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Introduction

01.01 Background & Purpose

The Wigram Aerodrome site lies approximately 7 kilometres from Christchurch City centre. It was formerly a Royal New Zealand Air Force (RNZAF) base and was named after Sir Henry Wigram. Since the site was largely decommissioned as an RNZAF base in 1995, it has maintained its aviation character with several aviation related businesses using the existing facilities, airstrip and hangar buildings. Christchurch’s Air Force Museum is located to the northern side of the aerodrome.

A key objective of this Masterplan Report is to respond to the South West Christchurch Draft Area Plan which identifies the Wigram Aerodrome site as a proposed new development zone within the Christchurch urban growth boundary. The site is proposed to include a Living G mixed used community including residential, community, education activities and an activity centre (Wigram Town Centre), as well as Business 4 land.

This report provides a summary of the more comprehensive Urban Design Masterplan Report prepared by Woods Bagot in May 2008. The May 2008 report outlined more detailed urban design concepts and methodologies related to the development of a new community masterplan for Wigram. This summary report responds to changes that have occurred to the site masterplan since May 2008 following detailed negotiations with Christchurch City Council, particularly in relation to the Living G zone provisions of the Christchurch City Plan.

The proposed masterplan builds upon the visions and aspirations of the stakeholders to facilitate a framework upon which growth can occur in a robust and flexible manner on the Wigram Plan Change site. The outcomes of the masterplan can be summarised as follows:

- Development of residential areas similar in scale to surrounding properties with an increased density towards the centre of the site, overlooking areas of open space and in walking distance to public transport.
- Creation of “Wigram Town Centre” at the centre of the site, including commercial, retail, civic and higher density residential uses based on a “high street” and a town square.
- Encouragement of a self-sustaining community with significant opportunities for employment, particularly in the business zone to the eastern side of the site.
- Retention and enhancement of key elements of the site’s history including the original airstrip alignment and Southern Cross memorial.
- Establishment of an integrated stormwater management system primarily in Wigram Park (stormwater park), including retention areas and open flat areas for playgrounds or neighbourhood/local parks.
- Connection to existing public transport routes with bus stops located within walking distance of all residents.
- Creation of safe and well maintained walking and cycling routes connecting to the wider community.
- Provision of an education zone for a possible school adjacent to a large regional sports park.

01.02 Our Process

This phase of the masterplanning process commenced in July 2007 and has involved close collaboration with Ngāi Tahu Property Ltd, Christchurch City Council, consultants including Eliot Sinclair and Partners, Urbis Group, Traffic Design Group and community groups.

This collaborative process is summarised in the design methodology diagram below. It has resulted in a set of strong urban design principles and a robust development framework. The masterplan will ensure that the integrity of the design is maintained throughout each phase of development, while simultaneously enabling the development of Wigram to respond to market conditions over time and uphold the visions of the Council and community. The Masterplan presented has been evolved following a thorough exploration of a number of development scenarios for the site.
01.03 Strategic Guidance Documents

The design process for the Wigram Aerodrome site has been guided by a number of national, regional and City wide policy documents. At the local level the South West Christchurch Area Plan (SWAP) outlines development for the area including and surrounding Wigram. The main document guiding development at a City scale is the Greater Christchurch Urban Development Strategy published in 2007 by a number of organisations including Christchurch City Council and Transit New Zealand. The document identifies Wigram as a greenfield area with potential for immediate household growth. At a regional level, Regional Policy Statement Proposed Change No. 1 from Environment Canterbury has provided guidance for the Canterbury region particularly in regard to density and staging.

The following documents and studies have also informed our collaborative process in developing the Wigram masterplan:
- New Zealand Urban Design Protocol (Ministry of Environment, March 2005)
- People, Places & Spaces: A design guide for urban New Zealand (Ministry of Environment, June 2002)
- Living G Zone Provisions (Christchurch City Council)
- Building the Future: The New Zealand Housing Strategy (Housing New Zealand Corporation, March 2005)
02.01 Understanding Wigram

The future positioning of the Wigram site within Christchurch must be carefully assessed in relation to the Greater Christchurch Urban Development Strategy and Action Plan 2007. Rapid recent growth and continued expansion brings many challenges for Christchurch and The Strategy provides principles and framework guidance for implementation. The Strategy projects that the population of Greater Christchurch will increase by 21% to 501,300 by 2026 and a further 9% to 548,520 by 2041. This is based on the most recent 2006 census population of 413,500. This rapid expansion will in turn place significant pressure on the City’s capacity to cater for its expanding population, particularly in relation to housing availability and the provision of services. South West Christchurch is identified by The Strategy to accommodate major growth with an additional 10,000 households. Wigram is identified as a major centre to accommodate part of this growth in South West Christchurch.

Wigram has the opportunity to provide a major new integrated development as a key location for housing and a major activity centre. Development at Wigram is proposed to include the provision of substantial business land to promote local employment. The framework established will set a new benchmark for integrated mixed-use developments and a legacy for Ngāi Tahu and the City of Christchurch. However, any growth must respond to the specific conditions and context of the site. Growth must also be guided by a clear set of urban design principles and a robust development framework to ensure a sustainable long term future can be achieved for Wigram and the City.

