

PARK CIRCULAR ECONOMY DIAGRAM

It is envisaged that the proposed Ngawha Innovation and Enterprise Park will be home to a range of organisations whose activities will complement, rather than compete with, already-established local businesses. Activity that will expand the economic potential of the region and add value to existing businesses by helping them extract greater value from their operations

- A catalyst - for significant economic and social gains in an area currently with high rates of unemployment but substantial natural assets
- Supporting rather than competing with local industry - activity that will extend potential in the region
- Closed loop design - much of the environmental impact of activity there will be dealt with inside the Park
- R&D - to support not just Park activity but the aspirations of businesses and surrounding landowners
- Education and training - opportunity to build the potential of the local workforce with real, transferable skilled jobs

#### VISION

The vision for the Ngawha Innovation & Enterprise Park (the Park) is to support economic, and consequently social development, in the district for the next 25-30 years. It will do this through

*“supporting high value land use and manufacturing that is driven by consumer demand, transitioning to a knowledge-based economy applying circular principles that equips the workforce for a more technology-driven future and that returns the economic and social benefits to the district and the region.”*

It's aim is to:

- develop mature, sustainable enterprise in the district;
- add greater value to the abundant raw materials in the district;
- overcome inter-generational welfare dependency through developing the skills to support employment and enterprise in the district and wider region;
- equip the local workforce for a transition to a technology-driven future; and
- address climate change challenges through the activity at the Park and the way that activity is managed.

Over the next 0-5 years, the Park's primary focus is on activity that:

- extracts greater value from primary sector production;
- gaining greater value from waste streams from production and manufacturing of primary products; and
- creating employment opportunities for the local community.

#### IMPACT

The following impacts are sought:

##### For the local community:

- An increase in new, full-time jobs and additional workforce training in the district;
- Better outcomes for Māori who make up nearly 65 per cent of the local community through the active approach being proposed at the Park to recruiting, supporting and equipping locals to fill jobs and training positions at the Park.
- Improved employment outcomes for locals - more people of working age in employment, an increase in the level of skill in those employed, and increased average incomes;
- Higher educational attainment because learners can see a practical outcome from their education;
- An increase in numbers in vocational training that will reflect at least the national average because training is able to be provided closer to home with good pastoral care and in a location where the practical aspects of their training are visible;
- Seasonality of employment will be reduced through the provision of year-round employment or the ability to work with employers and employees to train for transferable skills and so that the workforce can be deployed year-round even if it isn't with the same employer;
- The wellbeing of the local community will be improved through more revenue to spend in local businesses, less anti-social behaviour because of meaningful/ gainful ways for the community to use their time, lower re-offending rates and better health outcomes; and
- The cycles of high unemployment in the community will be mitigated through anticipating and equipping the local workforce for technological changes in manufacturing and production.

