make provision for:

- Location, scale, landscaping and visual appearance of open space
- Setback from public roads
- Setback from internal boundaries
- Traffic generation
- Vehicle access and temporary car parking
- Protection of ecological and natural values
- Provision for walkways, cycle ways and pedestrian linkages
- Scale of the activity
- Noise
- Hours of operation
- Public highway mitigation, if required

5.8.5 Water storage and processing

- **Dams and Other Structures:** structures for the retention of water, ponds, streams, water races, drains, channels and pipes are permitted in the greenbelt
- **Water Processing Structures:** buildings in the greenbelt used to filter and clean harvested rain water, greywater and blackwater are a controlled use where controls are restricted to
 - Location, scale, landscaping and visual appearance
 - Setback from public roads

- Setback from internal boundaries
- Smells
- Noise
- Protection of ecological and natural values

5.8.6 Solid Waste and recycling

Principle of avoidance: The principle of avoidance of solid waste is superior to that of reuse and recycling. The Market Town has a critical mass of customers to merit the establishment of a digital-based buying group operated by the Market Town Company. In using group buying-power, the purchasing agents give attention to the useful life of products, the extent to which products can be maintained and repaired, and to packaging. Products and commodities that can come without packaging, such as apples in a bushel basket rather than in a polystyrene tray wrapped in plastic film and packaged in a cardboard shipping box eliminates packaging entirely. Where packaging is required, consider specifying packaging that has a subsequent use.

- **Solid waste reuse and recycling** is a controlled activity in the greenbelt where controls are restricted to
 - Location, scale, landscaping and visual appearance
 - Setback from public roads
 - Setback from internal boundaries
 - Smells
 - Noise
 - Protection of ecological and natural values
- **Construction Waste** is to be limited by the design of buildings. All buildings are to use sustainable design materials that generate minimal construction waste. They are to be made of durable and repairable materials that do not require demolition and disposal or removal of paint
- **Food Waste** is to be composted. It is recommended that separate food disposal pipes be installed in all kitchens so that compost is removed in a medium of under bench grey water that flows to a composting processing plant in the greenbelt. Options for composting includes advanced and innovative systems
- **Electronic Waste:** The initial design of the Market Town shall include future-proof designs and technology intended to reduce the consumption of disposable electronic devices, as well as a group buying system that specifies durable, repairable goods.

5.8.7 Signs: Within the Market Town, The purpose of signs is to provide information to the general public and to assist to create a sustainable and vibrant community.

There are significant positive effects associated with enabling signage to achieve these outcomes. However, signs may have adverse environmental effects particularly on visual amenity and may conflict with safety.

The standard of visual amenity varies in different parts of the Market Town, and is generally defined by the range and nature of land use. In the greenbelt, the potential

adverse effects of signs on visual amenity may diminish the natural quality of the greenbelt. In the urban core, signs have the potential to create adverse effects on visual amenity due to the more sensitive nature of these areas, but well-designed signs can add to the character and unique identity of each of the villages and the town centre.

5.8.7.1 Entrance to the Market Town: At the entrance to the Market Town signs to identify the entrance shall be erected in accordance with the rules of the host territorial authority's District Plan.

5.8.7.2 Greenbelt: Signs within the Greenbelt that are not visible from adjacent properties or public roads shall be governed by the Site Specific Plan to address the following assessment matters.

- Signage size is visually compatible with the scale and character of the building to which it relates and the surrounding environment.
- The design, location and size of the proposed signage complements the surrounding built environment and does not dominate built form;
- The design is consistent throughout the greenbelt;
- The size, colour and location do not adversely affect traffic and/or pedestrian safety;
- The placement, size and choice of materials has considered the architectural features of the building on which the sign is to be erected;
- Any signage on windows will retain the function of the window to provide interest, activity and passive surveillance on the street.
- Whether the cumulative effects of the proposed signage (and all that which can be anticipated to be established on the same building) will adversely affect the streetscape and visual amenity of the surrounding environment.
- Reduce the number of signs used in a single location by the use of directory or finger signs.
- Signs hand written on the building in the traditional way are best, provided they do not alter or obscure part of the building.
- Small scale signs, either mounted on to buildings or free standing, are appropriate.
- Sign materials shall be similar to those used traditionally. Painted wood and metal are appropriate. Plastic and highly reflective materials are inappropriate.
- Signs illuminated by neon, backlit or flashing signs are not appropriate and must not be used. Lighting should point at the sign in a manner that provides information but is not overly bright or glaring.