02.02 Site and Context

Wigram Aerodrome represents a historically significant site in Christchurch. It is also the largest city on the South Island, the regional capital of Canterbury and greater Christchurch is home to 413,500 people. Ngāi Tahu holds mana whenua and kaitiakitanga over much of the South Island, the largest territory of any tribe in New Zealand. Ngāi Tahu’s takīwa (tribal territory) runs from Te Parinui-o-whiti (White bluffs) on the east coast to Kahurangi Point on the West Coast, and southwards to Rakiura (Stewart Island).

The Wigram Aerodrome site lies within close proximity to both the city centre of Christchurch and the surrounding rural countryside of the Canterbury Plains. It is approximately 7km south west of Christchurch CBD and around 7.5km south of Christchurch International Airport. The site lies towards the edge of the developed area of Christchurch and its boundaries are contained by a mix of different land uses which are described in greater detail in Section 02.04.

Since the closure of the aerodrome, the site has been largely disused. It is vast open grassed site affording wide open views to the Port Hills and surrounding residential and industrial areas. To the north of site lies the well established Wigram residential community accessed from Main South Road and Springs Road. The hangars and control tower dominate the northern edge of the site. The low lying land of the Awatea Basin lies to the west along Awatea Road. To the east is Hayton Road and the existing industrial area. Wigram Road forms the southern boundary of the site and will provide the primary connection to the proposed Transit NZ Motorway Corridor.

"By the year 2041, Greater Christchurch has a vibrant inner city and suburban centres surrounded by thriving rural communities and towns, connected by efficient and sustainable infrastructure. There are a wealth of public spaces ranging from bustling inner city streets to expansive open spaces and parks, which embrace natural systems, landscape and heritage.”

Site Analysis

Existing Open Space and Landscape
Existing Infrastructure and Morphology
Existing Water System
Existing Main Access Points
Existing Buildings and Structures
Existing Land Uses

Runway and Airfield
Awatea Basin
Childcare facility
Fire station
Hangars
Control Tower
Residential Area
Industrial Area

Awataa Road
Owaka Road
Sioux Avenue
Broken Run
Main South Road
Springs Road
Harvard Road
Vickerys Road
Corsair Drive
Parkhouse Road
Hayton Road
Wigram Road

not to scale
Site Analysis

02.03 Historical Development

The Wigram site constitutes a total 146 hectares of brownfield land, currently dominated by the out of service airfield, runway and associated buildings. The topography is generally flat with a raised runway lying east to west through centre of site.

There are no buildings or permanent structures within the Plan Change boundary, however a number of historically significant buildings sit toward the northern end of the site including the Wigram Control Tower Building. These buildings form part of the current proposals for Plan Change 12. The Art Deco style control tower was constructed in 1939 and was originally used as an instruction and headquarters facility for the Royal New Zealand Air Force base. Alongside the control tower sits the imposing hangars currently used for storage facilities. A number of buildings have been developed at the northern gateway into site including two childcare centres and the National Trade Academy. Other hangar buildings of less architectural merit lie to the north west of site and are currently leased to the Southern Institute of Technology.

Sir Henry Francis Wigram, after whom the aerodrome was named, was a key player in the establishment of the Royal New Zealand Air Force. He formed the first private flying school, the Canterbury (NZ) Aviation Company, in Christchurch in 1916. The airfield was handed over to the Government in 1923 as was renamed Wigram Aerodrome. It operated as a Royal New Zealand Air Force base until 1995 and after this time it operated as a public airfield until its closure in early 2009.

In 1928 Australian’s Charles Kingsford Smith and Charles Ulm made the first historic crossing of the Tasman Sea from Australia to New Zealand. They crossed in the famous “Southern Cross” plane circling Wellington before landing at Wigram Aerodrome. The event was filmed and broadcast live over the radio and after this momentous event Wigram Aerodrome became a significant landmark.

Motor racing has also been an important part of the history of the Plan Change site. Summer race meetings were first held in 1949 and have been well supported by overseas drivers. The Formula libre race and the Lady Wigram Trophy are two of the significant races which have been held.

In 1996, the Crown sold the site to Ngāi Tahu following negotiations with Land Information New Zealand’s Crown Property Service, in consultation with the New Zealand Defence Force.

02.04 Land Use & Infrastructure

Since the site ceased to operate as an airfield in early 2009, it has been used for livestock grazing, plant nurseries and training activities associated with the Institute of Technology and Sockburn Fire Station.

Surrounding land uses include the bequest land immediately north of the site which has been retained for military purposes including the Air Force Museum. To the north east lies an extensive area of light industrial land that extends in a horizontal strip to the east towards the CBD. Towards the north and north west lies suburban housing laid out in a standard cul-de-sac road arrangement. The density of housing surrounding the site is generally low at around 10 dwellings per hectare (dph) and housing is generally large floor plate single-storey dwellings on approximately 500-800m² sections. There is variation in design, density and scale amongst some older style properties along Henry Wigram Drive. These houses were originally built as RNZAF Officers houses. The Officers Club which was built at same time as the airfield is a distinctive Art Deco design. A number of road names to the north west also respect the aviation tradition of the area, including Sioux Avenue, Corsair Drive and Hurricane Way. To the southern boundary lies rural agricultural land with smaller settlements beyond forming the greater Christchurch conurbation. The eastern corner of the site is bounded by the Agricultural and Pastoral Showgrounds.

