

## THE COLVILLE PROJECT

PRELIMINARY DESIGN TENDER FOR ARCHITECTURAL SERVICES 30.08.2022

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8th September 2022

The Colville Project Trust Attn: Anne Mountjoy c/- Colville PDC Coromandel RD4 3584

Dear Anne and the The Colville Project team,

PRELIMINARY DESIGN TENDER for ARCHITECTURAL/ENGINEERING DESIGN SERVICES For the Wellbeing and Education Centre and Land Management Plan of The Colville Project

Thank you so much for the opportunity to submit our preliminary design tender, representing the next stage of the Colville Project Trust's mission to complete a Wellbeing and Education Centre, and Land Use Management Plan.

We are still pretty excited about the project, and see huge potential for an effective working relationship between GDW and TCP. We have lived this project for the past seven weeks, and are pleased to present a design to you. We hope it is an exciting response to the brief and suggests an outcome that can breath life into the community, becoming a place for everyone that it needs to serve.

As neither of us are locals, I was stoked to have the opportunity to visit the site in July - thank you to Anne for enabling that. We had a lovely bush walk (bush bash in some places). We note that this preliminary design presentation is only a beginning point, a snapshot of what is in our heads following the site visit and after spending time chatting with Anne.

As we discussed in our EOI, community engagement will be key to this project so if this design is taken forward, there is so much more to do to involve all the key parties. Ordinarily we would not progress a design so far ahead without comprehensive involvement of the clients, the stakeholders, and the wider community. We have designed this building in a way that it becomes a conduit for collaboration.

If TCPT want us to proceed and develop our thoughts, we would also look forward to incorporating in our two specialist community engagement leads and of course our building services and sustainability expert. We have begun collaboration with Jade while completing this tender submission so some of our notes with regards to Culture and Heritage incorporate her thoughts.

Thank you again for this opportunity, and please don't hesitate to contact me on the details below if you need any more information.

Yours sincerely,

Gerard Dombroski Gerard@gdw.co.nz / 022 120 8628





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## PRELIMINARY DESIGN | LAND DEVELOPMENT PLAN: SITE ANALYSIS









- 1. Colville Township
- 2. Proposed Development (Stages 1 + 2)
- 3. Walking track
- Proposed bridge or raised boardwalk through
  Kauri forest, to protect and celebrate the trees (reference image above)
- 5. Small canopy for lunch stop
- 6. Pavilion or canopy developed alongside lwi as a place to celebrate and enable learning of the history of the site
- 7. Mountain bike tracks for all levels, including challenging down hill tracks that the topography is perfect for
- 8.Culturally sensitive area
- 9. Flood prone area
- 10. Kauri forest
- 11. Driveway access: to be widened and sealed to be accessible to all
- 12. Additional housing (Stage 4) 13. CHC, relocated to WEC

- 14. Shading on site: midday, winter solstice 15. Shading on site: 3pm, Winter solstice 16. View of ocean from Stage 2 development

## ARCHITECTURAL CONCEPT

We propose a simple circular building around which we cluster objects and shapes. It is intended that these objects be contributions by, or pay tribute to, the work of local artists and the history of Colville and the Coromandel, providing richness and personalisation through community input.

The diagram opposite illustrates this using placeholders that reference local artists' existing work. It is our hope here to create a building where the community has buy in, a building that is not like other buildings; an architecture of Colville. We have a case study project we would love to discuss: Todd Saunders' 'Fogo Island'.

#### LAND MANAGEMENT PLAN

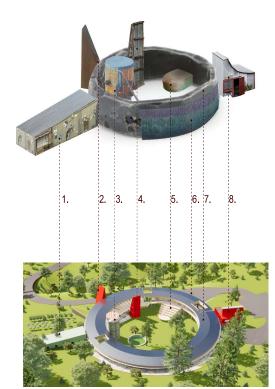
Before we dove into considering a building, we identified a few key points from our site visit, and after reading the TCPT project documents.

- Firstly, there is a disconnect between the Colville township and the site.
- Secondly, there is potential for the township to accommodate more occupants, whether they are permanent residents or short term visitors and tourists. Encouraging more people to the area, as long as there is infrastructure to accommodate them, will benefit Colville socially and economically. TCPT says "although there has been an increase in young families returning to the area, this movement is limited due to a shortage of accommodation options".
- Thirdly, providing recreational and wellbeing facilities and amenities can help to mitigate and alleviate societal problems and deprivation, either existing already or that might arise with greater volumes of people. The facilities can also be an attraction to bring people in.
- Fourth, possible changes to the natural environment such as flooding, sea level rise, rising temperatures and increases in natural weather events and natural disasters may be looming as the climate changes. Any development on the site needs to be located thoughtfully, be adaptable where possible, and provide services that help during these events such as Civil Defence and medical facilities. Additionally any development should aim to use resources wisely and sustainably as possible.