5.8.7.3 Urban Core: Signs within each village and within the Town Centre shall be governed by the Design Code for each respective village and the centre subject to the following assessment matters:

- Street signs shall be free standing or mounted on buildings.
- Direction signs shall be combined on a finger sign post or directory
- Safety signs shall be designed to be visually compatible with the scale and character of the building to which it relates and the surrounding environment, unless health and safety regulations override
- Signs on buildings shall be for identification, not advertising purposes.
- Signs hand written on the building in the traditional way are best, provided they do not alter or obscure part of the building.
- The placement, size and choice of materials has considered the architectural features of the building on which the sign is to be erected;
- Any signage on windows will retain the function of the window to provide interest, activity and passive surveillance on the street
- Small scale signs, either mounted on to buildings or free standing, are appropriate.
- Sign materials shall be similar to those used traditionally. Painted wood and metal are appropriate. Plastic and highly reflective materials are inappropriate.
- Signs illuminated by neon, backlit or flashing signs are not appropriate and must not be used. Lighting should point at the sign in a manner that provides information but is not overly bright or glaring.
- Temporary signs placed in windows or on buildings shall be of a design approved by the respective Design Code. This includes For Sale, For Rent and similar temporary signs.
- Election signs shall be governed by the respective Design Codes with small signs not greater than one for each street-frontage unit that does not exceed 45 cm x 45 cm, that may only be displayed during the active campaign period.
- Hoardings: Each village will establish an area on the village plaza where election hoardings can be displayed during the campaign, with size being appropriate for a pedestrian environment.

5.8.8 Earthworks

5.8.8.1 Archaeological Sites: All archaeological sites within the Market Town are protected from modification, damage or destruction by the Heritage New Zealand Pouhere Taonga Act 2014. In the event archaeological sites are discovered, an archaeological authority may need to be obtained from the Heritage New Zealand prior to commencing earthworks. Where such sites are significant and of educational value, efforts should be made to preserve the site and build the town around it so that it may be respected.

5.8.8.2 The matters in respect of which the Site Specific Plan shall be a controlled activity are restricted to:

- The nature and scale of the earthworks
- Environmental protection measures
- Remedial works and revegetation

- The effects on landscape and visual amenity values
- The effects on land stability and flooding
- The effects on water bodies
- The effects on cultural and archaeological sites
- Noise

5.8.8.3 Environmental Protection Measures

- Any person carrying out earthworks shall implement sediment and erosion control measures to avoid sediment effects beyond the boundary of the site.
- Any person carrying out earthworks shall implement appropriate dust control measures to avoid nuisance effects of dust beyond the boundary of the site.
- Areas of exposed soil are to be vegetated / re-vegetated within 12 months from the completion of works.

5.8.9 Subdivision: Subdivision of the Market Town is prescriptive. The land is divided into an outer Greenbelt that is held in common ownership by the Market Town on behalf of the citizens of the Market Town and the inner Urban Core which includes common ownership of streets, plazas and public buildings as well as private, fee-simple ownership of land that is under the privately-owned buildings. This standard does not apply to Market Towns built on land held in Maori title. In regard to the privately-owned fee simple lots:

- Each of the lots must have a separate certificate of title
- Each lot shall be for a building platform
- Most attached buildings will have a site coverage of 100% of the underlying lot, allowing for some uncovered land when the building shape is irregular.
- All lots are identified and approved in the Site Specific Plan, which when approved shall not be altered except where adjacent lots are combined to build a larger building covering multiple lots.
- Unless there is good reason within a Site Specific Plan, no land within the Market Town will be contributed to the host territorial authority or other public body or corporation. All land within the boundaries will be owned by the Market Town Company or private landowners.