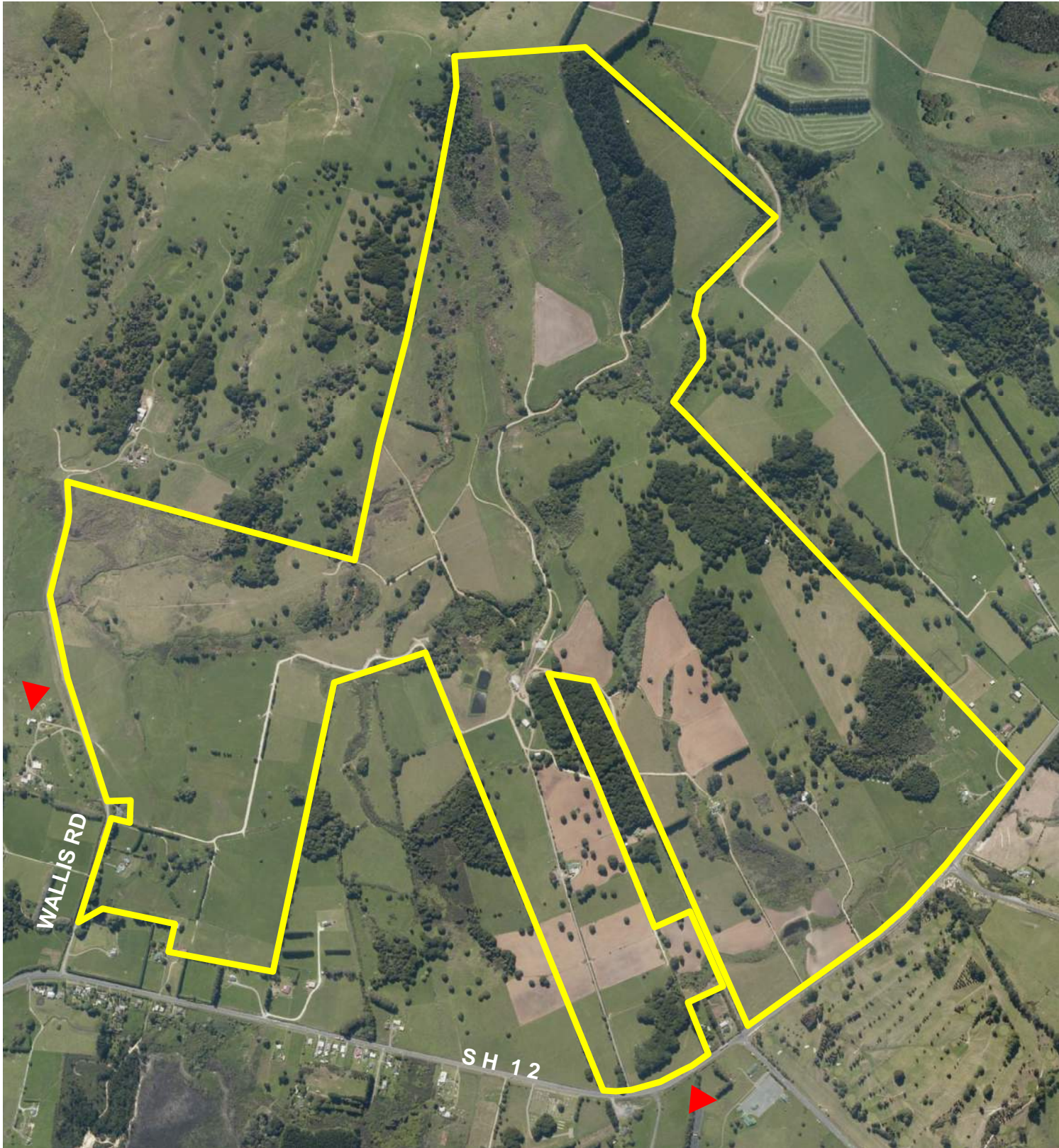
##### For the economy:

- Based on the businesses locating, numbers of business start-ups will increase and the sustainability of existing businesses (within and outside the Park) will improve;
- Employers in the Park and across the district will be able attract and retain the workforce that they require;
- Stronger links with education providers ensure that their employees have the right skills to meet current and future business needs;
- R&D connections with business are strengthened and more businesses undertake R&D because they can see its benefits for their business and/or they can undertake R&D with others to share the cost;
- Businesses are attracted to locate in the mid-North not just through a desire to contribute to the well-being of this community, but because the community can offer a workforce and ecosystem that supports their businesses.

##### For the environment:

- Circular manufacturing system at the Park mitigates the environmental impact of manufacturing and deals with heat, energy and waste within the Park;
- Using renewable energy to provide heat and energy to tenants at the Park reduces reliance on coal and petroleum products such as natural gas;
- Gas emissions can be used on site by the mix of tenants e.g. CO2 from anaerobic digestion/ pyrolysis is cleaned and used by glasshouses;
- Shared energy solutions using trash wood have high capital outlay but use waste from onsite production and reduce emissions from truck movements and landfills where it would otherwise be dumped;
- Other energy solutions using waste streams from forestry in the region are attracted to the Park. This lowers the environmental degradation to water ways from wood waste entering them.
- These energy solutions can fuel themselves from the gasses they produce and be used for drying products such as tea and timber on the Park.
- Waste product from alternative energy solutions results in organic by-product that can be used as fertiliser with lower rates of nitrogen and phosphorus.