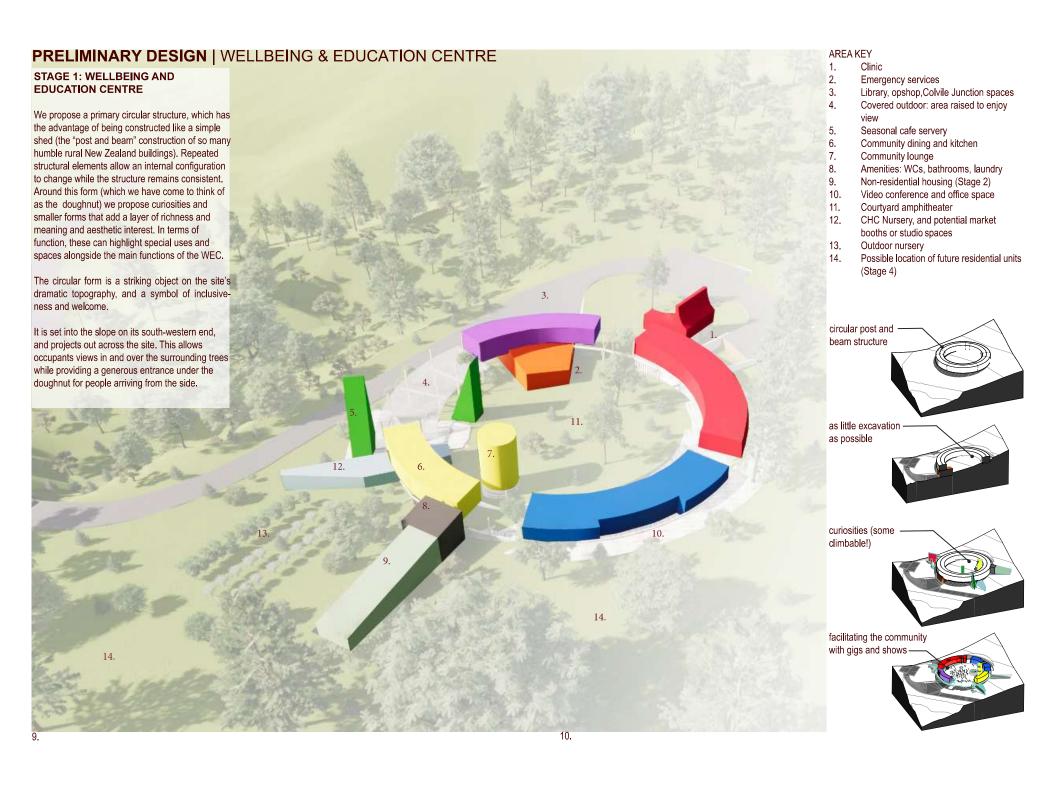
Our land development plan reflects these observations (refer plan on previous page).

- Stage 1, the Wellbeing and Education Centre (WEC)
  has been positioned to maximise winter sun and
  enable a view of the ocean. We have found that the
- 7 building platform that has already been partly exca-