5.8.10 Financial Contributions: The Market Town is expected to limit its citizen's need for transport beyond the Market Town boundaries, and to provide its own tri-water management, energy, schools, parks, libraries, animal management, museums, shopping, jobs, recreational, social and cultural activities and other services generally provided by territorial authorities. It will not be a gated community, but will be open to the greater law-abiding public. For this reason, it is deemed inappropriate for the territorial authority to receive financial contributions except for infrastructure improvements required by the Market Town that must be paid for by the territorial authority.



5.8.11 Natural Hazards: Natural Hazards that exist in New Zealand include:

- Flooding and inundation
- Erosion and deposition (including landslip and rockfall)
- Land instability
- Earthquakes and liquefaction
- Avalanche
- Alluvion, avulsion and subsidence
- Tsunami / seiche (oscillation of water due to earthquake shaking)
- Wild fire

Objective: The effects of natural hazards on the community and the built environment are minimised to tolerable levels.

Policies

5.8.11.1 Ensure assets or infrastructure are constructed and located so as to avoid or mitigate the potential risk of damage to human life, property, infrastructural networks and other parts of the environment.

5.8.11.2 Restrict the establishment of activities which have the potential to increase natural hazard risk, or may have an impact upon the community and built environment.

5.8.12 Transport: The primary means of day-to-day transport in the Market Town is local, meaning on foot, bicycle or small-scale, low-speed electric vehicle, no cars, buses or trucks. This is achieved by placing all day-to-day destinations within walking distance.

5.8.12.1 Outbound and Visitor Travel is provided at the Motorpool in the greenbelt. It provides for privately-owned cars, a rental car fleet to reduce the need for privately-owned cars, and transport services including shuttle, bus and if appropriate air, rail and boat linkages.

5.8.12.2 Freight is generally by truck delivery with the interchange at the freight depot in the greenbelt. Goods are transferred to and from local electric delivery vehicles that are permitted to operate in the urban core.

5.8.13 Energy and Utilities and Renewable Energy: 21st century technology has better ways to manage fresh, storm and waste water and solar energy and battery storage is now cost competitive with drawing from the grid. Where feasible, it is preferred that the Market Town:

- Harvest, store and purify rainwater for human consumption and washing
- Use water-saving devices so drought-year supply is more than enough
- Use water-cleaning systems to enable reuse of water for lesser purposes
- Collect and store storm water to be purified for lesser purposes
- Separate toilet water management from other water uses



- Process toilet sewage as a surplus resource to extract its caloric value
- Separate kitchen compost water into a separate pipe for fertiliser
- Harvest solar energy with PV cells, stored in large-scale batteries
- Harvest solar thermal energy for heating water directly (not electronically)

5.8.14 Hazardous Substances: Within the urban core

- No explosives
- No flammable solids except consumer products such as lithium batteries.
- Flammable liquids are limited to household and arts/crafts liquids
- No petrol except in motor vehicles operating by special permit
- No flammable gasses other than LPG, piped natural gas and welding gasses when used by workmen or artists/craftpersons

5.8.15 Protected Trees: The Site Specific Plan will survey the selected site and protect specific trees that have heritage value. It will protect large areas of bush that have well-developed ecosystems and high biodiversity.

5.8.16 Indigenous Vegetation: Site selection shall include surveying for the presence of indigenous vegetation. If the feasible site for the urban core is on land that has significant indigenous vegetation that should be protected, the site shall be deemed to be unacceptable for a Market Town unless the statutory authority determines that it is appropriate. If the site has significant indigenous vegetation that can be designated as part of the greenbelt and can be protected, it shall be designated as a reserve and appropriately protected as part of the Specific Plan.