The surrounding road infrastructure is limited and Wigram Road along the southern edge does not currently connect to a regional or arterial network. However, a designation located further south of the site has been reserved for the Transit NZ Motorway Corridor to provide increased road capacity. There are numerous opportunities for access into the Wigram site from the surrounding neighbourhoods. There is an extensive bus network which could be diverted or extended to service Wigram along Corsair Drive, Springs Road and Harvard Road.
03

Urban Design Principles

03.01 Project Vision

Tino Rangatiratanga “Mō tātou, ā, mō kā uri ā muri ake nei”

Tino Rangatiratanga “For us and our children after us”

Wigram will become a new town in town and represent a benchmark in mixed use integrated development in Christchurch.

Wigram will become an attractive, inclusive and sustainable development that aims to set a positive precedent for future suburban development. Embracing innovative design principles, Wigram aims to be a place which is memorable and unique within the suburbs of Christchurch. The scheme will embrace the Ngāi Tahu tradition of legacy to provide for future generations through social, economic and environmental sustainability.

Development will build upon historic references, events and collective memories by harnessing the importance of Wigram’s history whilst still ensuring the evolution of a contemporary neighbourhood. Wigram will be a self sufficient neighbourhood where community is embraced and encouraged to live, work, reside and recreate in the neighbourhood. This new community will provide a strategic role in the growth of the City.

03.02 Establishing Principles

To guide development at Wigram a comprehensive set of urban design principles has been created to inform the design process ensuring project objectives and a high level of design quality can be achieved. The overall guiding principle include the creation of a sense of place and the encouragement of a community spirit.

The “Greetings from Christchurch” postcard demonstrates how the City has a number of distinctive elements that make it recognisably Christchurch. The creation of a sense of place hopes to replicate this ideology by creating a distinctive sense of place and community that is recognisably “Wigram”.

The inspiration for the design principles behind Wigram have come from the urban planning ideology, the “Garden City Movement”, described in detail in Section 03.03. Whilst Christchurch is often referred to as the Garden City, this nomenclature refers to the abundance of gardens, parks and open spaces rather than the urban planning ideology by the same name. The Wigram masterplan draws inspiration from Christchurch and the Movement that has open green space at its very heart. To make the Garden City principles relevant, they have been reinterpreted to form the following set of urban design principles:

- Create a vibrant and complimentary mix of uses
- Establish a varied movement network and walkable community
- Develop a varied urban character with graded density towards open space and central facilities
- Connect the parks and open space network to water catchments
- Evolve a phased urban structure of complimentary neighbourhoods utilising heritage & cultural values

Creation of Wigram Sense of Place

Critical to the success of Wigram is the creation of a neighbourhood that is a unique, attractive and an interesting place where people choose to live. Many modern suburban housing developments throughout the world have little outstanding characteristics to differentiate them from their neighbours. This is also the case within New Zealand, and despite relatively relaxed architectural controls, the result has created many homogenous housing neighbourhoods. For Wigram to provide an alternative for new residents it must be both visually and characteristically different from other suburban developments.

Encouragement of Wigram Community Spirit

Crucial to the social sustainability of Wigram is the attraction and evolution of a strong community through a series of distinct neighbourhoods. The benefits of community are far reaching and the creation of strong networks of mutual support within a community have been linked to reductions in social and mental health issues amongst the population. Additionally a strong community spirit where the community feel a sense of ownership and stewardship over their neighbourhood can address issues of anti-social behaviour and crime within an area.
Although referred to as “The Garden City”, the development of Christchurch pre-dates the urban planning movement by the same name. Christchurch gained its acclaim as a garden city due to the presence of large amounts of public open spaces, parks and trees. As a result of this existing asset and the importance placed upon natural space by residents in Christchurch, harnessing the key principles of the Garden City Movement that placed greenspaces and self-sustaining communities at the very heart of its thinking appears to be a sensible beginning for the form and function of a new community at Wigram Aerodrome. Reinterpreting the Garden City movement principles into a modern context, supported by current urban design thinking, may help inform a contemporary garden city suburb that can influence the form of future residential growth in Christchurch. This may allow the city to accommodate its expected growth into self-sustaining and pleasant urban centres encompassing these values.

The Garden City movement began at the turn of the 19th Century by the influential social thinker and urban planner, Ebenezer Howard. At a time when Christchurch City Council embarks upon an ambitious and confident Urban Development Strategy to accommodate an increase in population by 120,000 by 2041, the original question in the famous three magnets diagram that asks “The People - Where will they go” becomes all the more appropriate.

The Garden City movement has informed many built developments across the world. Originally beginning in England with the establishment of Letchworth Garden City and later Welwyn Garden City. A number of housing areas throughout the world were also influenced by the movement, including Chatham Village in Pittsburgh, Garden City in New York and in Walkerville, Ontario in Canada, Daceyville in Sydney and Walter Burley Griffin was also influenced in his designs for Canberra.

The key components of the garden city movement are the planned development of limited size cities, self-sustained in terms of employment and facilities available and surrounded by agricultural land. Ebenezer Howard’s book “Garden Cities of Tomorrow” was written to propose a positive model for lower density urban development. Such a model of development may be useful in the context of suburban Christchurch due to the lack of highly efficient public transport system and the current character of low density housing throughout the city. Early diagrams proposed a centrally located Garden City of 1,000 acres (400 hectares) to provide for a population of 30,000. Howard was keen to state that his drawings were only diagrammatic and the plan for a town on an actual site would depart from the one he described. Therefore the original form was suggested as being concentric, a radial pattern that was favoured by many of his peers at the time due to its perceived superiority from both engineering and architectural viewpoints. The city could reach approximately 1km from the centre to the circumference.