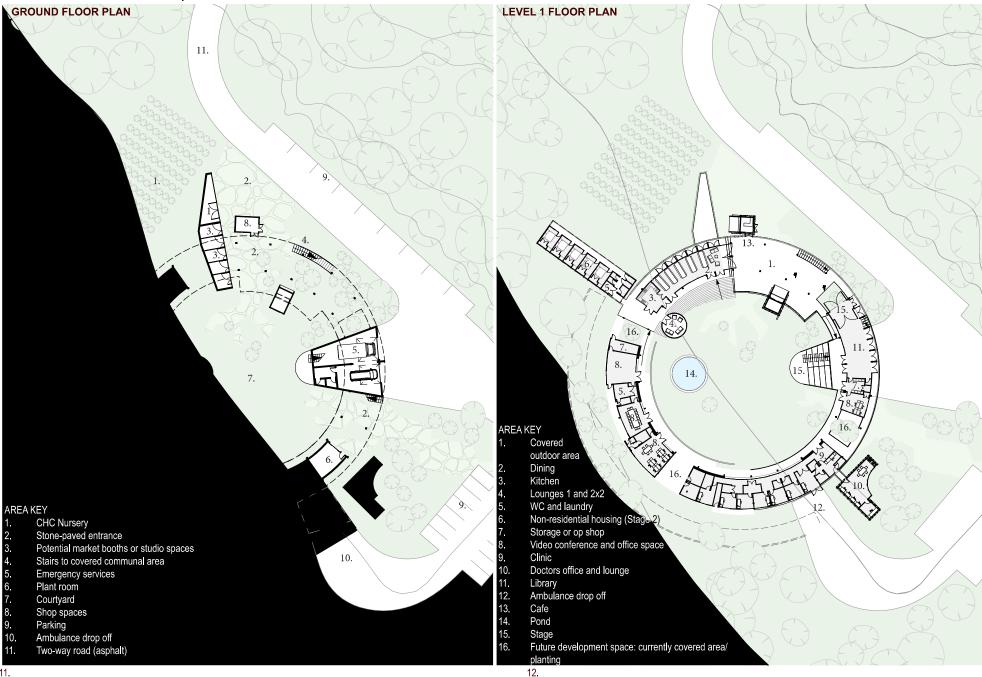
- vated allows for this. A second site, with year-round sunlight and view, is slightly further up the hill and slightly less accessible. We believe having the more accessible site will be better pay-off for more users. Utilising the established platform means savings on establishing access to the WEC. The location also allows for maximum winter afternoon sun due to the dip in the western ridge.
- Stage 2 covers the non-residential housing as you will see in our more detailed architectural plans. This can be accessed with a zigzag through the WC and laundry so that it is close by the kitchen and lounge but with privacy for occupants.
- 3. Stage 3, proposed recreational facilities, will be of utmost importance to add life to the development. We have intentionally designed some tall elements with the intention of introducing climbing walls. Creating excuses for people to visit the site within the architecture is a great opportunity. Similarly, a boardwalk through the kauri forest or a raised walkway or bridge to experience the trees while preserving the root structure could be a beautiful addition. Walking tracks and mountain bike tracks are a no-brainer to utilise the topography of the site, and will help small cafe business provid-ing coffee and food to athletes to thrive! A series of covered lunch and rest stops areas in the bush could enable people to dwell longer. A small outdoor pavilion or canopy atop the hill that celebrates the Maori heritage of the site could be developed with consultation by local iwi, making this special site a destination (as well as for the view). There is a wealth of knowledge in the area around biodiversity and conservation, so there could also be pavilions or stops amongst the landscape could educate visitors about trapping and other biodiversity initiatives. Designated spaces or structures could provide space for workshops or tours for the wider community. We have placed a natural amphitheater and stage area as another feature that can facilitate local musicians or even larger domestic and international artists. This could draw in tourists and visitors to the site for musical and cultural events. The natural features of the site really encourage this; it could be fantastic.
- 4. For Stage 4 we propose additional residential units could be dotted though the bush slightly up the hill or on the other side of the nursery, creating a residential street. Again, interesting forms and structures could be developed that reference local art and history.
- The land development plan has been developed with sustainability front of mind. This is explained further on the following pages with regards to construction and material choices, energy use, water management and waste management plans.



- 1. Reference existing Colville buildings
- 2. Fredrick Church tea pot spout
- Lisa Walker necklace
- 4. Chimney referencing old forestry huts
- Jaimie Jenkins Plinth
- 6. Jade Townsend cloak
- 7. The ring that unifies the parts
- 8 Picolo 2 0



## PRELIMINARY DESIGN | WELLBEING & EDUCATION CENTRE



# PRELIMINARY DESIGN | WELLBEING & EDUCATION CENTRE







## **CONSTRUCTION METHODOLOGY**

#### **TIMBER STRUCTURE**

Our aim is to keep things simple to reduce costs and to create an aesthetic as sympathetic to the rural area as possible. In our view, the closer we can get to constructing the WEC as a shed the better. We propose a predominantly rough-sawn timber post and beam structure. A single roof truss and primary floor beam layout is repeated around the building in 15 degree increments. Once this structure is filled in with roof purlins, roofing iron, floor joists and flooring, then the building is essentially complete. From here the planned rooms can be filled in. Going forward, these can be extended or changed around with no expensive changes to load-bearing walls. This is low-tech modularity at its best.