6 Prescriptive Definitions

- **Artist Guild Hall:** On each village plaza, the Market Town Company funds and builds a building suitable for 25 members of a collective of creators, called a guild. The definition of artist is broad, embracing the traditional arts (theatre, music, dance, painting, sculpture, mixed-media, film-making etc.), as well as the broader understanding of creativity including scientific invention and research, design, academic research and other areas of creativity that add cultural enrichment to each village. The hall consists of appropriate work space, visitor facilities that may be rented to cover operating expenses, and modest accommodation for the guild members either as part of the hall, or elsewhere in the village.

The intent of the Guild Hall is to ensure that approximately 5% of the community is of the creative class, and by providing free workspace and modest accommodation, the community may provide the type of support that was traditionally provided in tribal cultures but through the means of a modern, monetised local economy. The capital expense is paid by the initial project as commons infrastructure; the operating expenses are managed by the guild using the income from on-site visitor accommodation, and ongoing repairs are paid for by the Market Town Company out of its operating budget.

- **Client and Customer:** A client is a person who comes to a commercial establishment, usually an office or a service (such as a doctor, lawyer or accountant) with an appointment. A customer is a person who comes to a commercial establishment, such as a shop, eating/drinking place or a government office, without an appointment. The former is inherently a more controlled activity, whereas the latter can result in higher levels of activity that requires additional controls in areas that are predominantly residential in character.
- **Elder Care:** Removing elders from their community when they are unable to care for themselves involves trauma unrelated to their illness. They move to a home surrounded by others who are not well – all old except for staff that is too often overworked and underpaid. The effect can be devastating and younger people who have had to put an old person in such a home vow to find a different way when their time comes.

The different way is to build such nursing care facilities on each village plaza, and make them small. Instead of one per town, build smaller units, one per village. In this way, the elders remain in their familiar surroundings and many can be wheeled to the village café or a warm and sheltered part of the plaza where they can connect with the people they have knew before they moved to nursing care. Further, if the capital cost of the facility is paid by the initial development, and the operating costs are paid by town-wide self-insurance, the patient will not be forced into insolvency

- **Elder Housing:** In a Market Town losing one's license to drive a car has no effect on elders. They do not need to move into a retirement home. However, elders do have special needs, including design for less mobility, neighbours who can keep an eye on them, close walkable (or wheelchair) access to social connection, and a purpose in life. Autonomous elder housing costs less than retirement home living, and places a lower burden on social services. It also suits many elders more; they prefer independence.

The Market Town design provides autonomous elder housing, which is generally placed on the ground floor. It has special designs, such as no doorway threshold, panic button to call

for assistance and stoves that shut off if food begins to burn. This housing is restricted to elders and is designed for solo persons and couples.

- **Market Town Village-based Primary Schools:** Despite the ever changing trends in public education, the latest of which is evaluation by testing, the time-tested way that young people learn in society is by observing and interacting with adult role models. If those role models are replaced by media entertainment, children will not learn the skills required to become participating citizens in society.

Accordingly, primary education is provided for all children living in a village in a set of classrooms that are built on the village plaza. Called shopfront schools in Pattern № 85 in *A Pattern Language*, the public curriculum remains the same, only the location changes. Students learn amid adults they have known since birth. Those adults live and work in their village. The village café is intentionally designed so that school children who do not walk home for lunch eat among adults, either observing them or interacting with them. The classrooms are paid for by the Market Town, thus reducing the burden on the Ministry of Education.

- **Market Town Multi-college High School:** When children reach puberty, their social needs change as they look more to their peers and less to the adults around them. They need to broaden their social connections to find peers who share their interests and values. Their territorial needs change as well, the village they grew up in becomes too small. Accordingly, the students graduate from their village primary schools to a multi-college based high school that is located in the cosmopolitan town centre.