The movement also influenced many other urban planning movements, for instance, the City Beautiful movement in America. Modern new urbanist thinking encompasses many of the key components of the garden city, which highlight the pre-vehicle dependent urban planning importance of walking distances to open spaces and central services.

Key to this original garden city model was a central space laid out as public gardens and containing municipal and civic buildings such as the town hall, library or museum for instance. Surrounding this space was a large central park with ample space for recreation grounds.

Boulevards would traverse the city from centre to circumference and a series of avenues would radiate in an orbital pattern of concentric rings from the city’s centre. The circular form of streets meant all inhabitants were within of 500 metres of the central park. Additionally a “Grand Avenue” should be provided that would divide the outer zones and provide a second large parkland, within 200 metres from the furthest removed inhabitant. Within these Grand Avenues sit public schools with surrounding playgrounds and gardens. On the outer ring of the town are factories, warehouses, markets etc.

Housing was orientated to face the avenues or boulevards that radiated and converged into the centre. Housing was also encouraged to form crescents around the grand avenues in order to ensure a longer line of frontage on the Grand Avenue and further enlarge the “splendid width of the grand avenue”.

The garden city was to provide building lots, which were to be an average 240m² with smaller sections proposed for central locations. Housing design was encouraged to be to the “fullest measure of individual taste and preference”. Clearly, the scale and design of the town model proposed by Howard is not ideally matched to all suburban developments.

Many of these key principles can be interpreted into a contemporary suburban context at Wigram whilst upholding the ideals to allow community access to open spaces, local schools, shops, recreation areas and civic amenities.
The following urban design principles represent the direction for the conceptual development of the Wigram masterplan. The diagrams interpret the original garden city principles and aim to create a complimentary urban structure where open spaces and services are within easy access of all residents.

03.04 Design Principles

Create a vibrant and complimentary mix of uses

To create convivial streets, active places and serve community needs, a wide range of uses will be provided at Wigram. The masterplan will be flexible to provide numerous opportunities for uses and adaptation to the communities requirements over time. In order to make Wigram a self sufficient community, a number of retail, leisure, commercial, civic and recreational uses are proposed to supplement the mix density housing provision.

- **Range of Uses**: a high level of services will be provided and located with other complimentary uses.
- **Accessibility**: the richest variety of uses will be provided in the town centre ensuring the highest level of access.
- **Local Job Creation**: opportunities will be created for local jobs in the town centre, education zone and business zone to cater for a wide range of residents and work requirements.
- **Critical Mass of Activity**: certain uses will be consolidated into the town centre to provide a critical mass of activity creating an active public realm with civic activity.
- **Adaptability**: built form and land uses patterns will be adaptable and provide opportunities for evolution and change over time.
- **Varied Built Form**: the grain of the built form will become finer towards the town centre to provide smaller units for residential, commercial and retail uses.
- **Economically Viable**: the amount, scale, type and location of uses will be appropriate, considered economically sustainable and ensure sustained local job creation.

Establish a varied movement network & walkable community

The creation of a sustainable community at Wigram mobility is highly important. The community must have the ability to move freely and easily within and out of the area by different transport types. Wigram will provide a network of permeable and multi-modal streets that cater for a hierarchy of users from pedestrians and cyclists, public transport and private vehicles. A hierarchical structure of streets will provide improved way-finding and connect to neighbouring communities.

- **Hierarchical Structure of Streets**: the street network will ensure efficient traffic distribution and assign appropriate activity to scale.
- **Permeable Street Network**: streets will be connected at both ends to provide all users a variety of movement choices, increase street activity and shorten walking or cycling times.
- **Multi-nodal street provision**: equal weighting will be given to all users to ensure safe and efficient movement for cyclists, pedestrians and vehicles.
- **Streets as public spaces**: streets will be treated as public spaces where people can journey, sit or relax in a pleasant and safe environment.
- **Safe Streets**: travel routes will encourage walking and cycling by creating safe streets through a reduction in travel speeds and ensuring streets are overlooked.
- **Environmentally Sensitive**: limit the impact on the environment by incorporating elements such as permeable surfaces, swales and street trees.
Develop a varied urban character with graded density towards open space and central facilities

Wigram will predominantly provide housing for a new community in Christchurch creating an attractive and enjoyable place for people to live. It will also be environmentally sensitive and establish a socially balanced mix of housing provision. Housing will be the dominant built form within Wigram and will play an important role in the creation of the community character. Housing will be attractive, distinct and suited to the modern requirements of a community. Density will be graded towards the centre.

- Range of housing types: typologies will be varied to allow for the widest range of living requirements including affordable housing, small units for first home buyers or large family houses.
- Affordable housing: density will be graded around central employment, retail, public transport or community uses to provide maximum accessibility and a critical mass of activity.
- Environmentally sensitive: design features will respond to solar orientation, construction and sustainable design principles to reduce impact of built form on the environment.
- Neighbourhood character: housing design, views, materials and street enclosure will create a vibrant and unique neighbourhood character that is distinctive from surrounding areas.
- Community: community creation will be encouraged with a number of design tools to foster stewardship and pride in the local environment.