#### COMMUNITY PARTICIPATION

The proposed design has potential to incorporate other bespoke construction methods in smaller amounts within the special additional spaces and wings arranged around the doughnut. This could incorporate local specialties and materials, such as earth-building (rammed earth), locally made clay bricks, or locally made shingles. The personal involvement of passionate community members would add a richness to the architecture which would resonate generations to come. A local example is Henry's paper clay construction!

### **READILY AVAILABLE**

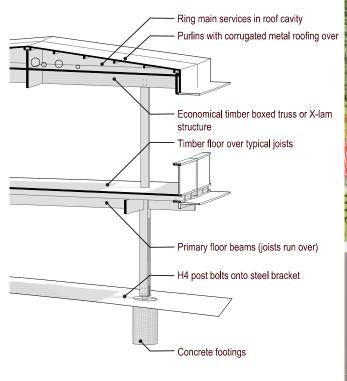
Additional to local materials, we aim to specify NZ manufactured materials available within as close proximity to the site as possible. As architects we are happy to advise with these requirements in mind, in order to reduce carbon miles for construction and also to reduce risk of items being unavailable.

We are also able to advise to a certain extent regarding availability and lead times of materials, and will recommend certain products with this in mind. The recent trouble around the availability of GIB products has highlighted the need for creativity and thinking outside the box when it comes to material selection. This is where a good architect becomes invaluable. Images (right): sunlive.co.nz.

H4 treated posts bolt into steel brackets (so we can utilise the local mill). An alternative is round SED posts.

Primary floor beams with joists running over are replaced with masonry block foundation walls closer to the ground.

Prefab gang-nail trusses or X-lam









## **MATERIALS & RESOURCES**

### LOCAL, LOCAL, LOCAL

It is preferred that we source materials locally with the least amount of travel (and carbon miles) and that most benefits local and neighbouring communities; their economies and people.

A collaboration we'd be excited to pursue is the Colville Sawmill Company which is a short drive from the site.

The Colville Sawmill Company provides radiata pine and has a treatment plant able to treat up to H3.2 and H4 (for exterior uses). They are unable to test strength treated timber which is required for structural applications, but there is precedent of another project recently in Colville that used visually-graded timber from the Sawmill. Commonly the Sawmill provides non-structural components such as weatherboards and timber decking, which could happily be incorporated into the WEC and subsequent development on site.

The Sawmill can also mill timber from other sources, such as timber harvested from the site (as allowed under the ETS).

There is also more unusual methods of construction available to us in the area such as building with lime (for mortars, renders, block elements), clay, straw (straw-bale construction) in the area. As a practice we have experience navigating more unusual solutions like this and would love to facilitate explorations of these methods with TCPT.

### **RE-USE AND RECYCLE**

Another way to increase the sustainability and reduce waste during construction stage is to re-use available materials that would otherwise be waste. GDW took this route to great effect completing the Picolo at Driving Creek. Hoarding available materials is always a good place to start...













## FLEXIBILITY, MODULARITY & ADAPTIVENESS

## LONG TERM FLEXIBILITY FOR FUTURE GENERATIONS

The question of flexibility, modularity and adaptive reuse is hugely important for a community project such as this, which it is hoped will serve the community for generations to come. The ability to change or renovate with small tweaks instead of building new or demolishing is a tenet of sustainability.

### SHORT TERM FLEXIBILITY FOR EVOLVING NEEDS

Short term, the WEC should have potential to adapt as required for different occupants and functions, even as often as day to day. We have designed the library and dining hall to both open out onto the covered outdoor area. This allows the building to cater for a large event, undercover. The library steps up 900mm so can double as a stage.

The office area requires a deeper understanding of the client and user needs before it can be designed. There are options available that we have used successfully on previous projects that increase flexibility, such as acoustic retractable walls through conference rooms.