It is multi-college because not all children have the same forms of intelligence. Some are academic in focus and learn well within New Zealand's traditional education structure. Others are more vocationally oriented; they want to master trades. Associated with this group is the emergence of technology that has produced its own subculture of learning, one that interacts with, masters and invents new technology. A fourth group is drawn to creative expression, the creative arts, and they thrive in a college that is arts oriented. Within these four colleges, students may take cross coursework, and there may be additional applied educational activities located in the greenbelt, in the artist guild halls and in apprenticeship/internship opportunities with local businesses.

The purpose of the prominence of the high school building is to signal to the young that the community values their education, that they are not housed in temporary buildings as is common in New Zealand. The function of the rooms within the high school building is to provide appropriate designs to enable the town's young people to learn the skills and knowledge that will enable them to take their place in society. As society becomes increasingly digitised, the need for direct, face-to-face human contact becomes increasingly important. It is the role of the school to provide this learning.

- **NEV (Neighbourhood Electric Vehicle):** A class of small-scale, low-speed four wheel vehicle designed for car-free local zones. Includes parcel delivery, passengers and special purpose vehicles including rubbish collection, emergency services and similar. Except for emergency NEVs, road hierarchy is pedestrian, mobility scooter, bicycles/tricycles, e-cycles and at the bottom NEVs. Except for emergency vehicles, NEVs shall have speed governors on them to limit top speed to a safe speed among pedestrians.

- **Parallel Market Real Estate:** Gentrification is the adverse process whereby a complete community becomes an elite because its qualities become desirable. A Market Town will be vulnerable to gentrification if it operates with a single real estate market. To counter this, to the maximum extent allowed by law, parallel real estate markets are established and maintained.

In the establishment of the town, sectors of society who will not be able to compete in the open market are identified. These include teachers, public servants, essential workers, blue collar workers, young people moving into their first home, artists, elders and other demographic groups. Each is assigned a purchasing power band, and applicants are offered to buy or lease a home that is deemed affordable. When the parallel market customer goes to sell their home, they can ask any price, but only sell to a qualified member of the parallel market. In other words, a teacher can only sell to another teacher. Enforcement is managed by the Market Town Company that retains an economic interest in the property and must approve all parallel-market property transfers including leases. Buying parallel market homes is voluntary to ensure the town retains the full breadth of citizens who make it a complete community. No one is forced to buy parallel market.

- **Rooftop Glasshouse:** In some site-specific plans it may be deemed appropriate to harvest rainwater from angled rooftops and in some cases, it will be deemed appropriate that these rooftop structures are glasshouses that can be used as uninsulated semi-outdoor living space, plant and food growing, and/or solar (electric and/or thermal) collection. The rooftop glasshouse shall not be counted as a floor, but considered an environmentally sustainable roof. In the town centre, a four-storey height limit can mean four floors of rooms plus a rooftop glasshouse or a rooftop open living space that is not insulated and is open on the sides to the elements. Decisions on permitting rooftop living space and glasshouses is reserved to the site-specific plan.
- **Small Office/Micro Office/Home Office:** A private business that operates in a single village building, on one, several or all floors, that has limited foot traffic in terms of visitors. Office means a place where a company conducts its business that is non-manual work and that has clients (visits with an appointment) as opposed to customers (walk-in without an appointment). Small means 6 to 20 employees. Micro means 1 to 5 employees. Home means a micro office that is inside a residence.
- **Street hierarchy:** The Market Town has a hierarchy of street and public space designations with different permissible activity levels. Because all streets and public space within the urban core are car-free, the activities refer to visitor access:
 - **Town square and village plazas:** The highest level of customer and client access
 - **Primary streets:** High level of customer and client access but with regulated hours
 - **Secondary streets:** Regulated hours, mixed use (local shops, cafes, offices, etc.)
 - **Residential streets:** No customers, limited client and employee access; quiet zone
 - **Youth zones:** Areas designated for young adults, higher level of youth-type noise
 - **Greenstreets:** The alley behind townhouses, social network for residents and guests
 - **Challenging walkways:** Unsuitable for wheels: cobblestone, stairs, steep footpaths
 - **Narrow alleys:** Separation between buildings of less than 1.2m that connects streets
 - **Greenbelt roads:** Roads in the greenbelt for Market Town utility and safety vehicles
 - **Vehicle access roads:** Roads to the motorpool, freight depot and industrial park