Connect the parks and open space network to water catchments

Open space will be provided within easy reach of all residents. The benefits of public open space are important in terms of health, recreation, sustainability and community stewardship. The efficient use of land within Wigram, in terms of building scale and density, will ensure more public open space availability. A hierarchical structure and linked open space network to the water catchment areas will create usable space for all residents in Wigram.

- Accessible Open Space Network: provide a network of open spaces, neighbourhood parks and sports areas within 400m walking distance of all residents.
- Safe space: open space will be well-supervised, active, overlooked and well lit to ensure community safety.
- Hierarchy of open space: a clear hierarchy of private and public space will be defined, using built form to create defensible spaces where people can relax or public spaces where people can interact.
- Community gathering: opportunities will be provided for the community to meet, such as active streets for informal meetings, public parks for sitting, or a public square for festivals and markets.
- Environmentally sensitive: landscape treatments will respond to local conditions using indigenous species, where possible, and allow for ground water permeation and increased biodiversity.
- Recreation space: sports and recreation areas will allow for club facilities and be of sufficient size to provide playing fields / courts for rugby, soccer, tennis or netball, bowling or cycling.
Evolve a phased urban structure of complimentary neighbourhoods utilising heritage and cultural

Wigram will develop in phases and distinct neighbourhoods allowing the area to evolve a number of contrasting yet complimentary uses and built characters. The phasing will allow evolution of the community rather than imposing a built form style. The northern area will form a strong gateway the existing educational areas and will build upon the function of the heritage buildings for community sports or leisure uses. The business zone to the east will extend neighbouring industrial uses and provide employment opportunities. The town centre will provide some high density housing, retail, civic and commercial provision.

- **Community**: the phasing will allow the community to evolve organically with a strong social network developing over time as the neighbourhood grows.
- **Economic viability**: phasing will permit employment, commercial or retail uses to be staged to provide for new residents as the community expands.
- **Local job creation**: the business zone, education zone and the town centre will be within reasonable travel distance of all residents providing high levels of employment opportunities.
- **Distinctive character**: a distinctive character will be created in each neighbourhood or “quarter” such as the gateway arrival point with historic buildings.
- **Share economic resources**: housing will be within close distance of commercial and employment opportunities ensuring jobs are created and housing values can be maintained over time.
The illustrative masterplan reflects the ambition for the development of the Wigram aerodrome site and builds upon the design principles established. It describes the design intention for this new community, rather than a finite solution. The illustrative masterplan will continue to evolve responding to development requirements and market changes, as well as the aspirations of stakeholders, Council and the community.

The concept represented shows the aspiration to integrate Wigram into the surrounding residential, industrial and rural areas by working with the natural systems and engaging the open space network to deliver simplified pedestrian connectivity and a series of parks. The broader aspiration is to create a sustainable mixed use town centre and a diversity of residential choices supported by a variety of transportation options.
05.01 Land Use Strategy

Wigram will be a predominantly residential development supported by the necessary services to allow the community to be self-sufficient in terms of employment and retail. The supporting services for the resident population include retail, leisure, education, recreation, civic and community uses.

The northern gateway area from Corsair Drive will continue to provide community and education uses with the potential redevelopment of the hangar and control tower buildings. On the new boulevard an education zone and sports park will be provided and may in the future provide a primary or secondary school associated with the playing fields in the sports park.

Along Hayton Road to the east of the site, a large area of business land will be provided as an extension of the existing industrial area further east. This area will provide large levels of employment for Wigram and allow the community to be self-sufficient and create local jobs. Wigram Park is a primary open space and stormwater catchment area which will act as a buffer between the residential and industrial areas.
Wigram Town Centre

To gain a understanding of the feasibility and demand for services in the town centre, a retail assessment was undertaken by Philip Donnelly and Associates. The assessment is based on estimated growth in spending within a 2km radius of Wigram and evaluates neighbouring retail centres, competition, function and provision.

The predominant uses for the proposed town centre include:
- food retailing
- food and beverage supplies
- pharmaceutical and personal goods servicing (eg. video store, newsagency or hairdresser)

This would provide a local shopping centre anchored by a supermarket with potential for future expansion. The estimated Town Centre floor space is:
- 2,500m² by 2013
- 3,500m² by 2016
- 4,000m² by 2041

In addition to these retail based activities, the Town Centre will be supported by community and civic activities, such as a community hall or space for leisure or recreational clubs. The town centre will be focussed on a pedestrian priority “high street” and town square.
Hangar and Control Tower Neighbourhood
Adjacent to the Wigram Plan Change Site (within the Plan Change 12 Site), there are a number of existing historic buildings which provide the opportunity for conversion. Retaining these buildings will not only respect the historical significance of the site but also create a unique character for Wigram setting it apart from other residential areas in Christchurch.

Control Tower
The Art Deco style control tower was built in 1939 and was originally used as an instruction and headquarters facility for the airfield and the RNZAF base. In 2006, Wilkie & Bruce Architects developed a number of options for alternative uses and conversions of this building. There are number of different uses that could be accommodated within the building with the general intention being to create an interesting icon at the northern entry to Wigram and generate sufficient activity to enliven the building and the space around it.