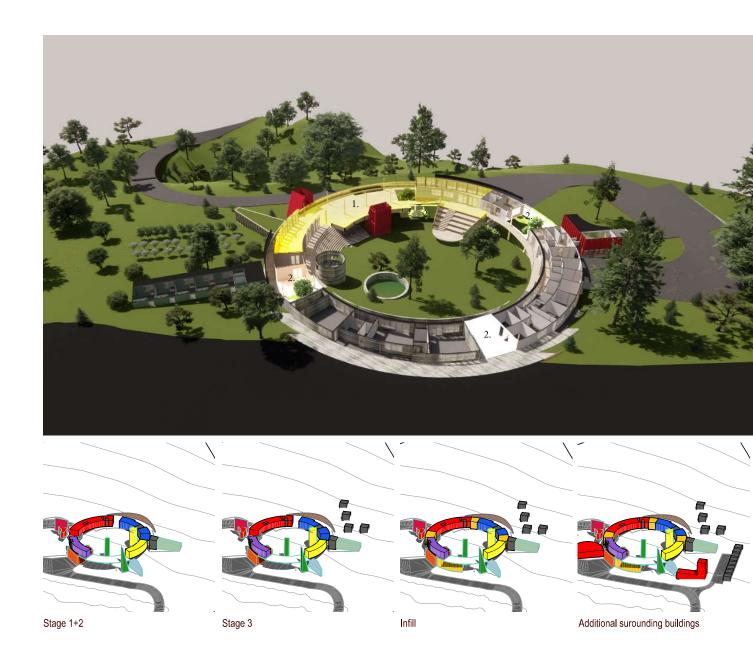
### FRAMEWORK FOR THE FUTURE

2. Within the framed areas of the circular structure there are almost unlimited configurations thanks to the post and beam structure; there are no load bearing walls so spaces can be reconfigured with ease. For the short term we have left areas between closed-in areas to allow for future expansion. This could be extended to the ground floor to make use of the structure.

Beyond the circle we will need to design a framework for how additional buildings are added so they continue to fulfill the goals and aspirations of the community.

In essence the project is about a central core that ties together a myriad of shapes and structures.

The diagrams show intention but rely on design work still to be carried out with user consultation and engagement.



## **HERITAGE AND CULTURE**

## UMANGAWHA, CABBAGE BAY, COLVILLE

Historically, the area has held cultural and spiritual significance to mana whenua who have sought safety in the bay or have settled permanently to utilise the valuable resources available. Kaimoana, kauri logs, mining and in modern times farming, tourism, and community services have provided the local population means to live.

The site overlaps with a Pa site, and consultation with Iwi is essential before any development on this area takes place. Out land management plan maintains this area as development free. We would like to consult with Iwi regardless of this, in order to create a sustainable relationship for future generations to come, and a richer architectural outcome that is a result of collaboration.

#### HERITAGE

Some historical local buildings reference chimney shapes. We particularly loved the Coromandel bush camp (1). The haphazard and organic shapes and nature of these early settler buildings has great architectural potential. We see potential to reference this in our potential spaces around the main WEC building (1).

### **SPECIAL BUSH AND VEGETATION**

There are special bush areas on site where kauri is being regenerated. Being registered under the ETS, just 2 ha of trees can be processed every five years (this is also contingent on replanting and attaining levels of successful growth). Our WEC aims to respect all the existing vegetation on site as much as possible, being constructed on stilt-like construction that allows growth underneath and around (2) and (3).

Images (right): coromandeltown.nz and Beca's concept design report.

(2) Stilt-like construction treads lightly

- (1) Historical chimney forms referenced in a new, personal way
- (3) Vegetation, forestry and native bush on site is preserved wherever possible to maintain the natural character of the









## **HERITAGE AND CULTURE**

#### **ENGAGEMENT WITH IWI**

Our cultural engagement lead, Jade Townsend will help us to liaise with local iwi within the planned workshop format.

It is important to us that the bones of the design that we develop with TCPT and the community feel connected and *led* by Māori stories and not just the "dressing" elements such as gardens and art. Its important to avoid token Māori elements.

It is proposed that Jade will work with local iwi representatives to incorporate specifically local cultural input.

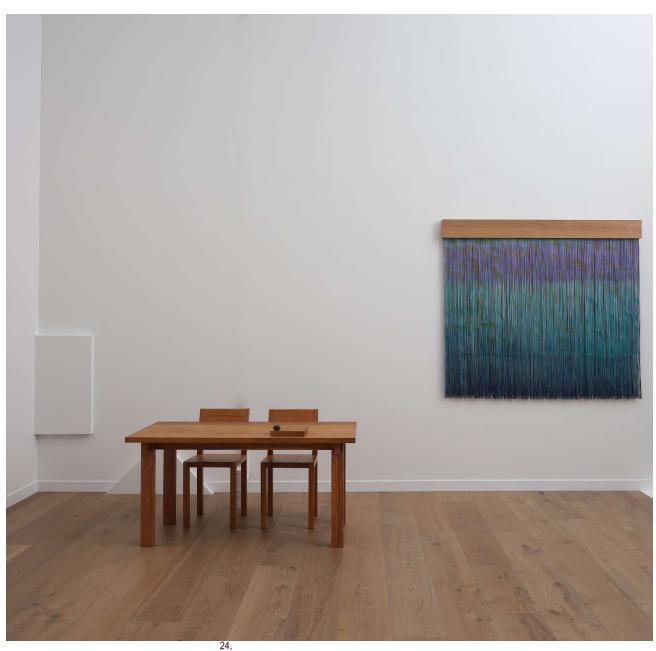
The image, right, is an example of Jade's work. Jade's works exist at the intersection of her Māori and Pākehā heritage. These "veil works" are made from discarded plastic beach mats, which "come to life with bodies brushing alongside them... or a gentle breeze from the back door being left open." She has painted landscapes and seascapes on them before the threads are hung and bound together using a bracket made from local wood.