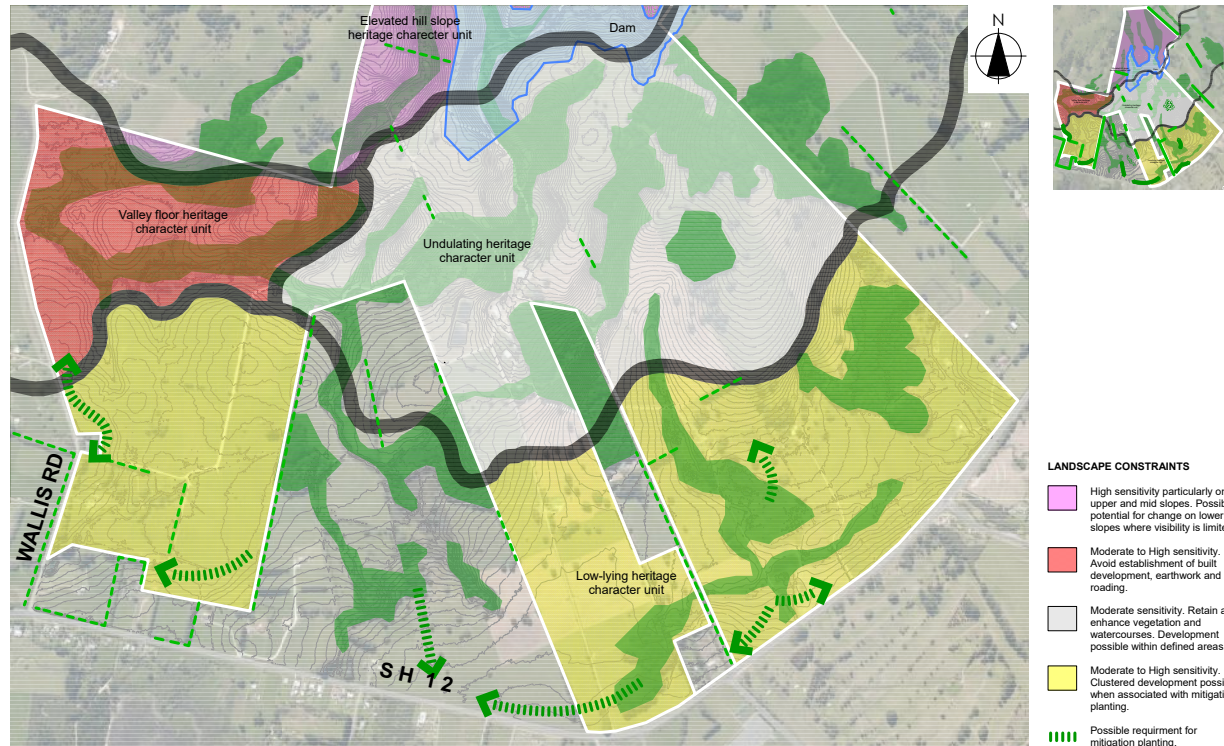


SITE BOUNDARY EXTENTS AND PROPOSED ACCESS POINTS (NTS)

THE PARK WILL ACHIEVE ITS VISION THROUGH:

- Shared values and commitments** - The Park is looking to attract tenants that have a shared commitment to:
- the desired outcome of making the Park a symbiotic, closed loop manufacturing system;
  - employing locals including those who are transitioning from the Northland Regional Corrections Facility;
  - Care and protection of the environment in the nature of their businesses and/or the way they undertake their manufacturing/ service delivery.
- Through careful, consistent management of the Park tenancies and infrastructure** - Far North Holdings Ltd (FNHL) will manage the development and the ongoing occupancy of the Park to ensure that the outcomes and objectives from the Park are realised over the 25-30 year timeframe. It will be responsible for the development and maintenance of all shared infrastructure at the Park including roads, signage, potable water, waste water, grounds maintenance and provision of electricity, phone and internet services to the Park.
- Through the range and types of activity accommodated at the Park** - In order to achieve the outcomes sought, the Park needs to model an innovation ecosystem. The components of this would include:
- Light to medium industry that is generated by the core strengths of the district.
  - Manufacturing start-ups (incubated at the Park) that are as yet unknown.
  - Manufacturing scale-ups (companies looking to grow from small to medium sized enterprises) and new, clean manufacturing processes for existing products.
  - Provision of a workforce development and upskilling to meet the specific needs of individual employers at the Park.
  - Laboratory facilities to support existing businesses requiring testing facilities.
  - Research and development facilities to support the growth, development and innovation in land use, primary sector-based industries, environmental management and clean manufacturing.
  - Technology-based and service businesses that service the local production and manufacturing and that bring new technologies to increase the productivity and competitiveness of the region.
  - Horticultural production facilities including glasshouses, packing and sorting sheds and cool stores to support high value crops.
  - Food processing and packaging facilities to enable the full production value to be retained in the region.
  - Manufacturing of waste products into energy and other by products such as organic fertiliser and CO2.
  - Business incubation facilities for businesses that would benefit from the skills, routes to market and the technologies being used by other tenants at the Park.
  - Education and training facilities including residential accommodation to allow for block courses on site
  - Housing to enable those employed at the Park to be located in proximity to work but away from the industrial activity.
- Through a central Innovation & Education Hub at the heart of the Park**  
Recognising the challenges to economic and social wellbeing for this community, a central Innovation & Enterprise Centre is being developed. This building at the heart of the physical development in the Park will provide accommodation for:
- Education and training entities to provide bespoke training for both employers and employees that is delivered on the job and on site (making the training relevant and overcoming the issues of transport facing learners in the region);
  - Research & development (R&D) agencies to base themselves permanently at the Park or hot desking when they are in the region and make laboratory/ testing space available to them. This is intended to foster relationships between R&D agencies and businesses in the region to improve innovation and productivity and make science as a career more visible for local taitamariki (youth);
  - Co-working space for service businesses that support primary production and manufacturing in the region;
  - Business incubation of start-up businesses locating at the Park through co-location and tailored business development support;
  - Provision of state-of-the-art communications technology to enable video conferencing that develop national and international relationships within the region (these facilities are not currently publicly available north of Whangarei).
  - Provision of and seminar and conference spaces for training, R&D and connecting with international conferences.