The options explored by Wilkie & Bruce Architects include:
- **Apartments over Health Centre**: Alter the ground floor to accommodate health and well being uses with tenants including doctors surgery, dentist, veterinary practice or similar. The first and second floors would be altered to accommodate a mix of two bedroom apartments with external balconies.
- **Apartments over pub/restaurant**: A proposed pub/restaurant would occupy the southern end of the building in order to ensure prominence from the road. Parking and entrances would be separated, with the pub main entrance via the elaborate and more prominent eastern facade.
- **Commercial tenants over health centre or pub to retain existing building plan**: As defined in previous options, separate entrances would provide different identities to be developed for each function and also to improve security. Subdivision of the first and second floor could be generally retained as existing to suit specific tenant requirements subject to structural and fire protection requirements.

Hangars
These significant and historic hangar buildings create an opportunity to reinforce the entry point from the north by creating a modern conversion whilst retaining the cultural and aesthetic characteristics of these structures. For example, the hangars could provide additional space for education or training. The large structures could accommodate a host of sports facilities such as indoor pitches, a swimming pool, fitness rooms etc. These could be provided for the public but associated with educational purposes. Also a number of cultural uses could be explored from artists studios, aircraft museum, dance studios, art gallery space, music studios, etc. The activity generated within the building could be allowed to spill into the forecourt area with possible outdoor courts and playing areas. Alternatively this forecourt space could be used as a public space and meeting area in front of the building.
Development Strategies

05.02 Movement Strategy

Road Network
The movement strategy in Wigram will ensure free and easy access for residents by a wide range of transportation methods. A hierarchical network of permeable streets will provide a variety of direct routes to allow residents to walk to the retail and community provisions in the town centre, the potential school, sports park or neighbourhood parks. This network will ensure the level of traffic is relevant to the use of the area, for example residential streets will have reduced traffic to allow flexibility for use as community spaces. The short streets, curved orientation, street design and on-street parking will be designed to slow traffic.

A high level of connectivity is made to the wider transport network with new connections from Wigram to all of the adjacent collector and arterial roads including Parkhouse Road, Hayton Road, Wigram Road, Aidanfield Drive Extension, Awatea Road and Springs Rd. The proposed internal transport network has also been designed to integrate with other proposed land use development and transport network improvements outside of the Plan Change site.

A transport project in the area still being investigated by the Council is an improved link from the Parkhouse industrial area and Wigram to Main South Road. Two road network options have been proposed for Wigram to ensure there is flexibility in accommodating the outcome of the ongoing studies for the project.

Option A - Harvard Avenue Link
Option A is provided on the basis that the new link is an access via Vickerys Road and Harvard Avenue to signals at Main South Road. This also provides a link from the southwest of the site via Harvard Avenue.
Option B - Corsair Drive Link
If the link is an extension of Hayton Road across the railway to the Sockburn roundabout, then the network would be amended to reflect the different traffic patterns that will result. This is primarily the strengthening of the link between Corsair Drive and Hayton Road, as shown by provision of a collector road in Option B.
Pedestrian and Cycle Network

Walking and cycling are a key priority in the design of the Wigram community. The permeable street network will provide a number of different choices for pedestrians and cyclists.

The design will ensure all streets are multi-modal to provide safe and easy movement of walkers, cyclists, motor vehicles and buses. The pedestrian and cycle routes will be designed to ensure issues of safety are addressed, especially at night time when overlooking and lighting are particularly important.

A mix of cyclists and pedestrians on streets will provide a high level of street activity which in turn will provide safer and more activated streets. The placement of pedestrian only routes will only be considered where high levels of supervision and natural street activity can be achieved, such as within the town centre.

I love to ride my bicycle.
Development Strategies

The masterplan has carefully considered the hierarchy for roads such as local and collector roads. Refer to the adjacent plan and sections for further detail.
Development Strategies

SECTION A - Local Road (Industrial/ Business 4 zone 18m)

SECTION B - Local Road (Avenue 19.8m)

SECTION C - Collector Road (with flush median 22.2m)

SECTION D - Collector Road (Boulevard 25.7m)

SECTION E - Local Road (distributor with cycle lane 17.8m)

SECTION F - Local Road (distributor without cycle lane 17.5m)

SECTION G - Local Road (residential 15.2m)

SECTION H - Local Road (neighbourhood 13.7m)

Scale 1:100 @ A3
Public Transport Network

Public transport has been considered as a vital element and will provide sustainable movement options for people to travel within and out of Wigram to adjoining neighbourhoods, Christchurch City and other regional areas.

Bus routes will be positioned along existing roads and new collector roads, such as the boulevard and southern extension of Corsair Drive and Vickerys Road. Buses will connect to existing City routes as well as providing new or re-routed services for the network in the future.