Refer also to our Collaboration Approach pages which outlines our cultural engagement plan.

## **ARTS**

We would love to facilitate an arts programme within the WEC, designed and led by local Māori knowledge holders and supported by Jade Townsend (who is an arts facilitator and curator). This would create opportunities to respectfully honour and incorporate stories of origin. We acknowledge that relationships with local iwi and Māori leaders takes time and we look forward to being introduced and guided by them. The arts programme will provide opportunities for the community to develop art while learning about the history of the area.

We would love to discuss this further.



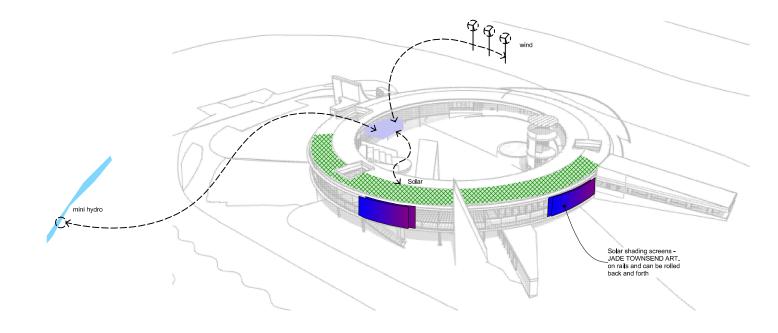
## **ENERGY MANAGEMENT PLAN**

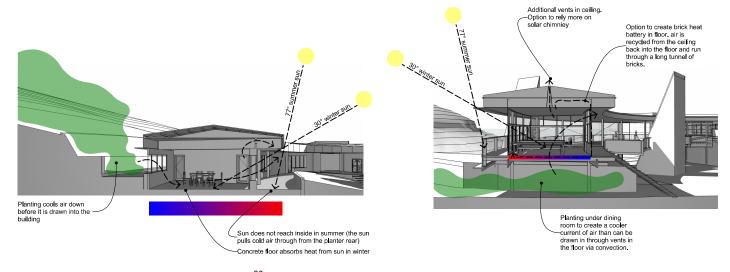
#### REDUCTION AND EFFICIENCY

The site and WEC diagrams, right, draw attention to features that can be utilised, and better developed at later design stages.

We are exited to actively pursue a low carbon future with TCPT by:

- Minimising greenhouse gas emission associated with day to day operation of the buildings, such as heating and cooling. The design will be based around the use of passive low-energy techniques such as natural ventilation and day lighting. With the wide deep eaves, the design integrates a sun control strategy that is tuned to the orientation to control solar gain (reducing the need for mechanical cooling).
- Using renewable energy. It is a no-brainer to utilise the site's natural features to reduce the need for energy brought onto the site. We see the site as having potential for wind farms, hydro-power and rainwater catchment.
- Reducing energy consumption through implementing energy efficiency and conservation measures
- 4. Thick walls allow for generous insulation.
- Use of thermal mass (concrete, brick, clay within the design) on elevations where the sun shines
- 6. Reducing transport-related greenhouse gas emissions.
- Promote sustainability as an ethos of the development. This means making our energy management and sustainability strategy visible in the design of the building, to allow passive education to be occurring constantly.
- 8. Maintaining the site in an environmentally sensitive way, with a high regard for local eco systems (refer also our Biodiversity Plan).
- As our Land Development Plan shows, we love the idea of incorporating efforts to interest the community in sustainably produced food. There is potential for using the site to plant orchards and vegetable gardens.





25. 26.