LANDSCAPE ZONES (NTS)



SOIL TYPES (NTS)

## MASTERPLAN ARCHITECTURAL DESIGN STATEMENT

### OVERVIEW

The Ngawha Innovation and Enterprise Park lies approximately 2km to the east of Kaikohe on the north side of SH12. It is part of a 238ha property managed by Far North Holdings Limited. The Park is to be situated across three fingers of land that front SH12 and which are separated by properties owned by other parties. The fingers merge into one contiguous piece of land on the inland side further to the north.

The western finger borders a side road (Wallis Road) and is relatively flat; it lies at the lowest point of the property. The central and eastern fingers rise gently from SH12 but can also be considered relatively flat. All three fingers lie at the lowest point of the total farm holding and have substantial areas of mature trees and wetlands. The adjacent and below plans reflect landscape features of the site.

The Park is being promoted as a location for innovative and enterprising businesses founded on sustainable principles using local resources and labour. The objective of the Master Plan is to reinforce the sustainable nature of the Park through respect for the existing landscape and development of which displays care of the environment. The major objectives of the Master Plan are to:

- Develop clusters of buildings as opposed to one contiguous mass
- Merge buildings into the landscape
- Give visual signals of the sustainable nature of the development via stormwater ponds, swale drains, gravel carparking and the like

The Master Plan has been developed around:

- Minimal interventions to the existing natural features, landscape and topography
- Civil engineering works providing water supply, sewage disposal, stormwater disposal and minimal earthworks
- Traffic engineering issues around vehicle movements and safe access off SH12
- Developing traffic spines through each finger that work with the topography and maximise individual site areas
- Defining activity zones (hubs) and grouping these hubs in such a way that there is space between to reinforce the rural nature of the site; zones / hubs have been provided as follows:
  - Stage 1: Horticulture (western finger) Finger 1
  - Stage 1: Innovation and Business Enterprise, Education (central finger) Finger 2
  - Future staged development (eastern finger) Finger 3
- Dispersing carparking through the entire site to ensure adequate carparking is located adjacent to the appropriate facility
- Developing a common language for the form, materials, colours of all buildings that is appropriate to a rural landscape
- The masterplan colour palette has been derived from the land; particularly the soils which have a rich history and represent a key part of the taonga of the site. Stage 1 on Fingers 1 & 2 reflect the Young Basalt Volcanic soils which are a mix of clay, scoria and basalt in light clay colours, through to rich reds and browns.



SITE ECOLOGY (NTS)- refer NZ ENVIRONMENTAL REPORT FOR DETAIL





STAGE ONE MASTERPLAN (NTS)

URBAN DESIGN AND LANDSCAPING

The key Urban Design & Landscaping features are:

- Retaining as much of the existing wetland, bush block & mature trees as possible. (Refer adjacent diagram)
- Working with the natural contour where possible.
- Use of naturalistic forms for roading, gentle curves favoured over straight lines.
- Careful design & placement of car parking to lessen the visual impact of car parking.
- Defining activity zones (hubs) with open spaces & planting.
- Landscaping the stormwater ponds & swales to help soften the built environment .
- Developing a common language for the form, materials, colours of all buildings that is appropriate to a rural landscape .
- Placement of the larger Production Hub buildings away from the State HW12 entrance.
- Smaller building with public interface located more towards the State HW12 entrance
- Pond edges to be planted & integrated into the natural landscape

INFRASTRUCTURE

Infrastructure necessary for the development, includes:

- Roading
- Stormwater and sewage
- Water supply
- Carparking
- General earthworks
- Landscaping

Infrastructure will be extended as required to service future development.

TRAFFIC

Roading has been designed to meet the Master Plan and Resource Consent conditon requirements in consultation with Waka Kotahi NZ Transport Agency and the Northern Transport Alliance.  
Finger 1 is accessed off Wallis Road and State Highway 12.  
Fingers 2 and 3 are accessed directly off SH12 at the mid- point of the frontage of Finger 2.  
A single internal roadway links Finger 2 with Finger 3. All three fingers of land are linked (at the rear (north) by a connecting carriageway.