Bus stops will be provided with seating and shelter in order to encourage travel by public transport from residential areas to the town centre, the City and surrounding neighbourhoods. The primary bus stop or interchange will be located in the town centre. Bus catchments will be assessed to ensure that all residents are within 500m walk of a bus stop.
The open space or “green network” is crucial to the creation of an attractive and liveable environment for Wigram. Consistent with the principles outlined earlier in this document the open space strategy at Wigram has been designed to give residents easy access to open space within 400 metres walking distance. The proposed strategy is also consistent with Council’s Long Term Community Plan 2006-16, which identifies that 4.7 hectares of urban open space should be provided for every 1,000 persons. The Plan also states that 90% of residents should be within 400 metres of a park and that there should be at least 4 playgrounds per 1,000 children. Based on the proposed Wigram population, the strategy will provide:

- 4 neighbourhood parks (approx. 1ha each);
- Sports Park (approx. 4.5ha) adjacent to the proposed education zone
- Town Square (approx. 0.2ha)
- Wigram Park (approx. 15ha) with the provision of play areas above the 1 in 50 year flood zone
- Local Parks (min. area 0.2ha)
- Approx. 6 playgrounds distributed throughout
Local Parks

One of the guiding principles of the masterplan is to encourage the development of a strong community spirit. Therefore opportunities are created to encourage interaction, meeting and informal gathering. The hierarchy of open space means the town square, open spaces and parks will provide differing places for the whole community or small groups to congregate. Additionally a number of smaller spaces or local parks with a minimum area of 2,000m² will be provided within neighbourhoods. The clusters address the importance of the street as a community public space and are based around the hierarchy of private space, street space and small greenspace.
The water movement strategy or “blue network” at Wigram is of great importance to both the proposed development and to the wider catchment area and its ecosystem.

The development will employ best practice sustainable urban drainage techniques to ensure that all surface water runoff is collected and treated on site before being discharged appropriately to the existing Awatea basin. The stormwater management areas will contain swales, streams and/or retention basins required for the collection, management and carriage of stormwater. These areas will generally consist of relatively flat gassed areas with tree planting and will be open to public access. In some cases these areas will be used for neighbourhood or local parks, informal recreation or playing fields.
Development Strategies

05.05 Built Form and Density Strategy

The levels of use intensity for both housing and other uses will vary in relation to the level of public accessibility by all forms of transport as well as the walking distances for residents. For example, density levels will increase around important nodes of use such as the Town Centre and areas of high amenity overlooking neighbourhood parks, sports park or Wigram Park. As a result, lower density housing will tend to be situated furthest from services and may be adjacent to surrounding lower density areas and more sensitive interfaces.

An increase in building height is proposed for the Town Centre and adjacent sites to allow for the development of number of iconic buildings. These buildings may be mixed use with retail or commercial use at ground level and residential or office use above. It is anticipated that the building design will be contextually relevant to the site and by going higher they will afford wide views across the City.

Homogenous density levels throughout any new development site can result in monotonous environments with little change in character or visual interest. Many suburbs have little variation in form and large areas can look aesthetically similar, making navigation difficult. With little built form to indicate change in use or a central community focus people rarely have notable landmarks to aid their orientation in the area. Diversifying the density can people to ‘read’ the environment better thus aiding legibility.

Some of the benefits of graded density include:

Adaptation and Flexibility - Grading density provides opportunities to change the location of density in future stages in order to adapt or respond to changing market conditions. This can occur whilst still ensuring that the minimum site density is achieved.

Increased accessibility - Grading density minimises average trip lengths and maximises local accessibility. Placing the majority of people within a reasonable walking distance of around 5 minutes walk or 400m distance can increase opportunities for people to reduce their dependency on private vehicles. This in turn has health benefits, creates active streets and increases opportunity for community interaction.

Viable local services - Local shops, community facilities and bus services demand a critical level of people in order to be sustained. Without a concentration of people within a certain area the critical mass of activity is reduced and community provisions such as bus services may not be viable, removing a vital support function for many members of the community.

Diversity of house types - In the creation of a balanced community a diversity of density levels will in turn encourage a diversity of house types and levels of affordability.

Open space - Diversifying the location of certain densities and intensifying the land use opens land for the creation of well connected public open space networks.

In accordance with the Environment Canterbury’s Regional Policy Statement Proposed Change No.1 (July 2007), Wigram will seek to achieve a density in the vicinity of 15 dwellings per hectare. As a result this higher density community will be afforded with the following benefits:

Convenient shops and services - With more people living in the Wigram community, better local shops, schools and public transport routes will become more economically viable. Places with local shops and facilities within walking distance depend less on private vehicles and enjoy livelier streets that in turn create better neighbourhoods.

Active places and spaces - With the introduction of more people closer to local services and spaces, the more likely people are to walk and enjoy open spaces. This results in convivial public spaces and streets making the local environment safer, more enjoyable and more attractive to live in.

Mixed communities - With the introduction of more dwellings, the easier it is to provide a mix of sections and house types to create a socially sustainable community. A mixture of terraced housing, semi-detached, or housing split into apartments can still be achieved whilst retaining a low key character.

'Somewhere not anywhere' - Higher density development makes it easier to create a sense of identity and place. Creation of a “place” at Wigram and branding is a key urban design tool to create distinctive locations people are proud to live. When combined with open spaces and attention to detail, it can turn locations into desirable places.

Viable public transport - An efficient public transport system reduces reliance on private vehicles and reduces pressure on already congested roads. There is already a network of buses around Christchurch however for an extended route to be sustained, a critical level of users is needed to make the service economically viable.