## **BIODIVERSITY MANAGEMENT PLAN**

## BUILDING STABILITY AND RESILIENCE

Biodiversity refers to the variety and diversity of all life on land, in fresh water and the sea. This includes ecosystems and the genes they contain such as birds, plants, fish, insects and any other species that are special to New Zealand; our indigenous biodiversity. Our biodiversity provides the life supporting systems that enable all organisms, including humans, to survive. Importantly, biodiversity can help provide stability and resilience as we adapt to the fluctuations and disturbances brought about by climate change. It is important to note that within Māori culture, the connection with nature is one of whakapapa (kinship).

On such an expansive site, there is a lot of potential to establish successful biodiversity initiatives. Ecological habitats found currently within the Colville catchment, and how they might be utilised further, are

- Wetlands can purify water and help prevent flooding and drought
- Indigenous planting provides carbon sinks and purifies the air we breathe as well as providing recreation and amenity values.
- Coastal forests, lowland forests and gardens

   when selected and cultivated carefully can provide products such as timber, fuel, food and medicines
- Salt water marsh home to a mixture of rushes and shrubs and ground cover that are an important habitat for fish, shellfish, crabs, wading birds and shore birds

As architects we can liaise with guides published by Waikato Regional Council (WRC) and, the most rich group of experts available - the Colville community. You guys will know what is already working in this special ecological area and we will work with your expertise.

The WRC runs a Native Plant Supply Scheme and the Colville Harbour Care provides eco-sourced plants with shared costs (it is hoped that the CHC will be relocated onto the site in close proximity to the WEC).





## **WATER MANAGEMENT PLAN**

#### WATER MANAGEMENT PLAN

Catchment and retention of rainwater in tanks will be the basis of our water management plan. Due to the circular form the building is perfect for a ring main, which will run via a plant room (which has been allowed for generously within the plans). We propose a grey water recycling system from sinks and showers which is filtered into its own grey water ring main, and then used to flush toilets. Additional ecologically minded solutions will be integrated with the assistance of our building services and sustainability experts, eCubed.

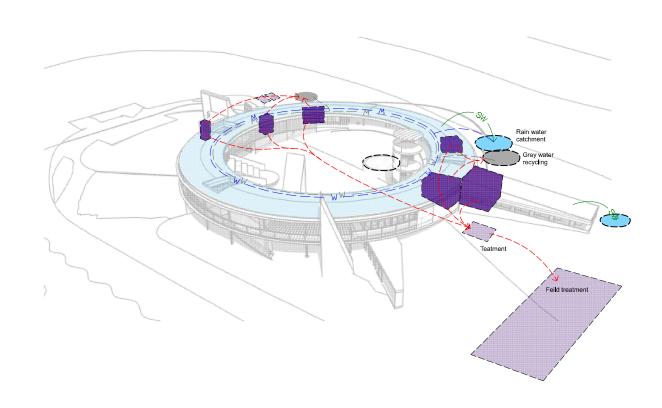
#### WASTEWATER OR EFFLUENT WASTE

If septic tanks are used for primary treatment of wastewater, community based systems like those below can be explored for TCP:

- Surface flow wetlands where wastewater flows over the surface of the substrate and is treated by plants growing in the water
- Subsurface flow wetlands in which plants grow in a substrate, with the wastewater treated as it flows through it
- A land application where wastewater is applied to land that may be planted in crops, pasture, forest or bare. The wastewater is treated by nutrient uptake from plants or filtration through the soil.

The main advantages of these systems over conventional methods of treating Waste water are:

- · Easily maintained
- Cheaper to run
- Can be set up on a small scale to be as affordable as possible (for example, just for TCP's development)
- · Perfect for remote places
- · Based on relatively low technology
- Wetlands have other advantages for biodiversity, as discussed earlier.
- The nutrients in the wastewater (the undesirable parts), is put to good use as fertiliser for gardens and forests.



29. 30.

## **WASTE MANAGEMENT PLAN**

## RUBBISH DURING A BUILDING'S CONSTRUCTION, LIFE AND USE

The focus for disposing of waste needs to move away from landfilling, and towards re-design, waste reduction, re-use and recycling. We consider the waste hierarchy on every project, as promoted by the Waikato Regional Council.

Firstly:

## **WASTE REDUCTION**

Lessening waste generation

And where that is not possible:

### **WASTE DIVERSION**

**Reuse** products in their existing form for their original purpose or similar purpose

**Recycle** / reprocess waste materials to produce new products

**Recovery** / extraction of materials or energy from waste for further use or processing (includes, but is not limited to, composting)

And if steps 1 and 2 are not possible:

## **WASTE DISPOSAL**

**Treat** /subject waste to physical, biological or chemical process to change the volume or character of that waste so it may be disposed of with no, or reduced significant adverse effects on the environment

**Dispose** as a final deposit of waste on land set apart for that purpose

This hierarchy also relates to waste created during construction. We anticipate that during a community-focused build such as this, off cuts and leftover materials can be stockpiled and put away for future projects - or bespoke parts of the development! We reference the Picolo once again (images, right) completed by GDW out of completely reused, recycled and recovered materials.