- **Storey:** A part of a building comprising all the rooms that are on the same level. In the Market Town the counting a storey does not include a rooftop glasshouse (greenhouse) or rooftop outdoor living. Thus a three storey building can mean three floors of rooms, plus a rooftop glasshouse. See Rooftop Glasshouse definition.
- **Tourist versus Visitor:** While tourist and visitor are used synonymously they are not synonyms. Tourists come to a destination because of its reputation. They tend to concentrate at high season and on the most attractive places, and tend to wear out both the place and the host people. Tourists pay to be entertained, rarely understand the culture of their hosts, and tend to deplete the energy of the community.

Visitors come to a destination with an invitation, be it personal or a planned event. They come year-round and disperse throughout the community. They tend to connect with the local people and there tends to be a more even exchange of energy; sometimes lifelong friendships are formed. Visitors come for business, education, social and cultural activities. Research shows that visitors spend more money per day than tourists.

The tourist industry conflict with the visitor industry. Visitors prefer to experience the host community for what it is, where the presence of too many tourists distorts the host community, both through by behaviour of tourists and the character of the shops and services that cater to the tourist trade.

- **Whare Tapu:** In English, the words *church*, *synagogue* or *mosque* imply a particular religion (Christian, Jewish, Muslim), and *temple* while more broadly understood, still implies a structure reserved for religious activities. In contrast, use of the Maori *whare tapu* refers to a sacred place, but does not imply a particular belief system. The use of the Maori word herein does not imply adhering to Maori tikanga however.

Need for sacred space is timeless. When linked to a religion, it can be lost when support for the religion wanes. In England on average, two churches a week are closed and sold to private parties. The communities report feeling the loss, that the church was the heart of community life, but its ownership structure limits their options.

Humans are social, and regardless of their beliefs or lack thereof, many have a need for sacred space, a place where the community celebrates the rights of passage (birth, coming of age, marriage, death). Individually, from time to time people need places of sanctuary where the person may go and feel protected, a place to experience silence or contemplation. In addition to these secular needs, some villages may form around a particular religion and wish to have a sacred space that is consecrated according to the principles of their formal religion. Their whare tapu may serve in this role as well.

Accordingly, in the Market Towns the whare tapu is built and paid for by the town as part of its initial development. It is owned, maintained and repaired by the town. The village determines how it is used. Each village may decide that the basic funding for their whare tapu is sufficient, or they may elect to seek patrons to make it more distinguished.



Appendix A: Local jobs and professions

| SHOPS | SERVICES | LEARNING/HEALTH | BUSINESS/SOCIAL |
|-------------------------|----------------------|----------------------|-------------------------|
| Food/drink shops | Appliances/Repair | Learning | Food/drink svc |
| Bakeries | Barber | Adult Education | Bistro |
| Bottle Shops | Beauty Salons | Art Galleries | Breweries |
| Butchers | Caterers | Art Schools | Cafes |
| Cake Shop | Community/Non-profit | Botanical Gardens | Farmers Market |
| Chocolatiers | Computer Services | Children-Daycare | Ice Cream Store |
| Coffee/Tea Supply | Cosmetics/Beauty | - Kindergarten | Juice Bars |
| Confectionery | Couriers | - Primary | Pubs/Bars |
| Dairy Products | Day Spas | - Secondary | Restaurants |
| Delis and Dairies | DJs | College/Private | Takeaways |
| Fruits/Vegetables | Domestic Services | Cooking School | Travellers' Inn Hall |
| Gourmet | Dry Cleaning/Laundry | Dance School | Vineyards/Wineries |
| Grocery Stores | Electricians | Drama School | Local Businesses |
| Seafood | Event Organisation | Language Schools | Banks/Financial |
| Specialty Food | Furniture Make/Fix | Libraries | Cemetery |
| Retail | Gardeners | Museums | Credit Union |
| Antiques Retailers | Glazier | Music School | Farming |
| Arts/Crafts Retailers | Graphic Design | Music Venues | Film Production |
| Astrology, New Age | Handyman/woman | Special School | Infrastructure Svcs |
| Bike/Ebike Shop | Holiday Services | Tutoring | Local Govt. Maint. |
| Bookstores | Import/Export Agents | Universities | Motorpool-Carwash |
| Chemists | Interest Groups | Health | - Mechanic |
| Clothing Retailers | Interior Design | Acupuncture | - Operations |
| Computer Store | Internet Publisher | Aged Care | - Rentals |
| Costumes/Formal | Internet Services | Alternative Medicine | Storage |