**AREA SCHEDULE**

Consented Platform Area	394,615m <sup>2</sup>
Consented Building Area	10,006m <sup>2</sup>
Consented Tunnel Area	163,847m <sup>2</sup>
Future Development Platform Area	296,996m <sup>2</sup>
<b>Total Site Area:</b>	<b>2,605,190m<sup>2</sup></b>

**KEY**

- Development Area (Platforms 1-36)
- Carpark / Yard / Road
- Outdoor Crop Zone >10degrees
- Native Species
- Existing Wetland Zone
- Dam / Reservoir / Stream / SW
- Dam Pipeline
- Irrigation Line
- Stream Catchments
- Stage 1 Planting  
(Note: Stage 2: TBC once site seed collection/propegation complete - to enhance existing ecological zones)

**ECOLOGICAL MAPPING**

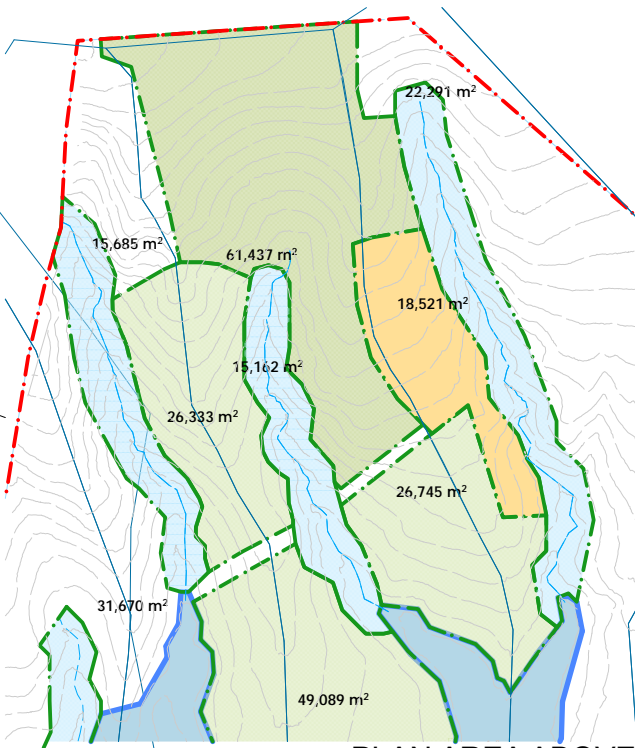
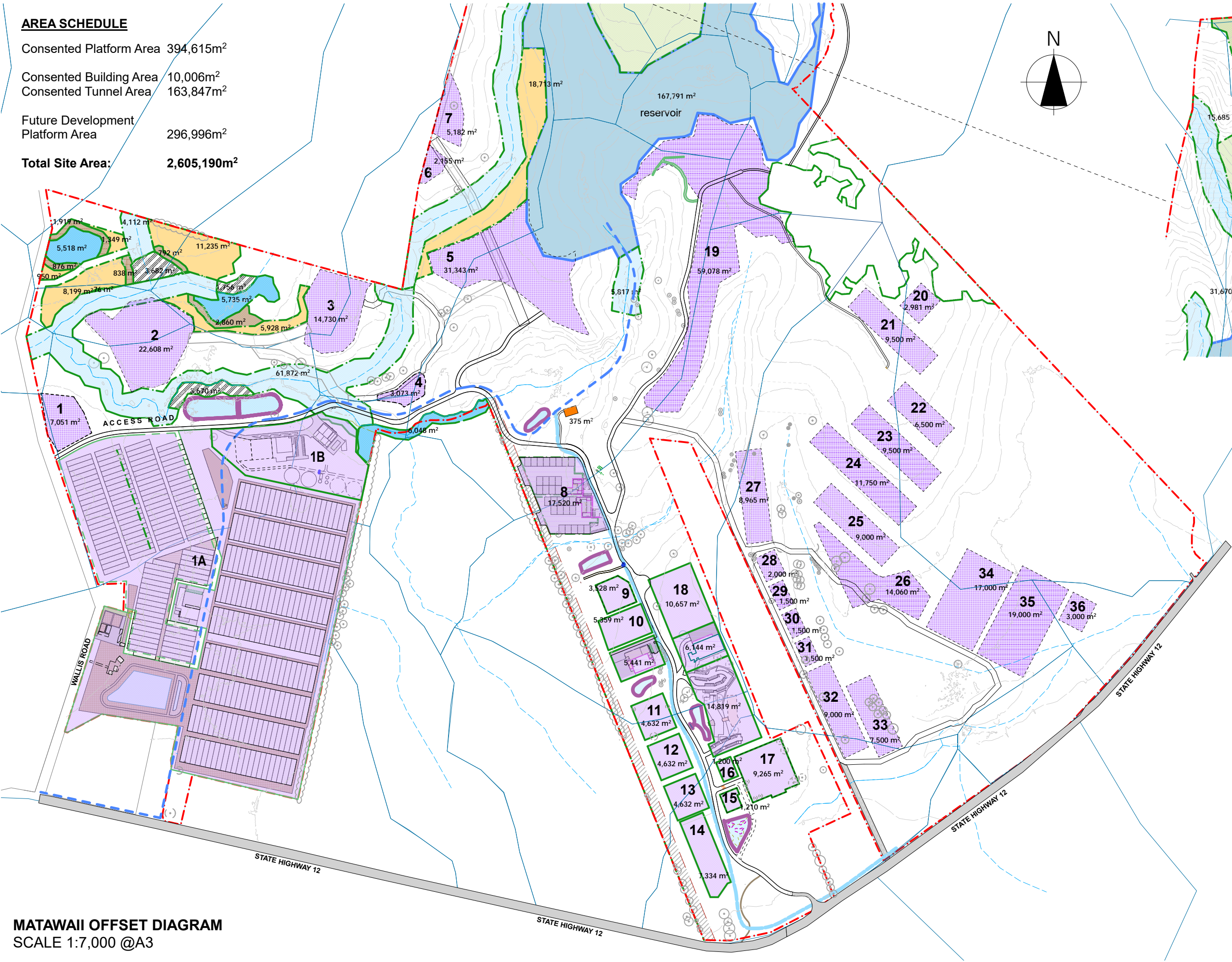
Ecological Wetland	172,297m <sup>2</sup>
Ecological Riparian Buffer	164,166m <sup>2</sup>
Ecological Forest	83,440m <sup>2</sup>
Ecological Linkages	61,858m <sup>2</sup>