## **COLLABORATION APPROACH**

### COMMUNITY ENGAGEMENT WORK-SHOPS

Again, we note that this preliminary design is only a beginning point. We purposefully propose a simple building that can be augmented by collaborators from the Colville community. Community engagement will be key to adapting the spaces within the simple circular shell to serve the community in the most effective way, and also to add richness with the surrounding individual potential spaces.

When the architectural team and large groups of varied stakeholders combine to implement creative solutions, the greatest level of social innovation occurs,

As described within our EOI, we will rely heavily on Paul and Jade to help lead consultation. In terms of cultural engagement with iwi, the Coromandel -Colville Community Plan 2020 - 2030 revealed and highlighted the desire for stronger Māori culture and reo Māori visibility in the region. We acknowledge that relationships with local iwi and Māori leaders takes time and we look forward to being introduced and guided by them. We outline Jade's expertise in a bit more detail in our Culture and Heritage section.

## **BRIEFING**

A rigorous briefing process is the first important engagement phase. We note that TCP has undertaken a lot of work developing a brief, but we would love to dig into this further and understand how it came about. Working on past projects we have found that the most effective briefing process is to define two work-streams, developed in parallel but that inform each other as the process develops, concluding in a single return brief document:

# Work-stream 1: Project vision and goals

Through a number of workshops the design team will gather and record specific information in order to understand the vision and aspirations for the project and identify what the scope of the project will include. This info is always rigorously documented, filtered and represented back to you as

a "return brief". This forms the basis of all design decisions moving forward.

Correct and complete information at the outset ensures the design team fully has the guidance required to deliver a truly successful project with a linear and effective process meeting the project expectations - delivering a quality project on time, and on budget!

The project brief will form the first part of the cost review to ensure that all parties (users and consultant team) understand the upfront cost of what is being asked for. Realistic expectations can be set and clearly managed throughout the projects duration. On this project it is expected that both functional brief and an up to date area schedule as the project develops will drive the cost review and the aspirations for the project.

## Work-stream 2: Functional briefing

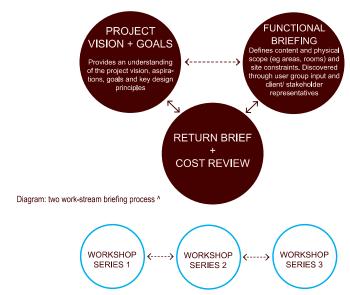
It's important to engage with all user groups who will be occupying and enjoying the WEC . User groups will be formed with representatives that are able to provide a complete overview of the requirements for their respective groups. We would love to establish specialist groups using as much of the Colville local knowledge as possible. One example is around biodiversity matters, where local residents start with so much good information that we can build on with our design team consultants.

#### 1 + 2 =

Once the return brief and costs analysis are approved, the next phase of the project, Concept Design, will begin and engagement is still important during concept design.

## **PROCESS**

The diagram, right, shows the three phases of workshops that will be undertaken (there may be multiple workshops to deal with large amounts of user groups!) within these phases.



#### 1. Listen and Discover

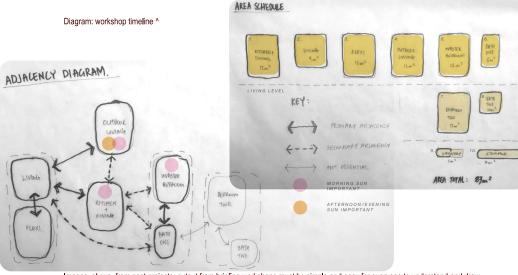
Here the architectural team spends time listening to the client and stakeholder groups as the aspirations and vision is defined. Smaller user group workshops will also be organised at this stage.

## 2. Propose and Define

We will provide feedback after the first workshop and user group briefing sessions and confirm our interpretation of it. Importantly, we will discuss how the feedback relates to opportunities for the project; what it means in architectural terms,

#### 3. Present

We will present our combined findings from the earlier workshops with the functional briefing info in a single easy to read document.



Images, above, from past projects: output from briefing workshops must be simple and easy for everyone to understand and draw conclusions from.