| | | | |
|---------------------|------------------------|----------------------|-------------------------|
| Electronic/Computer | Interpreting/Translate | Cardiologists | Accommodation |
| Eyewear Retailers | IT/Telecom Services | Chiropodist | Airbnb Mgt. |
| Fabric Stores | Landscaping | Chiropractors | Bed/Breakfast |
| Fashion | Local Control | Counselling | Home Minding |
| Florists | Makeup Artists | Crisis Care | Hostels |
| Framing | Marketing | Dentists | Hotels |
| Furniture Stores | Media/Communication | Doctors | Property Mgt. |
| General Retailers | Mortgage Brokers | Emergency Services | Rental Mgt. |
| General Store | Motorpool Rentals | Massage | Tenting/glamping |
| Hardware Stores | Nail Salon | Medical Centres | Traveller Inn-Room |
| Health Stores | Nursery Gardening | Mobility Aids | Sports/Entertain |
| Hobby Shops | Packing | OB/GYN | Badminton/Squash |
| Home Pools/Spas | Painters | Opticians | Bike/ebike rent/svc |
| Jewellery/Watch | Party/Event Planning | Oral Surgeons | Boating |
| Leather Goods | Pest Control | Paediatricians | Bowling |
| Lingerie Retailers | Pet Boarding | Pathologist | Cinema |
| Locksmiths | Pet Care | Physiotherapy | Comedy Clubs |
| Luggage Retailers | Photographers | Podiatrists | Golf |
| Maternity Retailers | Plumbing | Pregnancy Services | Gymnastics |
| Musical Instruments | Post Office | Psychiatrists | Gyms/Fitness |
| Office Equipment | Printers | Professions | Horses/Equestrian |
| Outdoor Gear | Professional Services | Accountant/Bookkeep | Martial Arts |
| Party Supplies | Publishers | Advertising | Nightclub |
| Security Supplies | Radio/TV Stations | Architect/Designers | Parachuting |
| Shades/Blinds | Recorded Media | Business Broker | Personal Trainers |
| Shoe Stores | Recording Studios | Business Consultant | Pilates |
| Ski/Snowboard | Removalists | Business Opportunity | Playgrounds |



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| Sporting Goods | Rubbish Removal | Business Services | Pool Halls |
| Stationery | Security Services | Engineering | Skating Rinks |
| Toy Store | Sewing/Alterations | Environment Consult | Sports Clubs |
| Used Goods | Shoe Repair | Financial Services | Sports Field Mgt. |
| Vintage Clothes | Signwriting | Insurance | Stadiums/Arenas |
| Wedding Supplies | Upholstering | Investing | Swimming Pools |
| Religious | Watch Repair | Lawyers | Tennis |
| Church, temple, etc. | Web Design | Legal Services | Theatres |
| Funeral Services | Web Hosting | Public Relations | Venues/Events |
| Religious Stores | Wedding Planning | Veterinarians | Yoga |