**PLATFORM MASTERPLAN**  
SCALE 1:7,000 @A3



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PLAN AREA ABOVE

KEY

- Development Area (Platforms 1-36)
- Dam Pipeline
- Irrigation Line
- Stream Catchments

MATAWAI OFFSET PLANTING SCHEDULE

- mature podocarp broadleaf additional planting
- mature podocarp broadleaf planting
- riparian margin planting
- raupo wetland restoration
- swamp forest planting
- secondary broadleaf planting
- swamp maire planting

MATAWAI OFFSET DIAGRAM  
SCALE 1:7,000 @A3

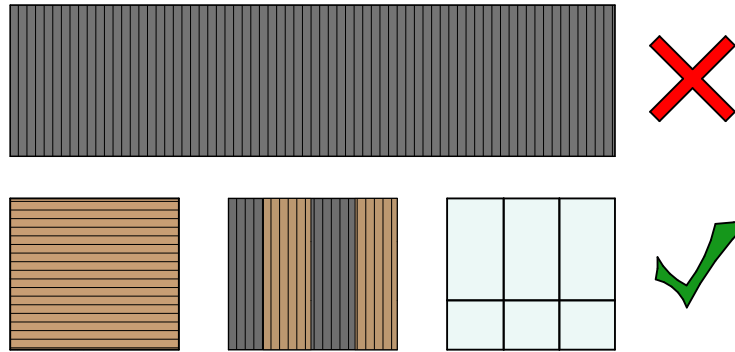


Fig: A



Fig: D

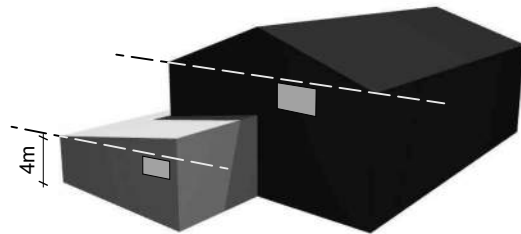


Fig: E

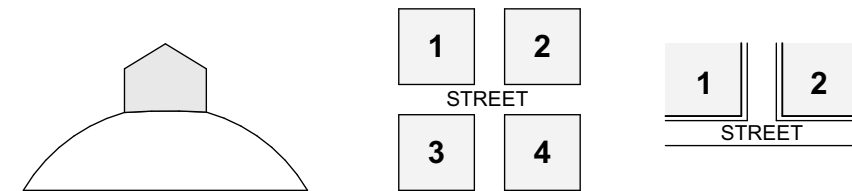


Fig: G

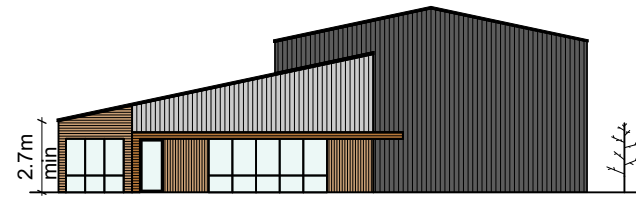


Fig: B

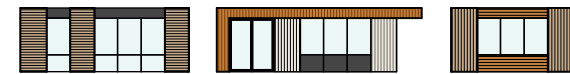


Fig: C

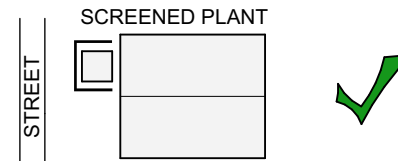
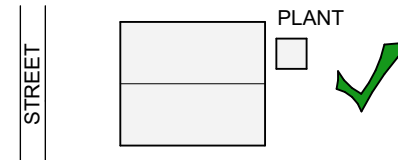
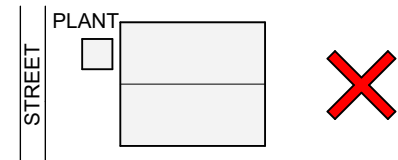


Fig: F

## BUILDING GUIDELINES

### 4.1 Siting and Separation

- The height of the building should be limited to 12m for Production Hub areas.
- Office / training / accommodation buildings to be limited to two storeys maximum.
- Gravel paths & carparking areas to be used where possible to reduce the amount of hard paved area.
- Balancing bulk of buildings via massing, separation, recessive colour's and textures. (See figures: A ,B & C)

= Benefits:

- Adequate space for parking, loading and planting
- Balancing the bulk with open space

### 4.2 Variety and Continuity

- Building scale, massing, siting and appearance should relate to the park's design guideline strategy:

- Materials (locally sourced where practically possible)
- Colour
- Texture
- Architectural form (height mitigation to ridge line view from SH 12, Wallis road)
- Planting / screening of car parking

(See figures: A, B & C)

= Benefits:

- Integrated development
- Individual buildings relate to each other and their site

### 4.3 Facades

- Avoid large long blank walls. Break up long, linear or blank facades with changes in materials, windows, recesses if possible. (See figure A)
- The buiding facade must address the street and site access approach, avoiding the back of buildings, and yards facing the street. Yard screening must be constructed.
- 2.7m min. high timber accent rule at entries, street elevations, etc (See figure B)

= Benefits:

- High quality image for individual business
- 'big box' apperance avoided
- Promotes park vision for a contextual architecture within a rural setting

### 4.4 Roofs

- The form of the new buildings should be compatible to the surrounding rural building types.
- Simple mono pitch or gabled roofs with regular building geometry.
- roofs to match wall cladding colour
- low pitch where possible
- no roof top mechanical permitted; unless for solar energy
- Preferable to locate mechanical plant on non-facing street elevation; to be screened, concealed from view if site constraints don't allow placement elsewhere on site. (See figures D, E & F)

= Benefits:

- building appearance simplified, so more in keeping with rural landscape setting

### 4.5 High Visibility Sites

- buildings on prominent, T section and corner sites to be given further attention. Specific architectural form/ expression to be considered due to street prominence (See Figure G)
- specific landscape design to be considered to screen back of house operations, yards, industrial building types where practically possible. (See Figure F)
- High visibility sites are to be determined by a landscape architect.

= Benefits:

- reinforces high quality development that expresses Park's vision within architectural form
- positive public image for individual businesses and the Park as a whole