Land efficiency - Building to higher density reduces the land take of urban development and creates more opportunity for open green spaces this reducing the encroachment of urban areas into surrounding greenfield areas.
Development Strategies

Typical Residential Block Layout
(refer to Land Use Plan for block reference numbers)

Development Strategies

Business Zone
Collector Road
Wigram Park
Density B
Density C
Local Park
Neighbourhood Park
Boulevard
Density A
Collector Road
Density A
Density C
Density B
Density B
Neighbourhood Park

not to scale
## Residential Yield

- Average 1,317 dwellings (max. 1,733 min. 1,070)

## Residential Yield as percentage of total average number of dwellings (1,317)

- Density ATC - 3.8%
- Density A - 11.8%
- Density B - 30%
- Density C - 54.4%

## Residential Yield as percentage of total residential area (63.73ha)

- Density ATC - 50 dwellings on 3.41ha (5.3%)
- Density A - 155 dwellings on 3.48ha (5.5%)
- Density B - 395 dwellings on 13.84ha (21.7%)
- Density C - 717 dwellings on 43ha (67.5%)

### Table: Residential Yield

<table>
<thead>
<tr>
<th>Density</th>
<th>Parcel Land Use</th>
<th>Parcel Land Use m²</th>
<th>Ha</th>
<th>Residential Yield as percentage of total average number of dwellings</th>
<th>Residential Yield as percentage of total residential area</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATC</td>
<td>Dwellings</td>
<td>1,733</td>
<td>1070</td>
<td>1.15%</td>
<td>94%</td>
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<tr>
<td>A</td>
<td>Dwellings</td>
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<td>540</td>
<td>7.15%</td>
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<tr>
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### Tables: Land Use

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</thead>
<tbody>
<tr>
<td>Business</td>
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<td>6.5</td>
<td>11.7%</td>
<td>11.7%</td>
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<tr>
<td>Education</td>
<td>200</td>
<td>11.7</td>
<td>11.7%</td>
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<tr>
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It is recognised that the built form and density within Wigram will be a contributing factor to creating a unique identify for this new community. To create the character of a town centre and address issues of affordability, a range of densities and appropriate scale built forms have been proposed.

However, the location of density is proposed in proximity to local services, employment, open space or public transport to create a truly walkable neighbourhood. The intention is also to create an interesting townscape where the character is defined by buildings or openness where people can navigate. Some of the key built form principles are identified on the adjacent diagrams.
Townscape
Townscape refers to the arrangement of buildings and the resulting spaces created between the built form. The townscape should create building arrangements that interact with each other, are complimentary to the surrounding context and create interesting and legible built environments. The beauty of townscape as a means of creating interesting and unique built urban environments has been overlooked in modern times despite its importance in attracting people to neighbourhoods and helping people to navigate through areas. Suburban streets often have little consideration as to how buildings will interact with and enclose street space.

The townscape within Wigram will be carefully considered whilst ensuring a degree of flexibility in architectural expression. The layout will ensure the appearance of an informal townscape structured by a more formal framework. The townscape will vary within different areas of density and creating differing character in each neighbourhood. Towards the town centre where density is higher, the street pattern will be more formal and angular with a more enclosed built form, shorter streets and vistas terminated by buildings. Towards the edges where density is lower, the street pattern will become more flowing and complement the existing pattern of streets in the surrounding areas. Greater building set backs on lower density sections will ensure the character feels less dense and more rural, which is appropriate towards the edges of the site.

Legibility
The street layout within Wigram will be designed to allow for a built form and townscape that is legible and clear to residents and visitors. In the future, design guidelines may be used to ensure key elements are maintained to highlight significant views, strengthen building lines and address corners of blocks. This will allow the visitor to navigate easily through all areas by using key buildings as legible markers along their route.
This design process has provided a thorough analysis of the existing conditions of the Wigram site and its position within the regional context. The site analysis has been undertaken to determine the inherent qualities that make the site distinctive. The design team has worked closely with stakeholders to ensure the existing character and community values are respected where possible.

This process has been structured around a set of urban design principles that have guided the evolution of the masterplan from the beginning. It has resulted in a development framework that has been agreed after the exploration of numerous options with the consultant team.

The masterplan establishes land use, movement, open space, water movement and built form and density strategies to ensure Wigram is a sustainable neighbourhood to live and work. An architectural language has not been established at this stage, however it is recognised that an attractive built environment with a distinctive sense of place is crucial to the success of Wigram. The control of the built form should provide sufficient flexibility to allow freedom of expression whilst ensuring that the urban design principles are met.

Tino Rangatiratanga
“For us and our children after us”

Wigram will become a new town in town and represent a benchmark in mixed use integrated development in Christchurch.

06.01  The Way Forward

There’s a new town in town.

What it means to be close.

This town was made for walking.

I love to ride my bicycle.
Wigram will be developed in stages linking to existing infrastructure, services and networks. The staging strategy will ensure the community can grow in a sustainable manner as well as providing opportunities for the development to respond to changing market conditions. The intention is to provide a mix of densities within each stage as a platform for the evolution of a mixed use and socially inclusive community. Community benefits will be provided in each stage and the staging principles are as follows:

Stage 1 (Plan Change 12)
- Residential community
- Business 1
- Heritage precinct
- Open space

Stage 2A
- Mixed density residential areas
- Wigram Town Centre
- Sports Park and proposed education zone
- Boulevard connecting to the Town Centre
- New collector roads
- Neighbourhood and local parks
- Wigram Park and water movement network

Stage 2B
- Business 4 land
- Boulevard connecting to the Town Centre

Stage 3
- Mixed density residential
- Neighbourhood and local parks
- New collector roads

Stage 4
- Mixed density residential
- Neighbourhood and local parks
- New collector roads

Stage 5
- Mixed density residential
- Neighbourhood and local parks
- New collector roads
Wigram.
Neighbours wanted.