## SIGN GUIDELINES

### 5.1 Signage to be below gutter eaves. (See figure E)

### 5.2 Example of signage placement on gable end and side elevation and at entry.





EXAMPLE OF COLOURS APPLIED TO THE INNOVATION HUB PROJECT



EXAMPLE OF COLOURS APPLIED TO INDUSTRIAL BUILDINGS

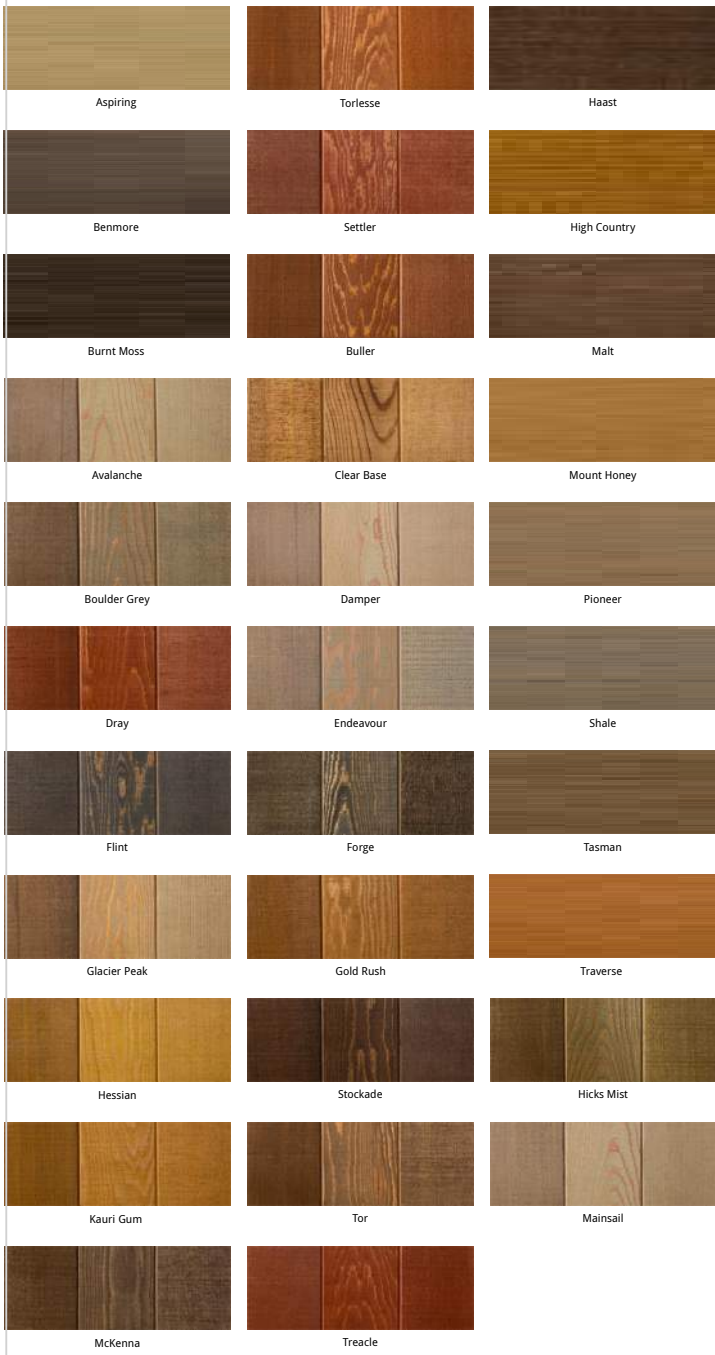
MATERIAL & COLOUR GUIDELINES

6.0 Materials and Colours

The development's Resource Consent condition relating to colour:  
*"Prior to (or in association with) the lodgement of any Building Consents, the consent holder shall provide a colour palette range for the proposed development. The range is to be detailed following consultation with Far North Holdings Ltd and consist of the earthy tones of the soils which are present within the site.. All exterior building finishes shall fall within the approved ranges. Any glazing or metalised surfaces shall be designed to ensure these surfaces (and their reflectance) do not impact on adjoining properties or drivers utilising the roading network"*

- 6.1 use locally sourced materials where practically possible
- 6.2 Exterior materials to use but not limited to:
  - pre finished Profiled Metal Cladding,
  - Oiled, or stained NZ native timber species where possible
  - Oiled, or stained Non-local timber species
  - Pre finished and painted PVC Downpipes to be in recessive colour matching facade adjacent/ behind
- 6.3 Building colours to be earthy tones that relate to the site's soil landscape, thus in keeping with the site's rural context. Refer acceptable Colours from the following ranges:
  - Resene Wood X Oil
  - Resene Woodsman timber stain colour palettes
  - Colourcote colour options from their Standard and Special Colours range
  - Dulux Powder Coatings Colour range
- 6.4 On larger industrial type buildings prefinished metal roof and wall cladding colour to be the same
- 6.5 At entrances and street elevations, material and or colour change/texture needs to be applied to break down long facades of bulk buildings. Refer Figure A, B and C on previous page)





RESENE WOOD-X OIL COLOURS FOR TIMBER CLADDINGS AND BUILDING FACADE ELEMENTS



RESENE WOODSMAN STAIN COLOURS FOR TIMBER CLADDINGS AND BUILDING FACADE ELEMENTS

MATERIAL & COLOUR GUIDELINES

6.6 Colour Palettes  
Refer adjacent and below for colour swatches.  
Other manufacturer's are also acceptable, colour selected must be similar to ranges below.



DULUX POWDERCOAT COLOURS FOR WINDOW/ DOOR JOINERY, CLADDINGS AND BUILDING FACADE ELEMENTS, FLASHINGS ETC



COLORCOTE COLOURS FOR PRE-FINISHED METALS